

GENERAL RAILWAY SIGNAL COMPANY

1905

SECTION 1

ELECTRIC INTERLOCKING



Class TF 635

Book 1G 22

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CATALOGUE AND PRICE-LIST  
OF  
ELECTRIC INTERLOCKING  
AND  
SIGNALING DEVICES

MADE BY

THE GENERAL RAILWAY SIGNAL COMPANY  
OF BUFFALO, N. Y.

Owners of the Patent Rights formerly owned by The Taylor Signal Company of Buffalo, N. Y.; The Pneumatic Signal Company of Rochester, N. Y., and The Standard Railroad Signal Company of Troy, N. Y.

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Also Designers, Manufacturers and Erectors of Electric, Electro-Pneumatic, Electro-Mechanical, Pneumatic and Mechanical Appliances for Railway Protection; Crossing Gates; Automatic, Semi-Automatic and Manually Operated Block Signals; Electric, Electro-Pneumatic and Mechanical Interlockings to suit conditions

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*GENERAL OFFICES*

BUFFALO, N. Y.

*DISTRICT OFFICES*

NEW YORK—Broad Exchange Bldg.  
CHICAGO—Monadnock Block

*WORKS*

BUFFALO; NEW YORK  
ROCHESTER, NEW YORK

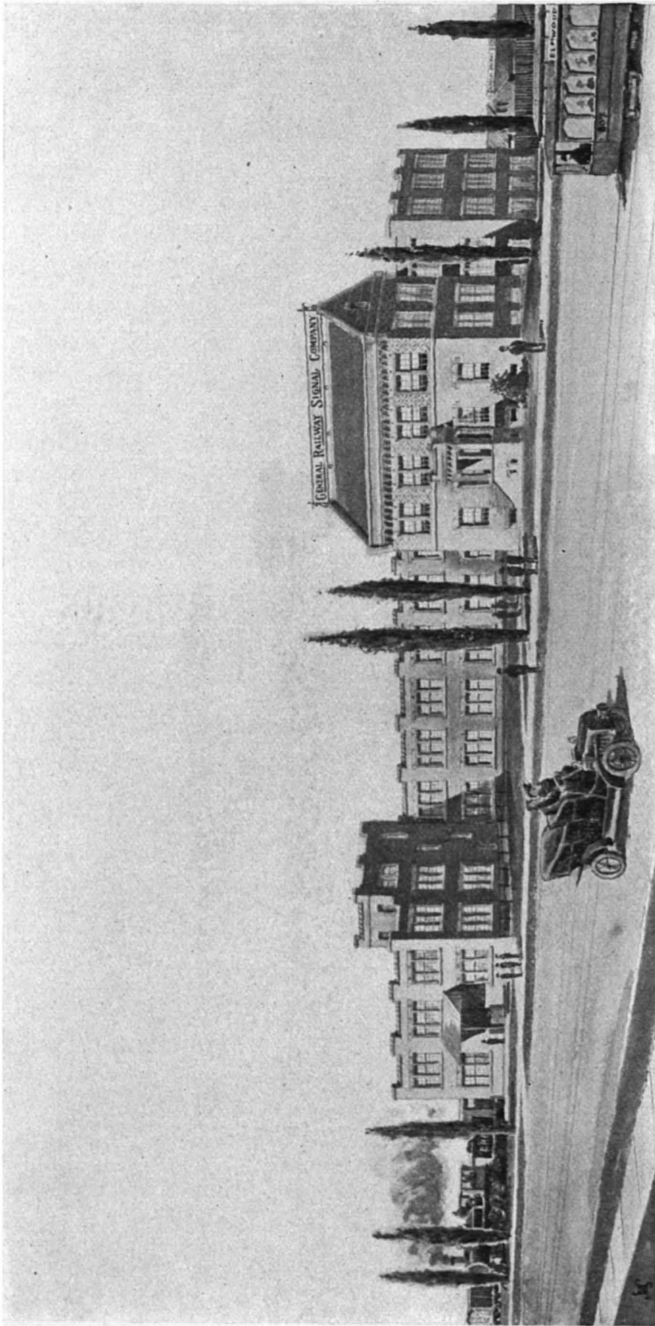
1905

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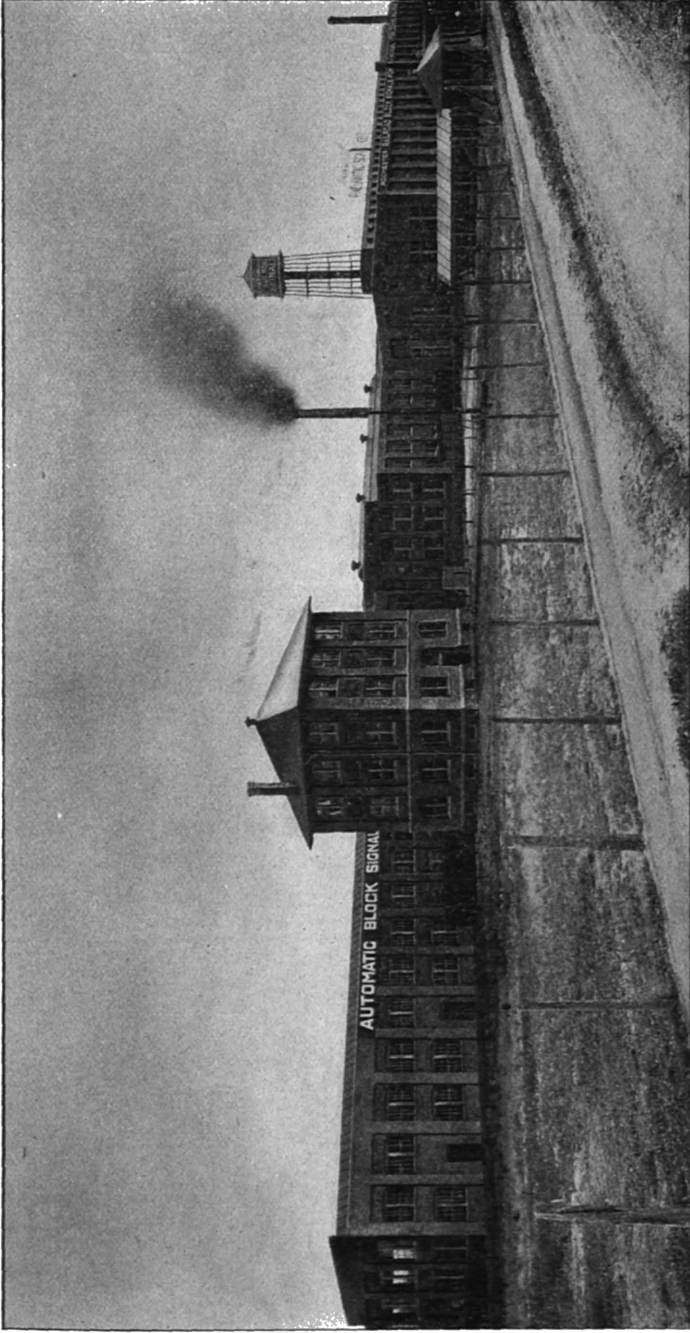
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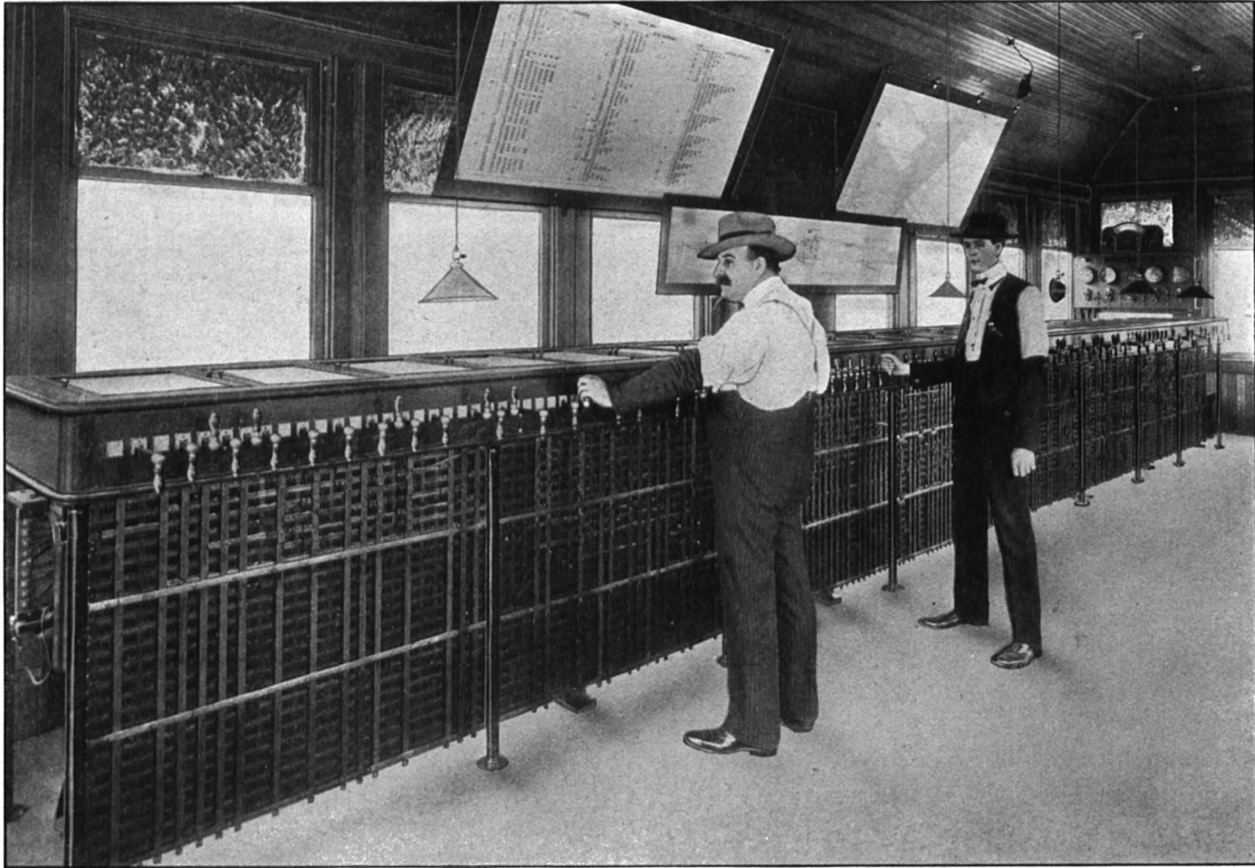
**ELECTRIC  
INTERLOCKING DEVICES  
SECTION I**



GENERAL RAILWAY SIGNAL COMPANY'S BUFFALO, N. Y. WORKS.



GENERAL RAILWAY SIGNAL COMPANY'S ROCHESTER, N. Y. WORKS.



INTERIOR OF TOWER AT LA SALLE STREET STATION, CHICAGO, ILL.

## PREFACE

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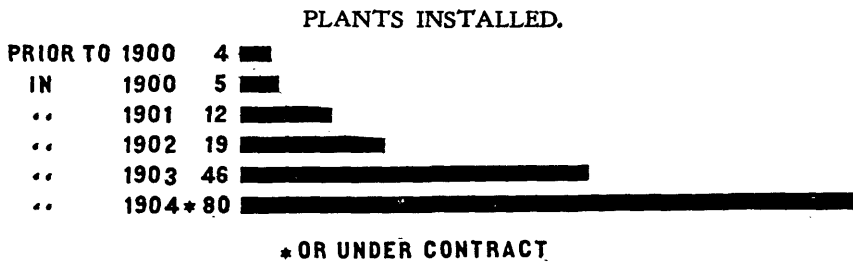
**T**HIS section of our catalogue deals only with Electric Interlocking Devices, and is the first of a series of sections which will be issued from time to time, pertaining to Pneumatic, Electro-Pneumatic and Mechanical Interlocking Apparatus, Station Block, Automatic and other Signaling Devices manufactured by this company.

In presenting this catalogue to our patrons, we feel that inasmuch as the principles involved in the operation of Electric Interlocking have become familiar to the engineering and other departments of railroads in the country, it will be unnecessary to enter into a detailed description or explanation of those principles employed in the apparatus listed in this section.

We have, therefore, endeavored to make this edition purely an order catalogue, and as such, list prices have been extended opposite each item, and list prices given for a number of combined parts, which we believe will be of great assistance in ordering. Where prices are not extended same will be furnished on application.

**GENERAL RAILWAY SIGNAL CO.**

**A**S ILLUSTRATIVE of the great advancement in the use of Electric Interlocking Devices, perhaps the following graphic representation of the percentage of increase, together with a statement showing the number of plants which have been erected or contracted for since the introduction of such devices, will better portray the growth and the favor with which a "one power" device has been received, than anything that may be said.



From the above diagram it will be seen that the number of plants in any one year exceeds the number installed or contracted for in any two preceding years.

We will state here that all of the electric plants in service in this country at this time are protected by patents owned by this company, which company also controls all of the patent rights in the Western Hemisphere, formerly owned by the Taylor Signal Company of Buffalo, N. Y., Pneumatic Signal Company of Rochester, N. Y., and the Standard Railroad Signal Company of Troy, N. Y.

List of railroads on which Electric Interlocking Plants have been erected or contracted for up to January 1, 1905, together with statement of number of plants and functions operated on each road, is shown on opposite page.

| <i>Name of Road.</i>                            | <i>No. Plants.</i> | <i>Functions.</i> |
|---|--------------------|-------------------|
| Atlanta Terminal Co.....                        | 2                  | 124               |
| Achison, Topeka & Santa Fe.....                 | 16                 | 408               |
| Baltimore & Ohio.....                           | 15                 | 467               |
| Cleveland, Cincinnati, Chicago & St. Louis..... | 6                  | 227               |
| Chesapeake & Ohio.....                          | 2                  | 59                |
| Chicago, Burlington & Quincy.....               | 2                  | 63                |
| Chicago, Milwaukee & St. Paul.....              | 1                  | 28                |
| Chicago Great Western.....                      | 2                  | 41                |
| Copper Range.....                               | 1                  | 36                |
| Chicago & Northwestern.....                     | 6                  | 210               |
| Chicago & Eastern Illinois.....                 | 3                  | 92                |
| Chicago, St. Paul, Minneapolis & Omaha.....     | 3                  | 30                |
| Chicago, Rock Island & Pacific.....             | 2                  | 128               |
| Cincinnati, New Orleans & Texas Pacific.....    | 2                  | 27                |
| Delaware & Hudson.....                          | 2                  | 64                |
| Elgin, Joliet & Eastern.....                    | 3                  | 75                |
| Erie.....                                       | 4                  | 207               |
| Grand Trunk.....                                | 1                  | 46                |
| Hocking Valley.....                             | 1                  | 65                |
| Houston & Texas Central.....                    | 8                  | 243               |
| Illinois Central.....                           | 9                  | 353               |
| Indiana Harbor.....                             | 1                  | 113               |
| Lake Shore & Michigan Southern.....             | 15                 | 730               |
| Long Island.....                                | 1                  | 28                |
| Lehigh Valley.....                              | 7                  | 248               |
| Monon.....                                      | 1                  | 22                |
| Michigan Central.....                           | 4                  | 76                |
| Norfolk & Western.....                          | 1                  | 13                |
| Pennsylvania.....                               | 1                  | 32                |
| Pennsylvania Lines West of Pittsburg.....       | 6                  | 332               |
| Pittsburg & Lake Erie.....                      | 3                  | 157               |
| Pere Marquette.....                             | 4                  | 145               |
| Southern Pacific.....                           | 10                 | 313               |
| Southern Indiana.....                           | 1                  | 28                |
| Southern.....                                   | 1                  | 16                |
| Savannah Union Station Co.....                  | 2                  | 67                |
| Terminal Railroad Assn. of St. Louis.....       | 6                  | 417               |
| Texas Pacific.....                              | 2                  | 186               |
| Toledo Railway & Terminal Co.....               | 1                  | 43                |
| Union Pacific.....                              | 2                  | 155               |
| Wisconsin Central.....                          | 2                  | 39                |
| Total Number Roads, 41.....                     | 162                | 6153              |

GENERAL RAILWAY SIGNAL CO.





# IMPORTANT

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## HOW TO ORDER

On the following pages our latest devices, and many of those which the latest have superseded, are illustrated, described and listed in complete assembly and in detail.

Wherever feasible, we have shown assembled, or in groups, the parts that naturally belong together, and by so doing, we have indicated with greater clearness than could be obtained by description, the use and location of the individual parts. To each of these groups we have given, in heavy type, a number which, if rightly used, will facilitate the finding of any small part.

In ordering apparatus or parts listed in this catalogue, give, in addition to the regular shipping instructions, etc., the *Order Number and Name appearing in LARGE Type*, together with such additional specifications as may be necessary.

### PATTERN NUMBERS ARE NOT ORDER NUMBERS

Attention is called to the fact that pattern numbers which occasionally appear on castings are *not* listed order numbers. Therefore, in ordering, care should be taken to see that the order number is given and not the pattern number. If for any reason a pattern number is given, it should be specifically stated that such is the case. For convenience, a list of pattern numbers with their corresponding order numbers is given on pages 306 to 311, inclusive.

### TO ORDER APPARATUS NOT LISTED

Some of the appliances which have been superseded by improved devices are not illustrated in this catalogue. We are, however, prepared to furnish duplicates of all such apparatus. In ordering a device, or part thereof, of this kind, it will be necessary to give its correct name, exact location, and such information as circumstances may warrant, together with the name of the plant for which it is required. The proper name may be found by reference to a like part that is illustrated in this or other catalogues.

## INTERLOCKER, MODEL 2.

The following list of parts will indicate what is required when it is desired to add a new lever to an existing Interlocker without individual Polarized Relays on Terminal Board.

| Order No. | LIST OF PARTS.   | List Price. |
|-----------|--|-------------|
| 3174      | <b>SWITCH LEVER</b> includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever. 1 Guide 3098, 1 Set of Magnets 6765, 1 Indication Selector 2550, 1 Controller 3252, 1 Set of Lead Wires 3082, 1 Glass Insulator 4022, 2 Insulator Blocks 2570, 2 Caps 1222, etc., 1 Tappet Bar 3152, etc., also all necessary Screws, Binding Posts, etc. If Lever Latches are required, give order number .....  | 64.00 ....  |
| 3175      | <b>SWITCH LEVER, SHORT.</b> Parts required when adding a short lever to connect with an existing lever: 1 Lever 3096, 1 Guide 3098, 1 Set of Magnets 6765, 1 Indication Selector 2550, 1 Controller 3252, 1 Set of Lead Wires 3082, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps 1222, etc., and all necessary Screws, Binding Posts, Etc. ....   | 60.00 ....  |
| 3176      | <b>HIGH SIGNAL LEVER</b> includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6767, 1 Controller 2676, 1 Set of Lead Wires 3081, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps holding Lever 1222, etc., 1 Tappet Bar 3152, etc. Also all necessary Screws, Binding Posts, Etc. If Lever Latches are required, give order number.....  | 44.00 ....  |
| 3177      | <b>DWARF SIGNAL LEVER</b> includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6766, 1 Controller 2673, 1 Set of Lead Wires 3080, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps 1222, etc., 1 Tappet Bar 3152, etc. Also all necessary Screws, Binding Posts, Etc. If Lever Latches are required, give order number .....  | 48.00 ....  |
| 7916      | <b>DOUBLE LEVER</b> for Switch, Derail, Etc., includes 1 Lever 3096, 1 Lever 3825, (Specify Color or Number of Grip and Number of Lever.) 2 Guides 3098, 2 Sets of Magnets 6765, 2 Indication Selectors 2550, 2 Controllers 3252, 2 Sets of Lead Wires 3082, 4 Insulator Blocks 2570, 2 Glass Insulators 4022, 4 Caps 1222, etc., 1 Tappet Bar 3152, etc. Also all necessary Screws, Binding Posts, Etc. If Lever Latches are required, give order Number..... | 124.00 .... |

Order by NUMBER and NAME Appearing in Large Type.

## INTERLOCKER, MODEL 2.

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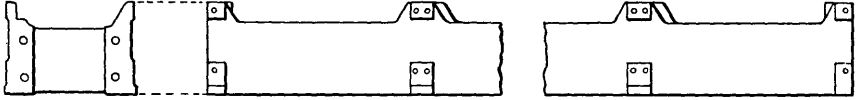
The following list of parts will indicate what is required when it is desired to add a new lever to an existing Interlocker with individual Polarized Relays on Terminal Board.

| Order No.   | LIST OF PARTS.  | List Price.  |
|-------------|---|--------------|
| <b>7917</b> | <b>SWITCH LEVER</b> includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6765, 1 Indication Selector 2550, 1 Controller 3252, 1 Set of Lead Wires 5075, 1 Glass Insulator 4022, 2 Insulator Blocks 2570, 2 Caps 1222, etc., 1 Tappet Bar 3152, etc., 1 Polarized Relay 4931. Also all necessary Screws, Binding Posts, etc. If Lever Latches are required, give order number.....   | 80.00 .....  |
| <b>7787</b> | <b>SWITCH LEVER, SHORT.</b> Parts required when adding a short lever to connect with an existing lever: 1 Lever 3096, 1 Guide 3098, 1 Set of Magnets 6765, 1 Indication Selector 2550, 1 Controller 3252, 1 Set of Lead Wires 5075, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps 1222, etc., 1 Polarized Relay 4931, and all necessary Screws, Binding Posts, etc.....   | 76.00 .....  |
| <b>7919</b> | <b>HIGH SIGNAL LEVER</b> includes 1 Lever 3097. (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6767, 1 Controller 2676, 1 Set of Lead Wires 5076, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps holding lever 1222, etc., 1 Tappet Bar 3152, etc. 1 Polarized Relay 4931. Also all necessary Screws, Binding Posts, Etc. If Lever Latches are required, give order number.....   | 60.00 .....  |
| <b>7920</b> | <b>DWARF SIGNAL LEVER</b> includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6766, 1 Controller 2673, 1 Set of Lead Wires 5077, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps 1222, etc., 1 Tappet Bar 3152, etc. 1 Polarized Relay 4931. Also all necessary Screws, Binding Posts, etc. If Lever Latches are required, give order number.....  | 64.00 .....  |
| <b>7921</b> | <b>DOUBLE LEVER</b> for Switch, Derail, etc., includes 1 Lever 3096, 1 Lever 3825, (Specify Color or Number of Grip and Number of Lever.) 2 Guides 3098, 2 Sets of Magnets 6765, 2 Indication Selectors 2550, 2 Controllers 3252, 4 Insulator Blocks 2570, 2 Glass Insulators 4022, 2 Sets of Lead Wires 5075, 4 Caps 1222, etc., 1 Tappet Bar 3152, etc. 1 Polarized Relay 4931. Also all necessary Screws, Binding Posts, etc. If Lever Latches are required, give order number ..... | 156.00 ..... |

Order by NUMBER and NAME appearing in Large Type.

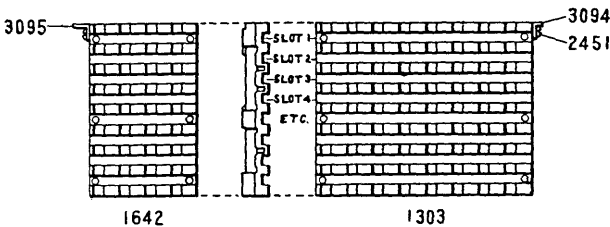
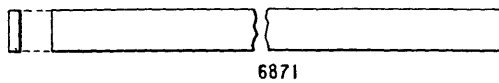
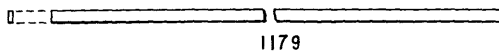
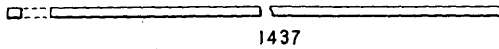
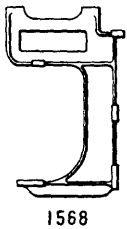
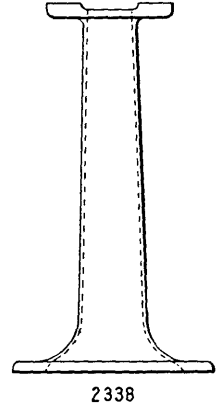
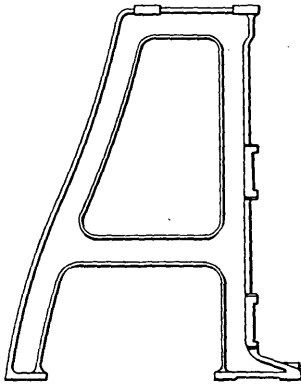
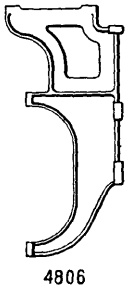
INTERLOCKER, MODEL 2.

FRAME.



3975 - 4 LEVERS  
 1585 - 8 "  
 1968 - 12 "  
 1586 - 16 "  
 1969 - 20 "  
 1587 - 24 "

1970 - 28 LEVERS  
 1588 - 32 "  
 1971 - 36 "  
 1589 - 40 "  
 7718 - 44 "  
 1590 - 48 "



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

INTERLOCKER, MODEL 2.

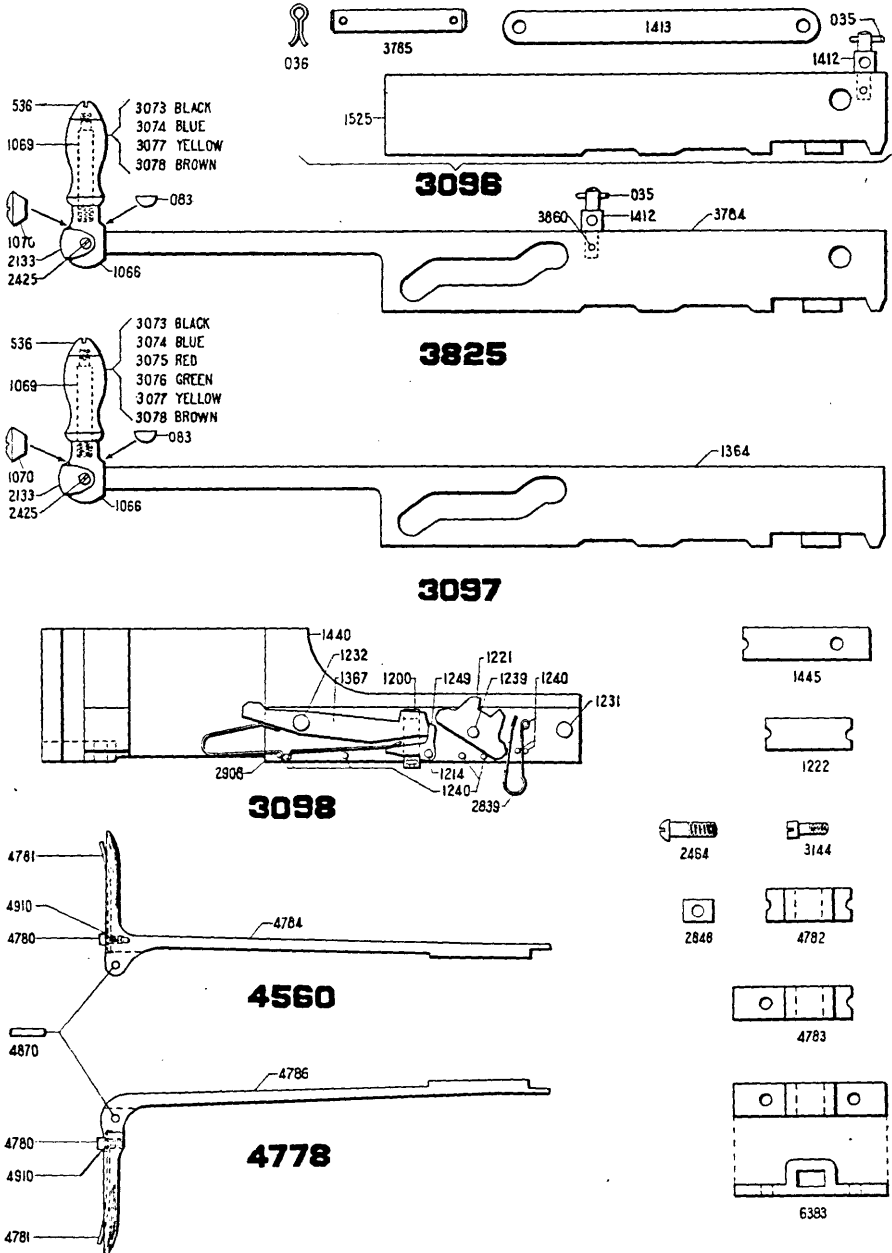
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| Order No. | FRAME.  | List Price. |
|-----------|---|-------------|
| 011       | BOLT with Nut holding Bed to Leg 6872 .....                               | .04         |
| 012       | BOLT with Nut holding Bed to Stand 2338 .....                             | .04         |
| 1048      | NUT for Screw 3065 .....  | .03         |
| 1104      | SCREW holding Bracket 1568 and 4806 to Beds .....                         | .04         |
| 1179      | BAR supporting Controller, per foot .....                                 | .20         |
| 1303      | Plate, single bank, (8 lever) LOCKING PLATE .....                         | 25.00       |
| 1437      | BAR supporting lever Guides, per foot .....                               | .50         |
| 1568      | BRACKET supporting Controllers and 8 $\frac{1}{4}$ " Terminal Board ..... | 3.50        |
| 1585      | BED for 8 lever spaces .....  | 18.00       |
| 1586      | BED for 16 lever spaces .....   | 30.00       |
| 1587      | BED for 24 lever spaces .....   | 42.00       |
| 1588      | BED for 32 lever spaces .....   | 54.00       |
| 1589      | BED for 40 lever spaces .....   | 66.00       |
| 1590      | BED for 48 lever spaces .....   | 78.00       |
| 1642      | Plate, half bank, (4 lever) LOCKING PLATE .....                           | 15.00       |
| 1968      | BED for 12 lever spaces .....   | 24.00       |
| 1969      | BED for 20 lever spaces .....   | 36.00       |
| 1970      | BED for 28 lever spaces .....   | 48.00       |
| 1971      | BED for 36 lever spaces .....   | 60.00       |
| 2338      | STAND for 1968, 12 levers and under .....                                 | 15.00       |
| 2451      | SCREW holding Bracket 3094 or 3095 .....                                  | .02         |
| 2453      | SCREW holding Bar 1179 to Bracket 1568 or 4806 .....                      | .02         |
| 2462      | SCREW holding Bar 1437 to Bracket 1568 or 4806 .....                      | .03         |
| 2474      | SCREW holding Plate 1303 or 1642 .....                                    | .06         |
| 3065      | SCREW used for joining Beds on long Interlockers .....                    | .10         |
| 3094      | BRACKET for supporting right end Lever Guides .....                       | .30         |
| 3095      | BRACKET for supporting left end Lever Guides .....                        | .30         |
| 3975      | BED for 4 lever spaces .....  | 15.00       |
| 4806      | BRACKET for supporting Controllers and 12" Terminal Board .....           | 4.00        |
| 6871      | BAR supporting Locking Plate, per foot .....                              | 1.10        |
| 6872      | LEG for Interlockers requiring 1, 2, or 3 tier of locking .....           | 20.00       |
| 7662      | SCREW for Bar 6871 to Leg 6872 .....                                      | .05         |
| 7718      | BED for 44 lever spaces .....   | 72.00       |
| 8674      | LEG for Interlockers requiring 4 tier of locking .....                    | 30.00       |

Order by NUMBER and NAME appearing in Large Type.

# INTERLOCKER, MODEL 2.

## LEVERS AND LATCHES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

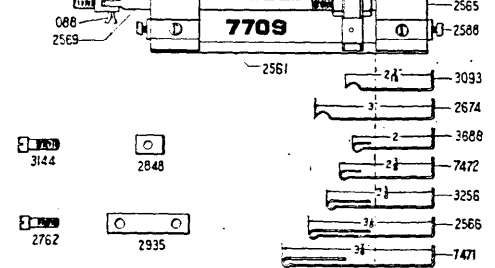
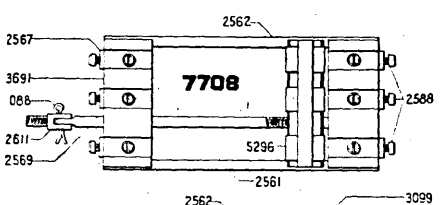
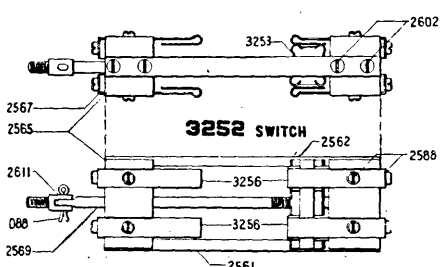
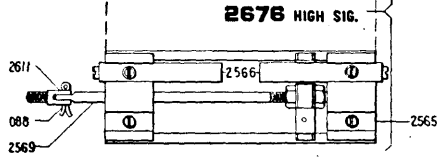
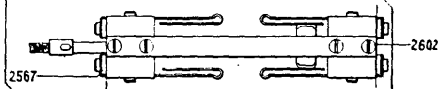
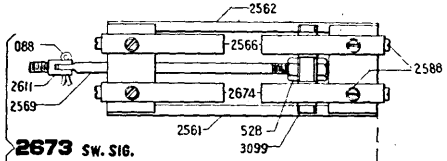
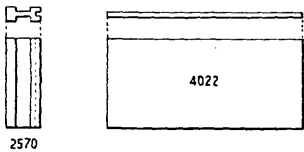
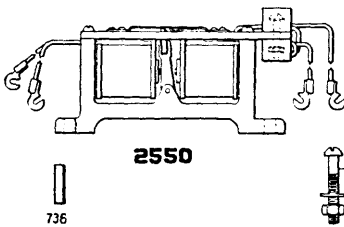
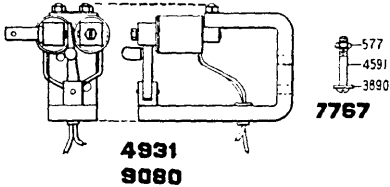
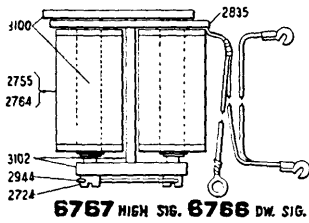
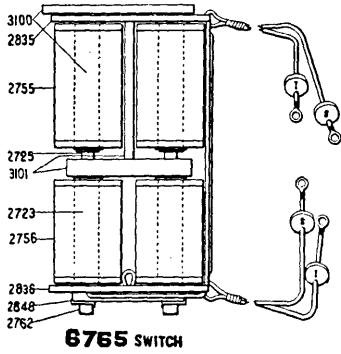
INTERLOCKER, MODEL 2.

| Order No. | LEVERS AND LATCHES.  | List Price. |
|-----------|--|-------------|
| 035       | COTTER Pin $\frac{3}{8}$ " x $\frac{5}{8}$ " (per 100)   | .80         |
| 036       | COTTER Pin $\frac{3}{8}$ " x $\frac{3}{4}$ " (per 100)   | .80         |
| 083       | KEY for 3097 and 3825 holding Base 1066  | .06         |
| 536       | GRIP NUT for 3097 and 3825   | .30         |
| 1066      | GRIP BASE for 3097 and 3825  | 1.00        |
| 1069      | THREADED ROD for 3097 and 3825   | .10         |
| 1070      | NUT for 3097 and 3825  | .20         |
| 1200      | LATCH for 3098   | .40         |
| 1214      | DOG PIN for 3098   | .10         |
| 1221      | CAM for 3098   | 1.00        |
| 1222      | CAP holding Levers to Guides   | .15         |
| 1231      | SPACING PIN for 3098   | .15         |
| 1232      | LATCH PIN for 3098   | .20         |
| 1239      | CAM PIN for 3098   | .10         |
| 1240      | SMALL PIN for 3098   | .05         |
| 1249      | DOG for 3098   | 1.00        |
| 1364      | LEVER for 3097   | 11.00       |
| 1367      | LATCH for 3098   | 1.20        |
| 1412      | STUD for 3096 and 3825   | .30         |
| 1413      | BAR connecting 3096 to 3825  | .40         |
| 1440      | GUIDE for 3098   | 8.00        |
| 1445      | CAP holding end Levers to Guides   | .20         |
| 1525      | LEVER for 3096   | 9.00        |
| 2133      | NUMBER PLATE for 3097 and 3825   | 1.20        |
| 2425      | SCREW for 3097 and 3825  | .02         |
| 2464      | SCREW fastening 3098   | .05         |
| 2839      | CAM SPRING for 3098  | .12         |
| 2848      | LOCK WASHER for 3144   | .01         |
| 2908      | LATCH SPRING for 3098  | .20         |
| 3073      | BLACK GRIP for 3097 and 3825 for Switch  | .50         |
| 3074      | BLUE GRIP for 3097 and 3825 for Derail   | .50         |
| 3075      | RED GRIP for 3097 for Home Signal  | .50         |
| 3076      | GREEN GRIP for 3097 for Distant Signal   | .50         |
| 3077      | YELLOW GRIP for 3097 and 3825 for Movable Point Frog   | .50         |
| 3078      | BROWN GRIP for 3097 and 3825 for Crossing Bar and Lock Levers  | .50         |
| 3096      | SHORT LEVER COMPLETE, used with and moved by 3825  | 10.00       |
| 3097      | LONG LEVER COMPLETE, for Switch or Signal, with Grip and Number as specified                                     | 13.00       |
| 3098      | LEVER GUIDE COMPLETE, for 3096, 3097 and 3825  | 11.00       |
| 3144      | SCREW holding Caps 1222, etc.  | .06         |
| 3784      | LEVER for 3825   | 11.00       |
| 3785      | PIN connecting 3096 and 3825   | .30         |
| 3825      | LONG LEVER COMPLETE, used with 3096 when two switches, etc., are operated together, Grip and Number as specified | 13.00       |
| 3860      | PIN for 3096 and 3825  | .03         |
| 4560      | LEVER LATCH, COMPLETE, for odd number or upturned handles  | 5.00        |
| 4778      | LEVER LATCH, COMPLETE, for even numbers or downturned handles  | 5.00        |
| 4780      | SCREW for 4560 and 4778  | .06         |
| 4781      | SPRING for 4560 and 4778   | .24         |
| 4782      | CAP holding Levers to Guides when 4560 and 4778 are used   | .40         |
| 4783      | CAP holding end Levers to Guides when 4560 and 4778 are used   | .50         |
| 4784      | LEVER LATCH for 4560   | 4.60        |
| 4786      | LEVER LATCH for 4778   | 4.60        |
| 4870      | PIN for 4560 and 4778 to Levers 3097 and 3825  | .10         |
| 4910      | LOCK WASHER for 4560 and 4778  | .02         |
| 6383      | CAP holding Levers to Guides with one or more spare spaces, each side, when 4560 and 4778 are used               | .60         |

Order by NUMBER and NAME appearing in Large Type.

INTERLOCKER, MODEL 2.

MAGNETS, CONTROLLERS, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



INTERLOCKER, MODEL 2.

| Order No. | MAGNETS, CONTROLLERS, ETC.  | List Price. |
|-----------|---|-------------|
| 088       | COTTER Pin, $\frac{3}{16}$ " x $\frac{3}{8}$ " (per 100).....                                     | .80         |
| 506       | BRASS WASHER for $\frac{1}{4}$ " Screw.....   | .01         |
| 528       | BRASS NUT, $\frac{1}{4}$ "—24.....  | .02         |
| 577       | BRASS NUT, No. 10—32.....   | .02         |
| 736       | DOWEL PIN, 2550 to Board.....   | .06         |
| 1411      | SCREW fastening 2550 to Board.....  | .08         |
| 2550      | INDICATION SELECTOR COMPLETE.....   | 15.00       |
| 2561      | BOTTOM STRIP for Controllers 2673, etc.....   | .40         |
| 2562      | TOP STRIP for Controllers 2673, etc.....  | .40         |
| 2565      | END BLOCK for Controllers 2673, etc.....  | 1.00        |
| 2566      | SPRING for Controllers.....   | .40         |
| 2567      | NUT, SPECIAL, for Controllers 2673, etc.....  | .04         |
| 2569      | ROD for Controllers 2673, etc.....  | .30         |
| 2570      | INSULATING BLOCK, separating Controllers 2673, etc.....   | .80         |
| 2588      | SCREW for Controllers 2673, etc.....  | .04         |
| 2602      | SCREW fastening 2561, 2562 to Controllers 2673, etc.....  | .02         |
| 2611      | JAW for Controllers 2673, etc.....  | .20         |
| 2673      | CONTROLLER, COMPLETE, for Dwarf Signal.....   | 7.00        |
| 2674      | SPRING for Controllers.....   | .40         |
| 2676      | CONTROLLER, COMPLETE, for High Signal.....  | 6.00        |
| 2723      | CORE for Magnets 6765.....  | .40         |
| 2724      | SCREW for Magnets 6766 and 6767.....  | .20         |
| 2725      | STUD for Magnet 6765.....   | .20         |
| 2755      | SINGLE COIL for Indicating Magnets 6765 and 6767.....   | 5.00        |
| 2756      | SINGLE COIL for Safety Magnets 6765.....  | 5.00        |
| 2762      | SCREW for Magnets 6765.....   | .06         |
| 2764      | SINGLE COIL for Indicating Magnets 6766.....  | 5.00        |
| 2835      | INSULATING GUIDE for Terminal Wires, for 6765.....  | .20         |
| 2836      | INSULATING GUIDE for Terminal Wires, for 6765.....  | .20         |
| 2848      | LOCK WASHER for Screws 2762 and 3144.....   | .01         |
| 2935      | LOCK WASHER for Screw 2762, for Magnets 6765.....   | .02         |
| 2944      | PIN for Locking Screws for Magnets 6766 and 6767.....   | .02         |
| 3093      | SPRING, SPECIAL for Controllers.....  | .40         |
| 3099      | BLOCK, COMPLETE, with Contacts for 2673, 2676 and 7709.....                                       | 1.00        |
| 3100      | MAGNET CORES, rivetted to Plate, for Magnets 6765.....  | 2.00        |
| 3101      | ARMATURE with Plunger rivetted in for Magnets 6765.....   | 1.50        |
| 3102      | ARMATURE with Plunger rivetted in for 6766 and 6767.....  | 1.20        |
| 3144      | SCREW fastening Controllers to Bar.....   | .06         |
| 3252      | CONTROLLER, COMPLETE, for Switch Lever.....   | 7.00        |
| 3253      | BLOCK, COMPLETE, with Contacts for Controller 3252.....   | 1.00        |
| 3256      | SPRING for Controllers.....   | .40         |
| 3688      | SPRING for Controllers.....   | .40         |
| 3691      | END BLOCK for Controllers with three tiers of contacts.....                                       | 2.00        |
| 3890      | BRASS WASHER for 7767.....  | .01         |
| 4022      | GLASS INSULATOR for separating Controllers.....   | .10         |
| 4591      | SCREW for 7767.....   | .03         |
| 4931      | POLARIZED RELAY, COMPLETE, used for protecting individual functions from crosses.....             | 15.00       |
| 5296      | BLOCK, COMPLETE, with Contacts for three tier Controllers.....                                    | 2.00        |
| 6765      | INDICATING and SAFETY MAGNETS, COMPLETE, for Switch Lever.....                                    | 14.00       |
| 6766      | INDICATING MAGNETS, COMPLETE, for Dwarf Signal Lever.....   | 11.00       |
| 6767      | INDICATING MAGNETS, COMPLETE, for High Signal Lever.....  | 11.00       |
| 7471      | SPECIAL SPRING for Controllers.....   | .40         |
| 7472      | SPECIAL SPRING for Controllers.....   | .40         |
| 7708      | FRAME, COMPLETE, as shown for three tier Controllers.....   | 8.00        |
| 7709      | FRAME, COMPLETE, as shown for two tier Controllers.....   | 5.00        |
| 7767      | SCREW with Nut and Washer for fastening 4931.....   | .06         |
| 9080      | POLARIZED RELAY, COMPLETE, used for protection against crosses between Interlocker Buss Bars..... | 15.00       |

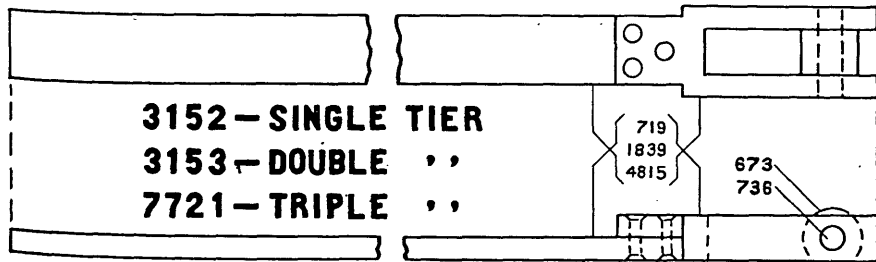
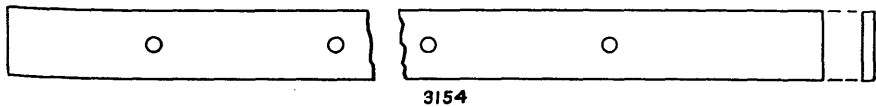
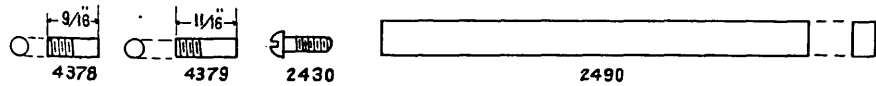
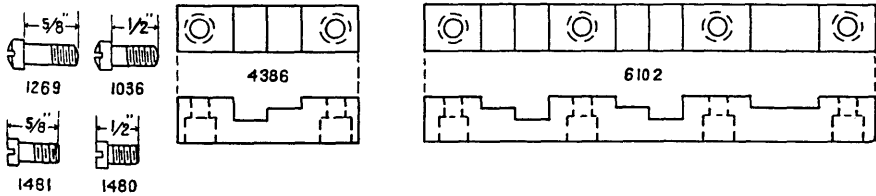
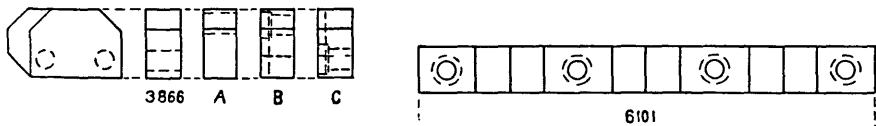
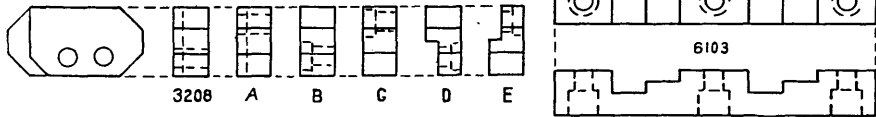
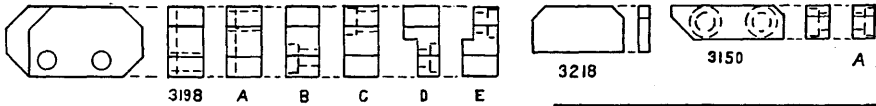
Order by NUMBER and NAME appearing in Large Type.

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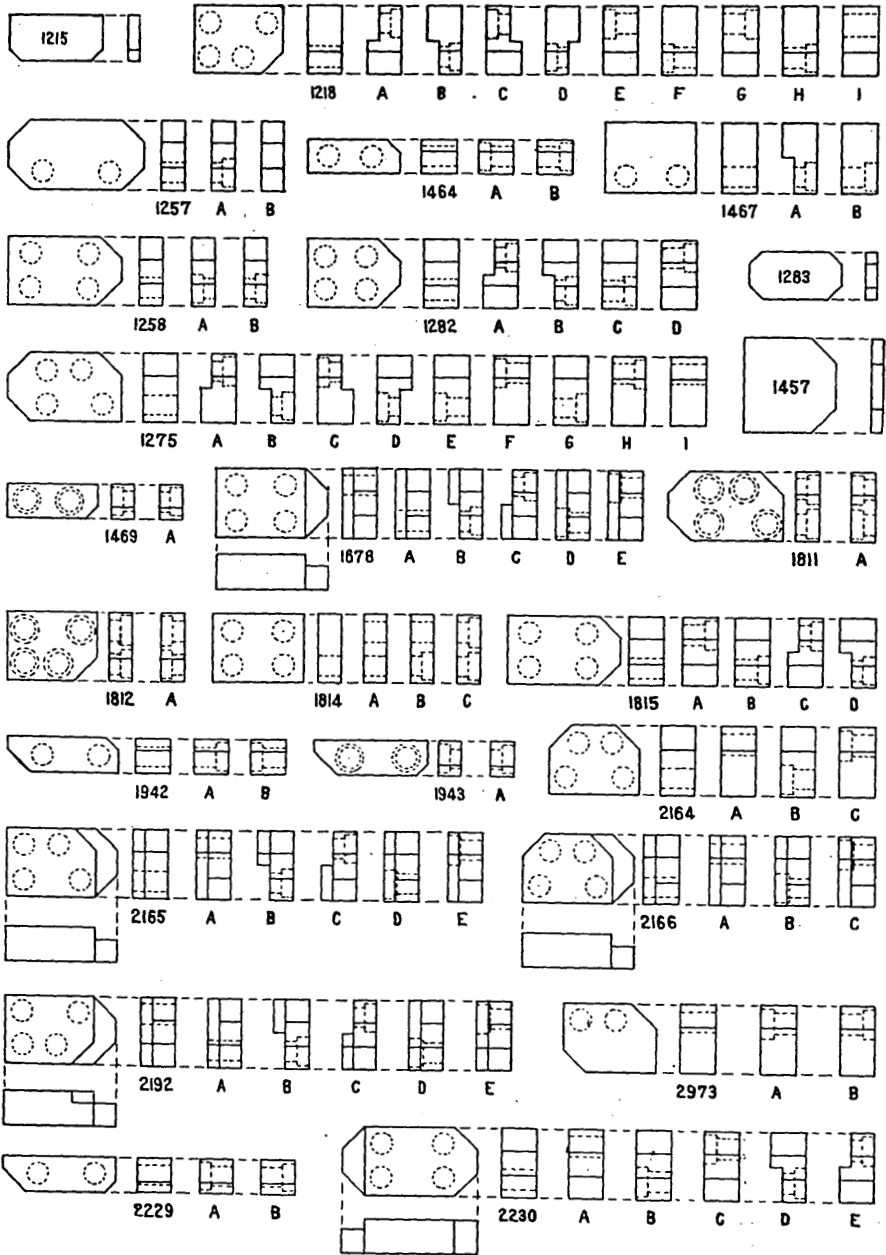
DOGS, GUIDES AND TAPPET BARS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

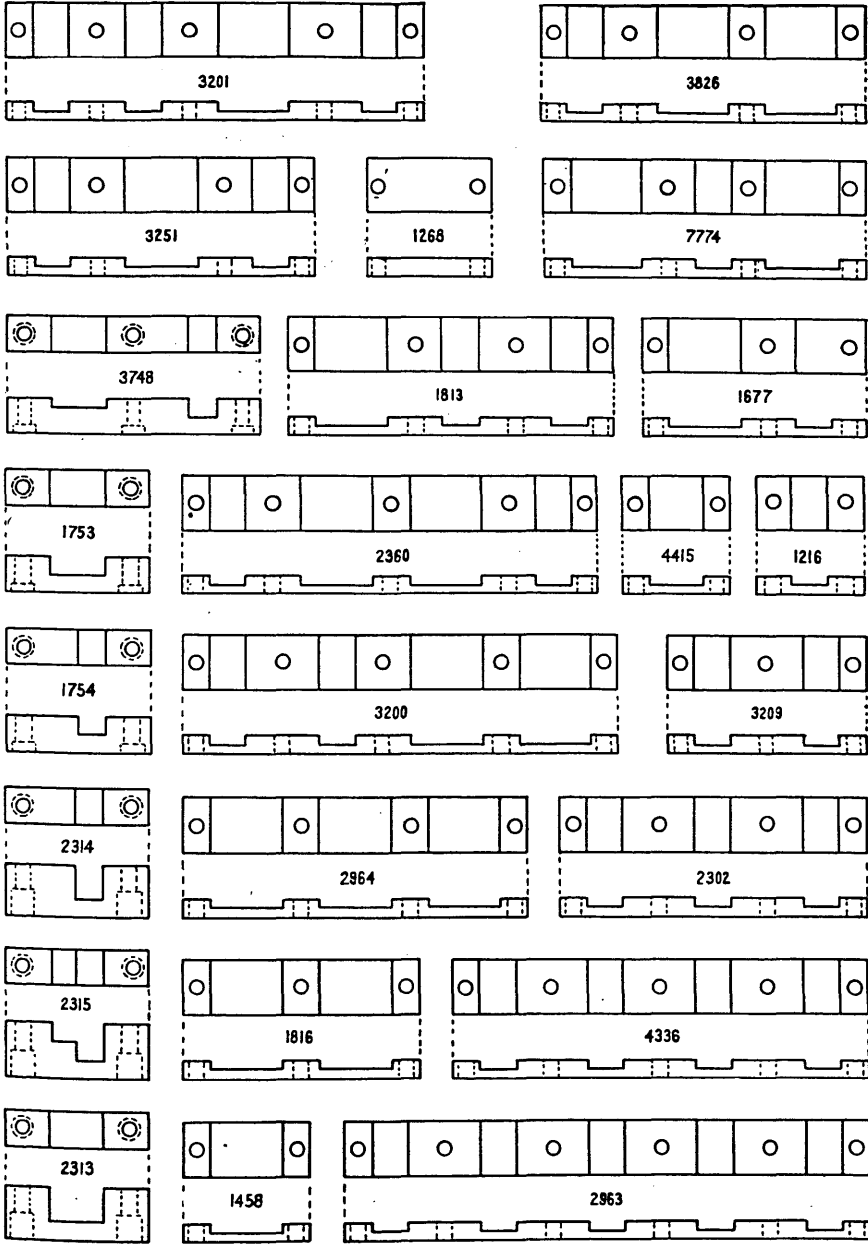
INTERLOCKER, MODEL 2.

DOGS, GUIDES AND TAPPET BARS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DOGS, GUIDES AND TAPPET BARS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## INTERLOCKER, MODEL 2.

## DOGS, GUIDES AND TAPPET BARS

1. All Dogs are shown in front and end views and where necessary, in side views. All possible drillings are shown in dotted lines on the front view of each Dog. The end views show only the drilling that goes with each number.

All Dogs and Guides are shown one-half size to facilitate selection in ordering.

2. In ordering Dogs and Guides for repairs, it would be advisable to refer to the proper dog sheet and give, in addition to the catalogue numbers, the lever numbers, between which the Dogs and Guides are used. For example: "1258-A, Levers 16-17, Slot 3."

NOTE.—The slots are numbered from the top downwards as indicated on the Locking Plate, 1303, page 16.

| Order No.   | List Price. |
|---|-------------|
| 673 ROLLER for 3152, 3153 and 7721 .....  | .15 .....   |
| 719 BAR, TAPPET, for 3152 .....   | 1.40 .....  |
| 736 PIN for 3152, 3153 and 7721 .....   | .06 .....   |
| 1036 SCREW .....  | .04 .....   |
| 1215 DOG, loose Locking .....   | .20 .....   |
| 1216 GUIDE for Dogs .....   | .30 .....   |
| 1218 DOG, front or back locking. When ordering specify whether style A,<br>B, C, D, E, F, G, H or I ..... | .50 .....   |
| 1257 DOG. When ordering specify whether style A or B .....  | .40 .....   |
| 1258 DOG, back locking. When ordering specify whether style A or B .....                                  | .40 .....   |
| 1268 GUIDE, for retaining Dog 1257-B .....  | .20 .....   |
| 1269 SCREW .....  | .05 .....   |
| 1275 DOG, front or back locking. When ordering specify whether style A,<br>B, C, D, E, F, G, H or I ..... | .60 .....   |
| 1282 DOG for front or back locking. When ordering specify whether style<br>A, B, C or D .....             | .50 .....   |
| 1283 DOG, loose Locking .....   | .30 .....   |
| 1457 DOG, loose Locking .....   | .20 .....   |
| 1458 GUIDE for Dog 1457 .....   | .30 .....   |
| 1464 DOG, back locking. When ordering specify whether style A or B .....                                  | .30 .....   |
| 1467 DOG, front or back locking. When ordering specify whether style A<br>or B .....                      | .40 .....   |
| 1469 DOG, front locking. When ordering specify style .....  | .30 .....   |
| 1480 SCREW .....  | .04 .....   |
| 1481 SCREW .....  | .04 .....   |
| 1677 GUIDE .....  | .40 .....   |
| 1678 DOG, front or back locking. When ordering specify style whether A,<br>B, C, D or E .....             | .60 .....   |
| 1753 GUIDE, retaining, for 2 Strips 2490 .....  | .30 .....   |
| 1754 GUIDE retaining, for 1 Strip 2490 .....  | .30 .....   |
| 1811 DOG, front locking. When ordering specify style .....  | .60 .....   |
| 1812 DOG, front locking. When ordering specify style .....  | .40 .....   |
| 1813 GUIDE, Special .....   | .60 .....   |
| 1814 DOG, Coupling. When ordering specify style whether A, B or C .....                                   | .30 .....   |
| 1815 DOG, front or back locking. When ordering specify whether style A,<br>B, C or D .....                | .50 .....   |
| 1816 GUIDE, Special .....   | .40 .....   |
| 1839 BAR, TAPPET, for 3153 .....  | 1.90 .....  |

Order by NUMBER and NAME appearing in Large Type.

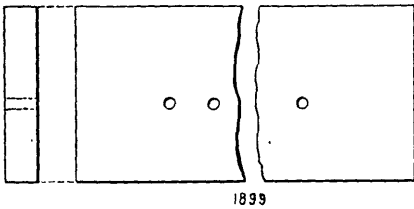
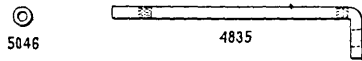
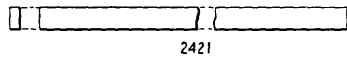
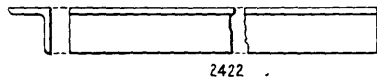
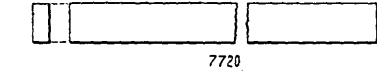
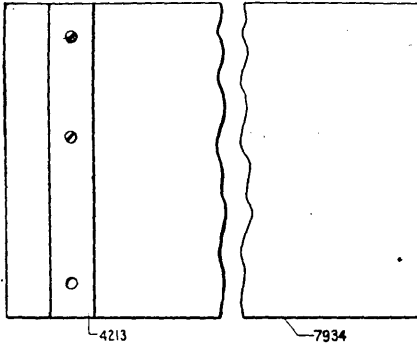
INTERLOCKER, MODEL 2.

| Order No. | DOGS, GUIDES AND TAPPET BARS.—CONT.  | List Price.  |
|-----------|--|--------------|
| 1942      | DOG, back locking When ordering specify whether style A or B . . .                                   | .40 . . . .  |
| 1943      | DOG, front locking When ordering specify style . . . . .   | .40 . . . .  |
| 2164      | DOG, front or back locking When ordering specify whether style A,<br>B or C . . . . .                | .50 . . . .  |
| 2165      | DOG, front or back locking. When ordering specify whether style A,<br>B, C, D or E . . . . .         | .70 . . . .  |
| 2166      | DOG, back locking. When ordering specify whether style A, B or C . .                                 | .80 . . . .  |
| 2192      | DOG, front or back locking. When ordering specify whether style A,<br>B, C, D or E . . . . .         | .70 . . . .  |
| 2229      | DOG, back locking. When ordering specify style . . . . .   | .40 . . . .  |
| 2230      | DOG, front or back locking. When ordering specify style whether A,<br>B, C, D or E . . . . .         | .70 . . . .  |
| 2302      | GUIDE, Special . . . . .   | .60 . . . .  |
| 2313      | GUIDE, Retaining, 2 Strips 2490 . . . . .  | .50 . . . .  |
| 2314      | GUIDE, Retaining, 1 Strip 2490 . . . . .   | .40 . . . .  |
| 2315      | GUIDE, Retaining, 2 Strips 2490 . . . . .  | .60 . . . .  |
| 2360      | GUIDE, Special . . . . .   | .80 . . . .  |
| 2430      | SCREW holding Cap 3154 to Locking Plate . . . . .  | .01 . . . .  |
| 2490      | STRIP, used for connecting the various Dogs or Dog Strips which move<br>together. Per foot . . . . . | .12 . . . .  |
| 2963      | GUIDE, Special . . . . .   | 1.00 . . . . |
| 2964      | GUIDE, Special . . . . .   | .60 . . . .  |
| 2973      | DOG, front or back locking. When ordering specify style . . . . .                                    | .40 . . . .  |
| 3150      | DOG, front locking. When ordering specify style . . . . .  | .40 . . . .  |
| 3152      | TAPPET BAR, COMPLETE, length 16 inches, for single tier Interlocker                                  | 1.50 . . . . |
| 3153      | TAPPET BAR, COMPLETE, length 28 $\frac{3}{4}$ " , for double tier Interlocker . .                    | 2.00 . . . . |
| 3154      | CAP, retaining lower ends of Tappet Bars, per foot . . . . .   | .06 . . . .  |
| 3198      | DOG, front or back locking. When ordering specify whether style A,<br>B, C, D or E . . . . .         | .80 . . . .  |
| 3200      | GUIDE, Special . . . . .   | .80 . . . .  |
| 3201      | GUIDE, Special . . . . .   | .80 . . . .  |
| 3208      | DOG, front or back locking. When ordering specify style whether A,<br>B, C, D or E . . . . .         | .80 . . . .  |
| 3209      | GUIDE, Special . . . . .   | .40 . . . .  |
| 3218      | DOG, loose Locking . . . . .   | .20 . . . .  |
| 3251      | GUIDE, Special . . . . .   | .60 . . . .  |
| 3748      | GUIDE, Special . . . . .   | .60 . . . .  |
| 3826      | GUIDE, Special . . . . .   | .60 . . . .  |
| 3866      | DOG, front or back locking. When ordering specify style whether A,<br>B or C . . . . .               | .80 . . . .  |
| 3867      | DOG, front or back locking. When ordering specify style whether A,<br>B or C . . . . .               | .80 . . . .  |
| 4336      | GUIDE, Special . . . . .   | .80 . . . .  |
| 4378      | SCREW, for use when Dogs are rivetted to Strips . . . . .  | .02 . . . .  |
| 4379      | SCREW, for use when Dogs are rivetted to Strips . . . . .  | .02 . . . .  |
| 4386      | GUIDE, used where Front Strips are set into Dog . . . . .  | .60 . . . .  |
| 4415      | GUIDE, for Retaining Dogs . . . . .  | .30 . . . .  |
| 4815      | TAPPET BAR for 7721 . . . . .  | 2.40 . . . . |
| 6101      | GUIDE, Special . . . . .   | 1.50 . . . . |
| 6102      | GUIDE, Special . . . . .   | 1.20 . . . . |
| 6103      | GUIDE, Special . . . . .   | 1.00 . . . . |
| 7721      | TAPPET BAR, COMPLETE, length 41 $\frac{1}{2}$ inches for triple tier Inter-<br>locker . . . . .      | 2.50 . . . . |
| 7774      | GUIDE, Special . . . . .   | .60 . . . .  |

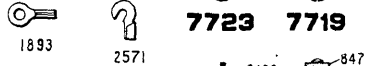
Order by NUMBER and NAME appearing in Large Type.

INTERLOCKER, MODEL 2.

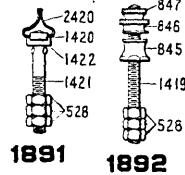
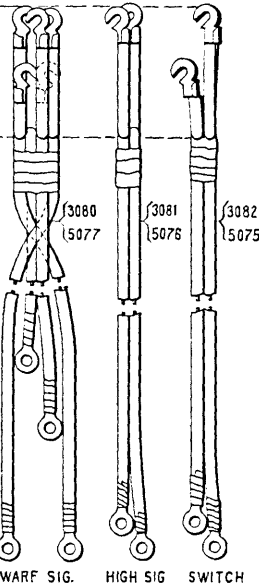
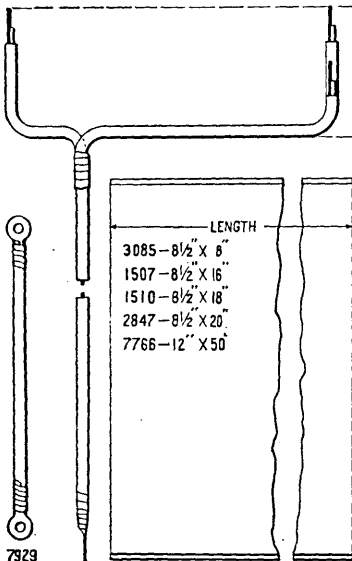
TERMINAL AND FUSE BOARD PARTS.



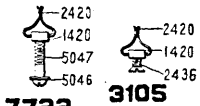
**7767**



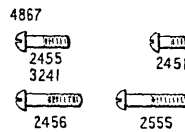
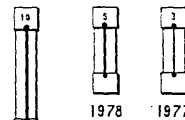
**7723 7719**



**1891 1892**



**7722 3105**



7929

DWARF SIG. HIGH SIG. SWITCH

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



INTERLOCKER, MODEL 2.

| Order No. | TERMINAL AND FUSE BOARD PARTS.   | List Price. |
|-----------|--|-------------|
| 506       | BRASS WASHER for ¼" dia. Screw.....  | .01         |
| 528       | NUT for ¼"-24 Brass Screw.....   | .02         |
| 577       | NUT for No. 10-32 Brass Screw 4591.....  | .02         |
| 845       | BASE for Binding Post 1892.....  | .08         |
| 846       | THUMB NUT for Binding Post 1892.....   | .06         |
| 847       | LOCK NUT for Binding Post 1892.....  | .05         |
| 1407      | TERMINAL, used as required for connections to Binding Post, etc....                          | .05         |
| 1418      | STUD for 7723.....   | .08         |
| 1419      | SCREW for Binding Post 1892.....   | .08         |
| 1420      | NUT for 1891, 3105 and 7722.....   | .02         |
| 1421      | STUD for Fuse Post 1891.....   | .10         |
| 1422      | SQUARE WASHER for Fuse Post 1891.....  | .05         |
| 1507      | SLATE TERMINAL BOARD, 8½" x 16".....   | 1.40        |
| 1510      | SLATE TERMINAL BOARD, 8½" x 18".....   | 1.60        |
| 1891      | FUSE POST Complete.....  | .28         |
| 1892      | BINDING POST Complete.....   | .30         |
| 1893      | TERMINAL, used as required for connections to Binding Post, etc....                          | .05         |
| 1899      | WOOD STRIP guiding incoming wires to Binding Posts, per foot....                             | .20         |
| 1977      | FUSE, 3 AMPERE, for 60 deg. Dwarf Signal.....  | .05         |
| 1978      | FUSE, 5 AMPERE, for High Signal and 90 deg. Dwarf Signal.....                                | .05         |
| 2420      | CLIP for 1891, 3105 and 7722.....  | .06         |
| 2421      | BUSS BAR, ½" x ½", per foot.....   | .40         |
| 2422      | BRACE of Angle Iron, supporting Slate Terminal Board, 8½" wide, per foot.....                | .10         |
| 2436      | SCREW for 3105.....  | .01         |
| 2451      | SCREW fastening 4836 to 7720 and 2422 to 1568.....   | .02         |
| 2455      | SCREW fastening 7934 to Brace 48.5.....  | .02         |
| 2456      | SCREW fastening 7934 and 8½" Slate to 2422.....  | .02         |
| 2555      | SCREW fastening 12" Slate to 7720.....   | .02         |
| 2571      | TERMINAL, used for connections to Controllers.....   | .05         |
| 2847      | SLATE TERMINAL BOARD, 8½" x 20".....   | 1.80        |
| 3080      | LEAD WIRES Complete, connecting from 8½" Terminal Board to Dwarf Signal Controller 2673..... | 2.00        |
| 3081      | LEAD WIRES Complete, connecting from 8½" Terminal Board to High Signal Controller 2673.....  | .80         |
| 3082      | LEAD WIRES Complete, connecting from 8½" Terminal Board to Switch Controller 3252.....       | 1.00        |
| 3085      | SLATE TERMINAL BOARD, 8½" x 8".....  | .70         |
| 3105      | FUSE CLIP Complete for direct connection to Buss Bar.....                                    | .09         |
| 3241      | SCREW fastening Buss Bar 2421 to Slate Terminal Board.....                                   | .03         |
| 3890      | WASHER for Brass Screw 4591.....   | .01         |
| 3964      | SCREW for 7719.....  | .10         |
| 4213      | PLATE for Board 7934.....  | .20         |
| 4591      | SCREW for 7767.....  | .03         |
| 4835      | BRACE supporting Board 7934 to 7720.....   | 1.00        |
| 4836      | BRACE supporting Board 1899 to 7720.....   | .80         |
| 4851      | SCREW fastening Bar 7720 to Bracket 4806.....  | .03         |
| 4867      | FUSE, 10 AMPERE (long) for Switch Lever.....   | .05         |
| 5046      | WASHER for 7722.....   | .01         |
| 5047      | SCREW for 7722.....  | .03         |
| 5075      | LEAD WIRES Complete, connecting from 12" Terminal Board to Switch Controller 3252.....       | 1.20        |
| 5076      | LEAD WIRES Complete, connecting from 12" Terminal Board to High Signal Controller 2676.....  | 1.00        |

Order by NUMBER and NAME appearing in Large Type.

## INTERLOCKER, MODEL 2.

| Order<br>No. | TERMINAL AND FUSE BOARD PARTS.—CONT.   | List Price. |
|--------------|--|-------------|
| 5077         | LEAD WIRES Complete, connecting from 12" Terminal Board to Dwarf Signal Controller 2673.....           | 2.20 .....  |
| 7719         | SCREW COMPLETE, with Nut used on 12" Terminal Board.....   | .16 .....   |
| 7720         | BAR supporting 12" Slate Terminal Board, per foot.....   | .20 .....   |
| 7722         | FUSE CLIP COMPLETE, for direct connection to Buss Bar on 12" Slate Terminal Board .....                | .12 .....   |
| 7723         | STUD with Nuts for connection to Buss Bar.....   | .14 .....   |
| 7766         | SLATE TERMINAL BOARD 12" x 50".....  | 6.00 .....  |
| 7767         | SCREW COMPLETE with Nut and Washer used on 12" Terminal Board.....                                     | .06 .....   |
| 7929         | LEAD WIRE, connecting from Polarized Relay to Binding Post for Dwarf Signal on 12" Terminal Board..... | .20 .....   |
| 7934         | BOARD only, for supporting Indication Selector 2550, per foot.....                                     | .30 .....   |

Order by NUMBER and NAME appearing in Large Type.

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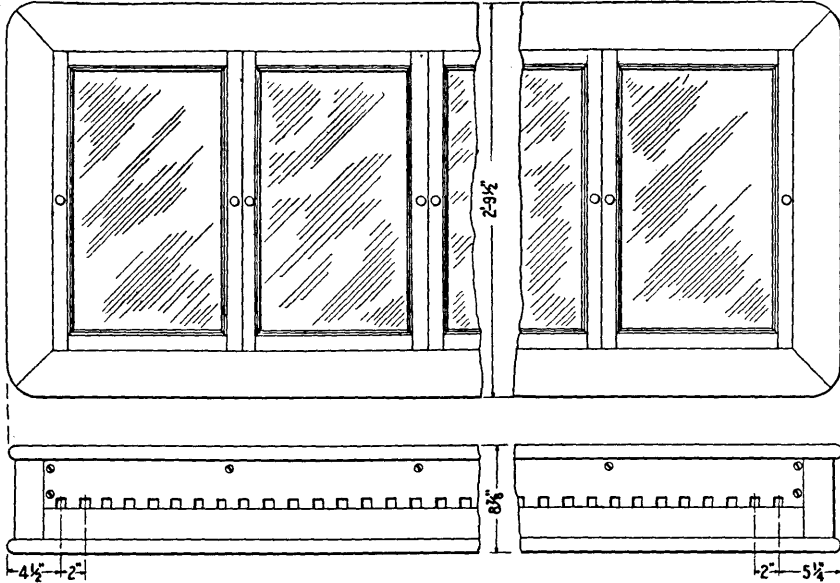
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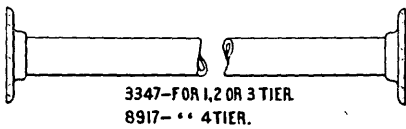
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INTERLOCKER, MODEL 2.

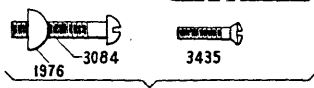
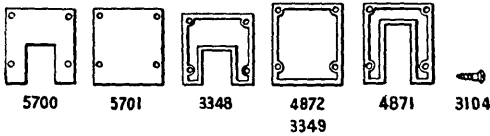
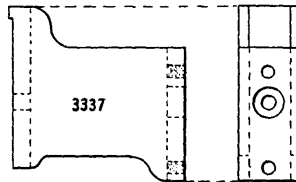
CABINET AND FIXTURES.



|                 |                  |                   |                   |
|-----------------|------------------|-------------------|-------------------|
| 3967 - 4 LEVERS | 6244 - 52 LEVERS | 7729 - 100 LEVERS | 7739 - 148 LEVERS |
| 5203 - 8 "      | 3444 - 56 "      | 7730 - 104 "      | 7740 - 152 "      |
| 4053 - 12 "     | 7725 - 60 "      | 7731 - 108 "      | 7741 - 156 "      |
| 3877 - 16 "     | 3217 - 64 "      | 7732 - 112 "      | 7742 - 160 "      |
| 4212 - 20 "     | 4470 - 68 "      | 7733 - 116 "      | 7743 - 168 "      |
| 3437 - 24 "     | 4666 - 72 "      | 6516 - 120 "      | 7744 - 176 "      |
| 4447 - 28 "     | 7726 - 76 "      | 7734 - 124 "      | 7745 - 184 "      |
| 3446 - 32 "     | 7727 - 80 "      | 7735 - 128 "      | 4472 - 192 "      |
| 3752 - 36 "     | 3336 - 84 "      | 7736 - 132 "      | 7746 - 200 "      |
| 3599 - 40 "     | 6769 - 88 "      | 7737 - 136 "      |                   |
| 7724 - 44 "     | 7728 - 92 "      | 7738 - 140 "      |                   |
| 4471 - 48 "     | 4436 - 96 "      | 4309 - 144 "      |                   |



3347-FOR 1,2 OR 3 TIER.  
8917- " 4 TIER.



**3448**

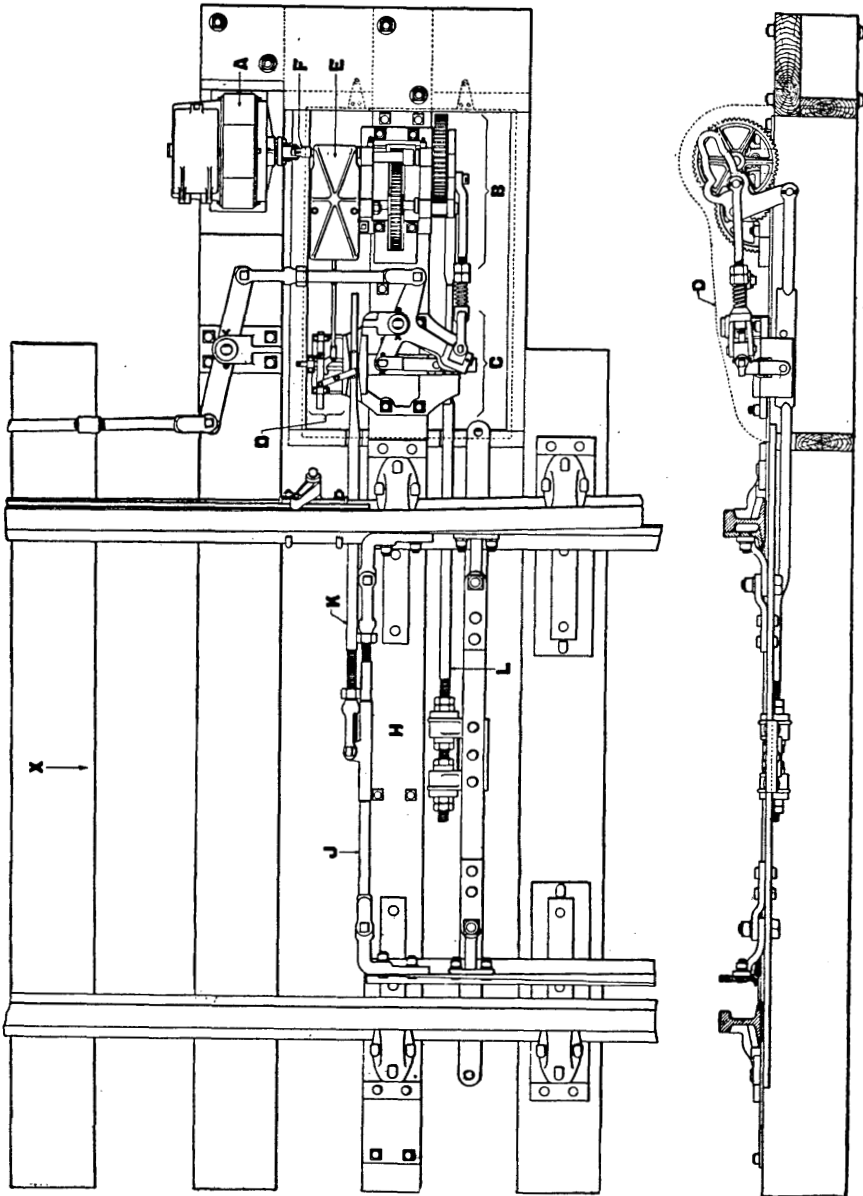
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

INTERLOCKER, MODEL 2.

33

| Order No. | CABINET AND FIXTURES.  | List Price. |
|-----------|--|-------------|
| 1976      | NUT for Screw 3084.....  | .12         |
| 3084      | SCREW fastening 3337 to Interlocker.....   | .06         |
| 3104      | SCREW fastening Number and Spare Plates to Cabinet.....                          | .01         |
| 3217      | CABINET for 64 LEVER Interlocker ( 8 Bank).....                                  | 99.00       |
| 3336      | CABINET for 84 LEVER Interlocker (10½ Bank).....                                 | 126.00      |
| 3337      | BRACKET between Cabinet and Interlocker.....                                     | .80         |
| 3347      | LEG supporting Cabinet for 1, 2 or 3 tier Interlocker.....                       | 4.00        |
| 3348      | NUMBER PLATE (Brass Casting), for Cabinets.....                                  | .30         |
| 3349      | SPARE PLATE (Brass Casting), for Cabinets.....                                   | .30         |
| 3435      | SCREW fastening Cabinet to Bracket 3337.....                                     | .04         |
| 3437      | CABINET for 24 LEVER Interlocker (3 Bank).....                                   | 54.00       |
| 3444      | CABINET for 56 LEVER Interlocker (7 Bank).....                                   | 90.00       |
| 3446      | CABINET for 32 LEVER Interlocker (4 Bank).....                                   | 63.00       |
| 3448      | BRACKET Complete with Screws for Cabinet to Interlocker.....                     | 1 00        |
| 3599      | CABINET for 40 LEVER Interlocker ( 5 Bank).....                                  | 72.00       |
| 3752      | CABINET for 36 LEVER Interlocker (4½ Bank).....                                  | 67.50       |
| 3877      | CABINET for 16 LEVER Interlocker ( 2 Bank).....                                  | 45.00       |
| 3967      | CABINET for 4 LEVER Interlocker ( ½ Bank).....                                   | 31.50       |
| 4053      | CABINET for 12 LEVER Interlocker (1½ Bank).....                                  | 40.50       |
| 4212      | CABINET for 20 LEVER Interlocker (2½ Bank).....                                  | 49.50       |
| 4309      | CABINET for 144 LEVER Interlocker (18 Bank).....                                 | 198.00      |
| 4436      | CABINET for 96 LEVER Interlocker (12 Bank).....                                  | 139.50      |
| 4447      | CABINET for 28 LEVER Interlocker (3½ Bank).....                                  | 58.50       |
| 4470      | CABINET for 68 LEVER Interlocker (8½ Bank).....                                  | 108.00      |
| 4471      | CABINET for 48 LEVER Interlocker ( 6 Bank).....                                  | 81.00       |
| 4472      | CABINET for 192 LEVER Interlocker (24 Bank).....                                 | 261.00      |
| 4666      | CABINET for 72 LEVER Interlocker ( 9 Bank).....                                  | 112.50      |
| 4871      | PLATE, escutcheon, for Cabinet, used when Latches 4560 and 4778 are applied..... | .30         |
| 4872      | SPARE PLATE, for Cabinets, used same as 4871.....                                | .30         |
| 5203      | CABINET for 8 LEVER Interlocker (1 Bank).....                                    | 36.00       |
| 5700      | NUMBER PLATE (Stamped Metal), for Cabinets.....                                  | .30         |
| 5701      | SPARE PLATE (Stamped Metal), for Cabinets.....                                   | .30         |
| 6244      | CABINET for 52 LEVER Interlocker ( 6½ Bank).....                                 | 85.50       |
| 6516      | CABINET for 120 LEVER Interlocker (15 Bank).....                                 | 166.50      |
| 6769      | CABINET for 88 LEVER Interlocker (11 Bank).....                                  | 130.50      |
| 7724      | CABINET for 44 LEVER Interlocker ( 5½ Bank).....                                 | 76.50       |
| 7725      | CABINET for 60 LEVER Interlocker ( 7½ Bank).....                                 | 94.50       |
| 7726      | CABINET for 76 LEVER Interlocker ( 9½ Bank).....                                 | 117.00      |
| 7727      | CABINET for 80 LEVER Interlocker (10 Bank).....                                  | 121.50      |
| 7728      | CABINET for 92 LEVER Interlocker (11½ Bank).....                                 | 135.00      |
| 7729      | CABINET for 100 LEVER Interlocker (12½ Bank).....                                | 144.00      |
| 7730      | CABINET for 104 LEVER Interlocker (13 Bank).....                                 | 148.50      |
| 7731      | CABINET for 108 LEVER Interlocker (13½ Bank).....                                | 153.00      |
| 7732      | CABINET for 112 LEVER Interlocker (14 Bank).....                                 | 157.50      |
| 7733      | CABINET for 116 LEVER Interlocker (14½ Bank).....                                | 162.00      |
| 7734      | CABINET for 124 LEVER Interlocker (15½ Bank).....                                | 175.50      |
| 7735      | CABINET for 128 LEVER Interlocker (16 Bank).....                                 | 180.00      |
| 7736      | CABINET for 132 LEVER Interlocker (16½ Bank).....                                | 184.50      |
| 7737      | CABINET for 136 LEVER Interlocker (17 Bank).....                                 | 189.00      |
| 7738      | CABINET for 140 LEVER Interlocker (17½ Bank).....                                | 193.50      |
| 7739      | CABINET for 148 LEVER Interlocker (18½ Bank).....                                | 202.50      |
| 7740      | CABINET for 152 LEVER Interlocker (19 Bank).....                                 | 207.00      |
| 7741      | CABINET for 156 LEVER Interlocker (19½ Bank).....                                | 211.50      |
| 7742      | CABINET for 160 LEVER Interlocker (20 Bank).....                                 | 216.00      |
| 7743      | CABINET for 168 LEVER Interlocker (21 Bank).....                                 | 225.00      |
| 7744      | CABINET for 176 LEVER Interlocker (22 Bank).....                                 | 234.00      |
| 7745      | CABINET for 184 LEVER Interlocker (23 Bank).....                                 | 243.00      |
| 7746      | CABINET for 200 LEVER Interlocker (25 Bank).....                                 | 270.00      |
| 8917      | LEG supporting Cabinet for 4 tier Interlocker.....                               | 5.00        |

## SWITCH AND LOCK MOVEMENT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

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### DESCRIPTION

On the opposite page is shown a plan view of a complete Switch and Lock movement layout for a left-hand Split Switch.

The layout in general consists of (1) Motor, (2) Switch Machine, (3) Switch Connections, and (4) Detector Bar and Connections.

(1) Motor (A) is shown complete and in detail on pages 36 and 39.

(2) Switch Machine consists of the Gear Frame (B); Lock Movement (C); Pole Changer Movement (D); Reversible Pole Changer (E); Connecting Shaft (F), and Cover (G). It is made either right or left hand, as specified. A right or left hand switch is one in which the mechanism is respectively to the right or left of an observer standing between the rails (as at X on opposite page) facing the switch points.

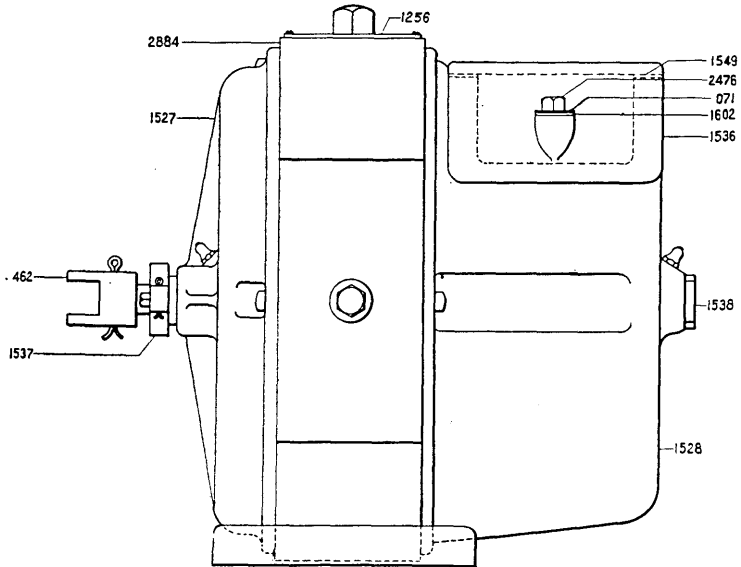
Switch Machines are the same for Derails, Single Switches, Single and Double Slip Switches, Movable Point Frogs, Crossing Bars, Scotch Block, etc. Details of Switch Machine are shown on pages 40 to 47 inclusive.

(3) Switch Connections consist of Tie Plates (H), with Slide Plates, Brace Plates, etc. Front Rod (J), Lock Rod (K), Throw Rod (L), all of which are subject to variation depending upon the kind of device to be operated and the relative location of the Switch Machine. Details of the various styles of Switch Connections are shown on pages 50 to 69, inclusive.

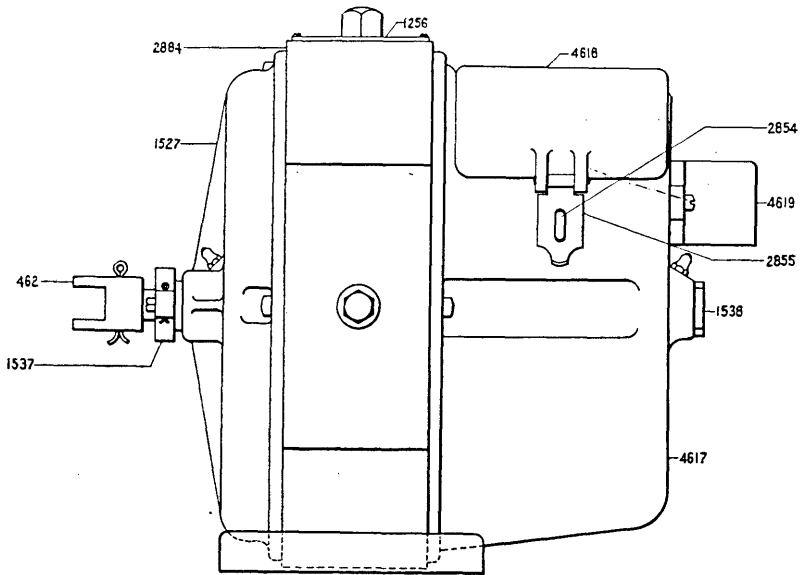
(4) Detector Bars and Connections vary. The style, which depends upon the kind of device to be operated and the relative location of the Switch Machine, is furnished to specifications. Details of Detector Bars and Connections are shown on pages 72 to 97, inclusive.

SWITCH AND LOCK MOVEMENT.

SWITCH MOTOR.



**2892**



**6057**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



SWITCH AND LOCK MOVEMENT.

| Order No. | SWITCH MOTOR.  | List Price |
|-----------|--|------------|
| 026       | KEY for Jaw 462  | .07        |
| 041       | COTTER Pin for 1537 to 1539 (per 100)                    | .80        |
| 045       | COTTER Pin for Jaw 462 (per 100)                         | .80        |
| 052       | GRAPHITE PACKING for Armature Shaft, (per Pound)         | 1.00       |
| 066       | LAG SCREW, Motor to Tie                                  | .05        |
| 071       | WASHER for Cover Screw 2476                              | .01        |
| 0236      | OIL CUP for Bearing Plates 1527 and 4617                 | .15        |
| 462       | JAW for 6057, or 2892                                    | .80        |
| 506       | BRASS WASHER for 1/4" Screw                              | .01        |
| 528       | NUT, 1/2"—24 for Brass Screw                             | .02        |
| 566       | CARBON BRUSH   | .30        |
| 845       | BASE for Binding Post for 1550                           | .08        |
| 846       | THUMB NUT for 1550                                       | .06        |
| 847       | LOCK NUT for 1550  | .05        |
| 1256      | NAME PLATE for 2892 or 6057                              | .80        |
| 1389      | SCREW for 1550   | .10        |
| 1527      | PLATE, Back Bearing, for 2892 or 6057                    | 6.50       |
| 1528      | PLATE, Front Bearing, for 2892                           | 10.00      |
| 1536      | COVER for 2892   | 2.50       |
| 1537      | CAP for Stuffing Box for Plate 1527                      | 1.00       |
| 1538      | CAP for Bearing Plate 1528 or 4617                       | .50        |
| 1539      | SCREW for Cap 1537                                       | .10        |
| 1543      | BRUSH HOLDER, Right Hand, for 1550                       | 2.00       |
| 1544      | Supporting STRIP for 1550                                | .50        |
| 1547      | ARM for 1550   | .36        |
| 1549      | GASKET, Rubber, for 2892                                 | .50        |
| 1550      | BRUSH HOLDERS and Binding Post Complete for 2892 or 6057 | 7.00       |
| 1551      | BRUSH HOLDER, left hand, for 1550                        | 2.00       |
| 1553      | PIN for 1550   | .02        |
| 1572      | SCREW for 1550   | .03        |
| 1573      | BINDING POST, Complete, for 1550                         | .30        |
| 1581      | SPRING for 1550  | .15        |
| 1600      | BRUSH HOLDER, Right Hand, Complete, for 1550             | 2.70       |
| 1601      | LOCK WASHER for Screw 2461                               | .01        |
| 1602      | WASHER, Rubber, for Cover Screw 2476                     | .02        |
| 1649      | BRUSH HOLDER, Left Hand, Complete for 1550               | 2.70       |
| 1767      | SCREW, Compression, for 1771                             | .40        |
| 1768      | INSULATED BUSHING for Lead Wires for 6057                | .30        |
| 1771      | PLUG, Rubber, for Lead Wires for 2892                    | .40        |
| 1772      | WASHER, Insulating, for 1771                             | .10        |
| 2102      | EYE BOLT for lifting 2892 or 6057                        | .40        |
| 2330      | ARMATURE, 110 volt, Complete, for 2892 or 6057           | 76.00      |
| 2400      | WASHER for Screw 2890                                    | .10        |
| 2426      | SCREW fastening 1256 to 2884                             | .01        |
| 2441      | SCREW fastening 1600 and 1649 to 1544 for 1550           | .01        |
| 2461      | SCREW fastening 1550 for 2892 or 6057                    | .04        |
| 2471      | SCREW fastening 1527, 1528 or 4617                       | .04        |
| 2476      | CAP SCREW, for 2892                                      | .06        |
| 2655      | FIELD CORE for 2892 or 6057                              | 3.00       |
| 2762      | SCREW fastening 4619 to 4617                             | .06        |
| 2854      | STAPLE for 6057  | .08        |
| 2855      | HASP for 6057  | .04        |
| 2856      | PIN fastening 2855 to cover 4618                         | .04        |
| 2884      | FIELD CASTING for 2892 or 6057                           | 20.00      |
| 2889      | CAP SCREW holding 2655 to Top                            | .80        |
| 2890      | CAP SCREW, 2 1/4", holding 2655, right and left          | .14        |
| 2891      | CAP SCREW, 1 1/2", holding 2655 to Bottom                | .12        |
| 2892      | MOTOR, 110 VOLT, MODEL 3, Complete                       | 160.00     |

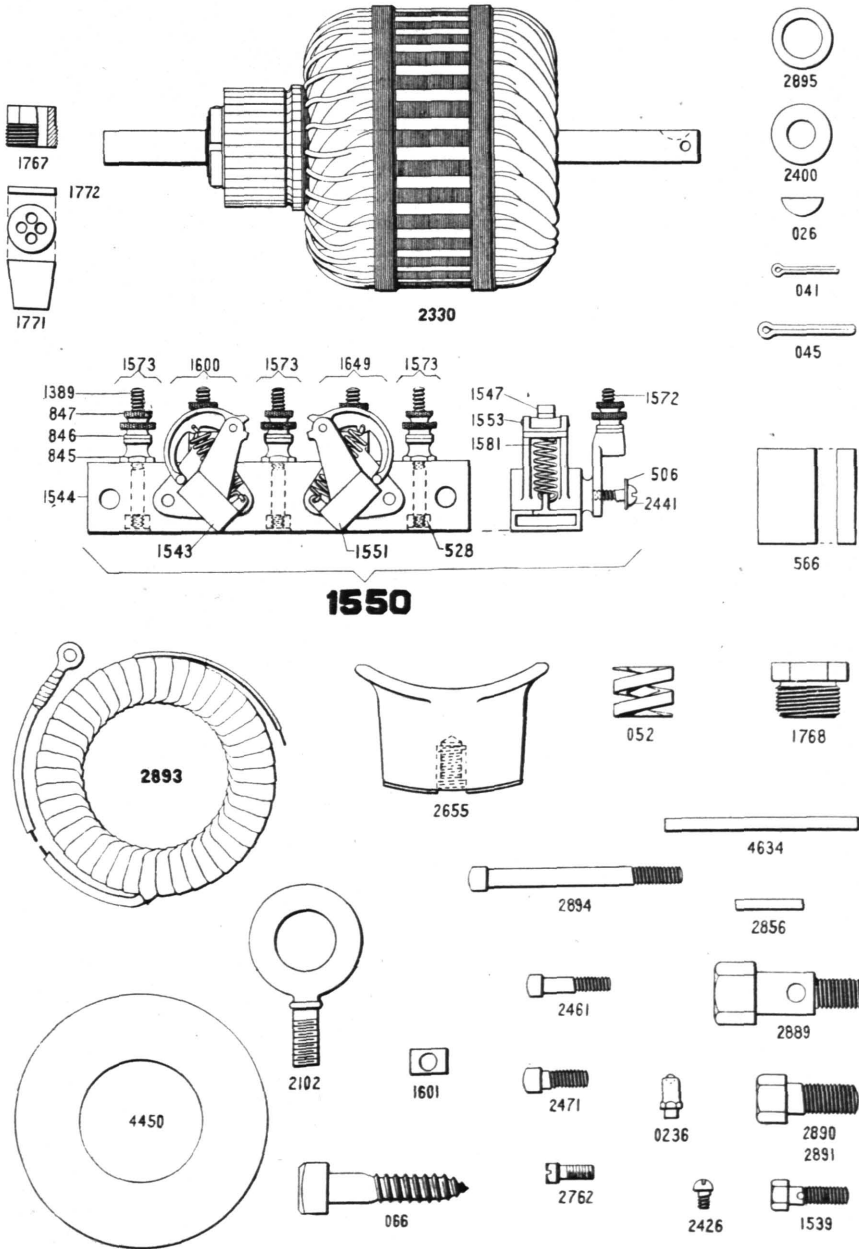
Order by NUMBER and NAME appearing in Large Type.

## SWITCH AND LOCK MOVEMENT.

| Order No. | SWITCH MOTOR.—CONT.  | List Price. |
|-----------|--|-------------|
| 2893      | SINGLE FIELD COIL, 110 VOLT, for 2892 or 6057. (If a Set of Coils are required, order four Coils)..... | 7.50.....   |
| 2894      | SCREW fastening 1527 and 4617 to 2884 at top.....  | .10.....    |
| 2895      | WASHER for Screw 2889.....   | .10.....    |
| 4450      | WASHER, Insulated, between Field Coil 2893 and Field 2884.....   | .20.....    |
| 4617      | PLATE, Front Bearing, for 6057.....  | 10.00.....  |
| 4618      | Hinged COVER for 6057.....   | 2.00.....   |
| 4619      | CAP for Trunking for 6057.....   | .30.....    |
| 4634      | PIN, Hinge, Cover 4618 to Plate 4617.....  | .05.....    |
| 6057      | MOTOR, 110 VOLT, MODEL 4, Complete.....  | 160.00..... |

Order by NUMBER and NAME appearing in Large Type.

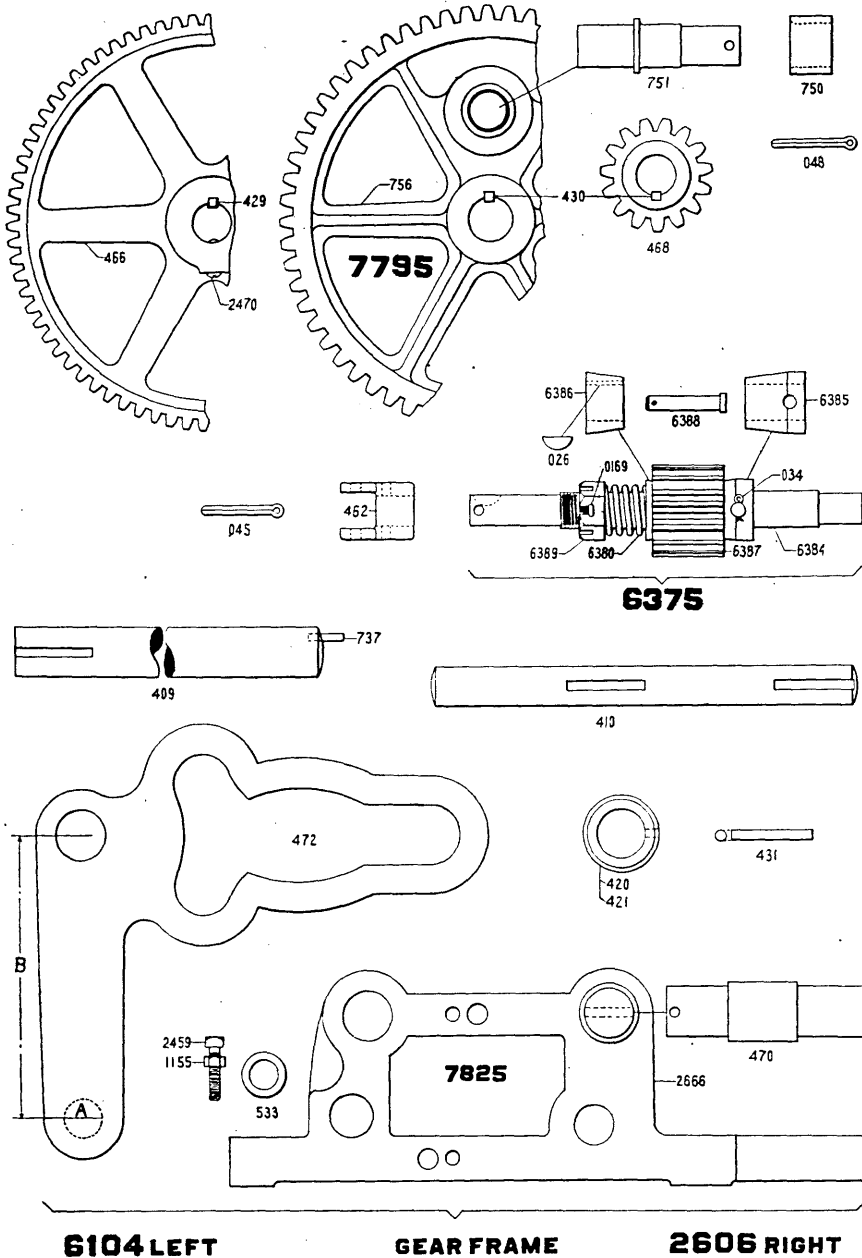
SWITCH MOTOR.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

SWITCH AND LOCK MOVEMENT.



6104 LEFT

GEAR FRAME

2606 RIGHT

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## SWITCH AND LOCK MOVEMENT.

41

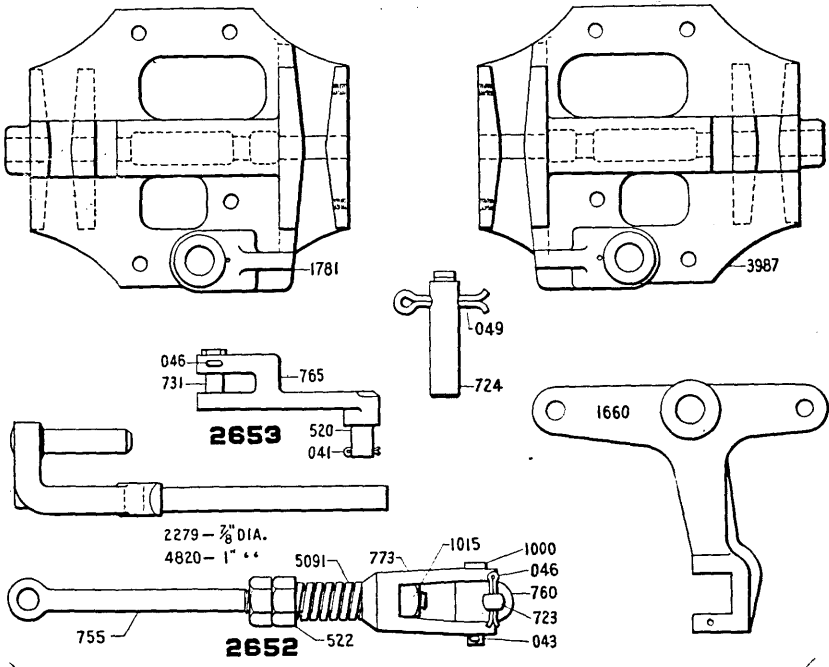
| Order No. | SWITCH MACHINE COMPLETE.  | List Price.  |
|-----------|---|--------------|
| 5018      | Right Hand Switch Machine Complete, includes Gear Frame 2606, Lock Movement 5020, Pole Changer Movement 1882, Reversible Pole Changer 6533, Connecting Shaft 2056 and Cover 7817..... | 160.00 ..... |
| 5019      | Left Hand Switch Machine Complete, includes Gear Frame 6104, Lock Movement 5021, Pole Changer Movement 1910, Reversible Pole Changer 6533, Connecting Shaft 2056 and Cover 7818.....  | 160.00 ..... |

| Order No. | SWITCH MACHINE GEAR FRAME.  | List Price. |
|-----------|---|-------------|
| 026       | KEY for 6375 and Jaw 462.....   | .07 .....   |
| 034       | COTTER PIN for 6375 (per 100).....  | .80 .....   |
| 045       | COTTER PIN for Jaw 462 (per 100).....   | .80 .....   |
| 048       | COTTER PIN for 470 or 751 (per 100).....  | .80 .....   |
| 0169      | COTTER PIN for 6375 (per 100).....  | .80 .....   |
| 409       | MAIN SHAFT.....   | .90 .....   |
| 410       | INTERMEDIATE SHAFT.....   | 1.00 .....  |
| 420       | COLLAR for Shaft 410.....   | .40 .....   |
| 421       | COLLAR for Shaft 409.....   | .40 .....   |
| 429       | KEY for Gear 466.....   | .05 .....   |
| 430       | KEY for Gear 468 or 756.....  | .05 .....   |
| 431       | PIN for Collars 420 and 421 to Shafts 409 and 410.....  | .05 .....   |
| 462       | JAW, Driving, 6375.....   | .80 .....   |
| 466       | INTERMEDIATE GEAR.....  | 7.00 .....  |
| 468       | SMALL GEAR.....   | 2.00 .....  |
| 470       | STUD for Frame 7825.....  | .80 .....   |
| 472       | CRANK CAM. If drilling "A" is desired, specify distance "B".....  | 4.00 .....  |
| 533       | BUSHING, Clutch Shaft, for Frame 2666.....  | .60 .....   |
| 737       | PIN for Shaft 409 for driving Reversible Pole Changer.....  | .04 .....   |
| 750       | ROLLER used for 751.....  | .40 .....   |
| 751       | STUD for 7795.....  | .70 .....   |
| 756       | MAIN GEAR without Stud.....   | 7.00 .....  |
| 1155      | NUT for Screw 2459.....   | .0 .....    |
| 2459      | SET SCREW holding Bushing 533.....  | .03 .....   |
| 2470      | SET SCREW holding Gear 466 to Shaft 410.....  | .03 .....   |
| 2606      | GEAR FRAME Complete, WITH FRICTION CLUTCH 6375, for right hand machine.....                                     | 50.00 ..... |
| 2666      | GEAR FRAME, Casting only.....   | 18.00 ..... |
| 6104      | GEAR FRAME Complete, WITH FRICTION CLUTCH 6375, for left hand machine.....                                      | 50.00 ..... |
| 6375      | FRICTION CLUTCH Complete.....   | 8.00 .....  |
| 6380      | SPRING for 6375.....  | .30 .....   |
| 6384      | SHAFT for 6375.....   | 1.50 .....  |
| 6385      | FRICTION CONE, tight, for 6375.....   | 1.50 .....  |
| 6386      | FRICTION CONE, loose, for 6375.....   | 1.50 .....  |
| 6387      | FRICTION GEAR, for 6375.....  | 2.50 .....  |
| 6388      | PIN holding 6385 to 6384, for 6375.....   | .20 .....   |
| 6389      | NUT, Tension Adjusting, for 6375.....   | .80 .....   |
| 7795      | MAIN GEAR 756 WITH STUD 751 riveted in.....   | 7.70 .....  |
| 7825      | GEAR FRAME 2666 WITH STUD 470. Specify location of Stud. (Right or left). (Stud located right hand in cut)..... | 18.80 ..... |

Order by NUMBER and NAME Appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

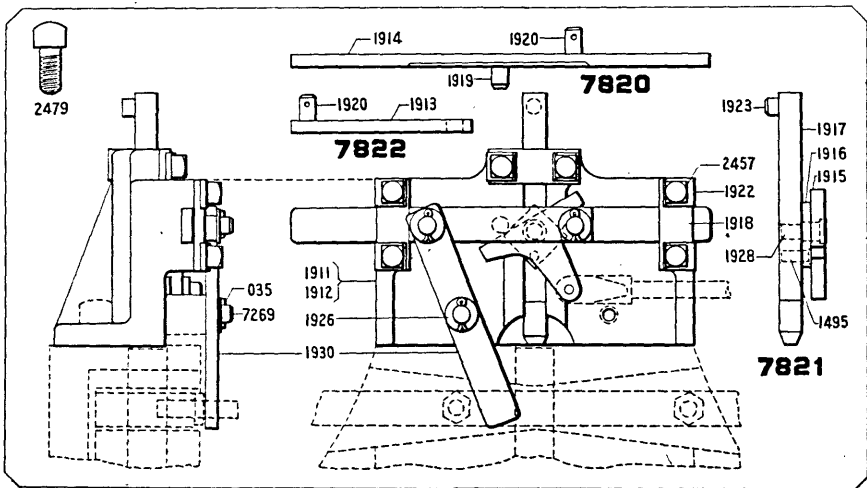
SWITCH MACHINE—LOCK AND POLE CHANGER MOVEMENTS.



5021 LEFT

LOCK MOVEMENT

5020 RIGHT



1910 LEFT

POLE CHANGER MOVEMENT

1882 RIGHT

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## SWITCH AND LOCK MOVEMENT.

43

| Order No. | SWITCH MACHINE—LOCK AND POLE CHANGER MOVEMENTS.   | List Price. |
|-----------|---|-------------|
| 035       | COTTER Pin, $\frac{3}{8}$ "x $\frac{3}{8}$ " (per 100).....                                     | .80         |
| 041       | COTTER Pin, $\frac{1}{2}$ "x $\frac{1}{4}$ " (per 100).....                                     | .80         |
| 043       | COTTER Pin, $\frac{3}{8}$ "x $\frac{1}{2}$ " (per 100).....                                     | .80         |
| 046       | COTTER Pin, $\frac{3}{16}$ "x $\frac{1}{2}$ " (per 100).....                                    | .80         |
| 049       | COTTER Pin, $\frac{1}{4}$ "x $\frac{3}{8}$ " (per 100).....                                     | .80         |
| 520       | STUD for 2653.....  | .24         |
| 522       | NUT for 2652.....   | .15         |
| 723       | PIN for 2652.....   | .30         |
| 724       | PIN, Pivot, for 1660.....   | .30         |
| 731       | PIN for 2653.....   | .30         |
| 755       | DRIVING ROD for 2652.....   | 2.00        |
| 760       | BLOCK for 2652.....   | .50         |
| 765       | LINK for 2653.....  | 1.50        |
| 773       | JAW for 2652.....   | 1.30        |
| 1000      | PIN for 2652.....   | .30         |
| 1015      | NUT for 2652.....   | .06         |
| 1495      | PIN fastening 1916 to 1917 for 7821.....  | .02         |
| 1660      | T. CRANK for Lock Movement 5020 and 5021.....   | 3.00        |
| 1781      | LOCKING FRAME, Left Hand, for 5021.....   | 22.00       |
| 1882      | POLE CHANGER MOVEMENT Complete, for right hand Switch Machine. (Left Hand shown in cut).....    | 9.00        |
| 1910      | POLE CHANGER MOVEMENT Complete, for Left Hand Switch Machine.....                               | 9.00        |
| 1911      | BRACKET with Stud for 1910.....   | 5.50        |
| 1912      | BRACKET with Stud for 1882.....   | 5.50        |
| 1913      | LINK for 7822.....  | .28         |
| 1914      | SLIDE BAR for 7820.....   | .40         |
| 1915      | CRANK for 7821.....   | .60         |
| 1916      | CAM for 7821.....   | .24         |
| 1917      | PLUNGER for 7821.....   | .50         |
| 1918      | CAP for 1882 and 1910.....  | .12         |
| 1919      | STUD for 7820.....  | .08         |
| 1920      | STUD for 7820 and 7822.....   | .12         |
| 1922      | LOCK WASHER for 1882 and 1910.....  | .01         |
| 1923      | STUD for 7821.....  | .08         |
| 1926      | WASHER for 1882 and 1910.....   | .02         |
| 1928      | STUD, Pivot, fastening 1915 to 1917 for 7821.....   | .14         |
| 1930      | LEVER for 1882 and 1910.....  | .40         |
| 2279      | PLUNGER, COMPLETE, $\frac{7}{8}$ ", for old style lock movement. (Super-<br>seded by 4820)..... | 4.00        |
| 2457      | CAP SCREW for 1882 and 1910.....  | .04         |
| 2479      | CAP SCREW holding Pole Changers to Locking Frame.....   | .05         |
| 2652      | DRIVING ROD, COMPLETE, for 5020 and 5021.....   | 5.00        |
| 2653      | LINK, COMPLETE, connecting 1660 and 4820.....   | 2.00        |
| 3987      | LOCKING FRAME, Right Hand, for 5020.....  | 22.00       |
| 4820      | PLUNGER, COMPLETE, 1" Double Locking, for 5020 and 5021.....                                    | 5.00        |
| 5020      | LOCK MOVEMENT, Right Hand Complete.....   | 37.00       |
| 5021      | LOCK MOVEMENT, Left Hand Complete.....  | 37.00       |
| 5091      | SPRING for 2652.....  | .60         |
| 7269      | STUD for 1882 and 1910.....   | .50         |
| 7820      | SLIDE BAR, Complete for 1882 and 1910.....  | .60         |
| 7821      | PLUNGER, COMPLETE, for 1882 and 1910.....   | 1.60        |
| 7822      | LINK Complete for 1882 and 1910.....  | .40         |

Order by NUMBER and NAME appearing in Large Type.





## SWITCH AND LOCK MOVEMENT.

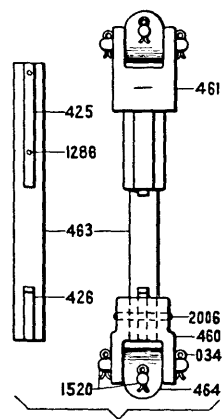
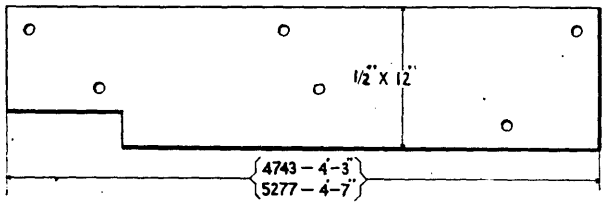
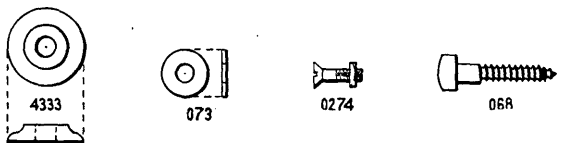
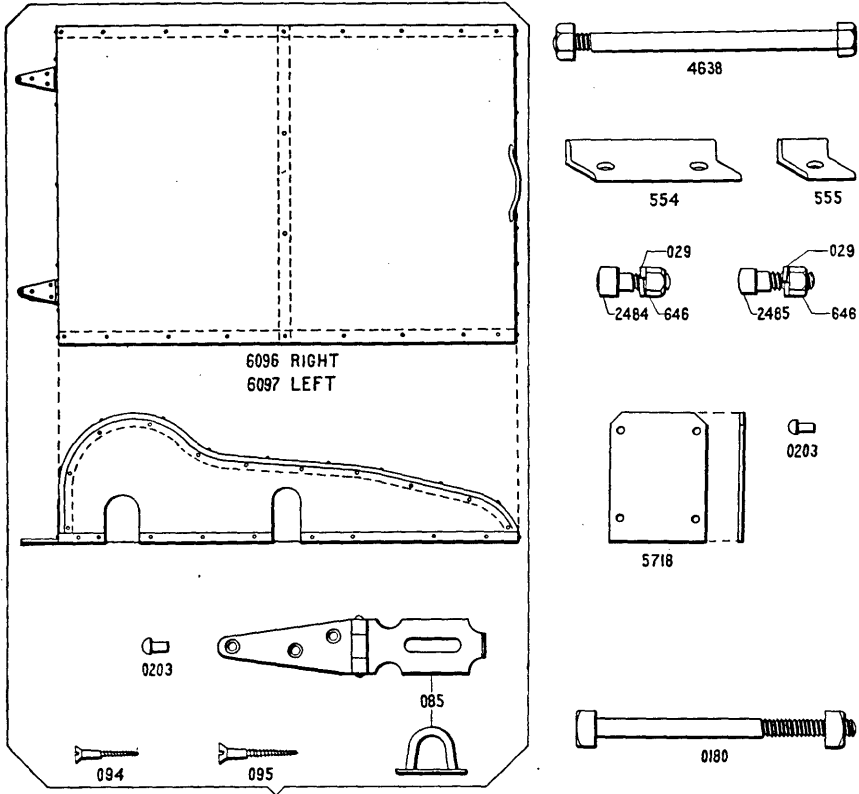
45

| Order No. | REVERSIBLE POLE CHANGER.  | List Price. |
|-----------|---|-------------|
| 036       | COTTER Pin $\frac{3}{8}$ " x $\frac{3}{4}$ " (per 100).....   | .80         |
| 040       | COTTER Pin $\frac{1}{8}$ " x 1" (per 100).....  | .80         |
| 0122      | WOOD SCREW for 3020 and 6489.....   | .01         |
| 506       | WASHER for 3026.....  | .01         |
| 528       | NUT for 3026.....   | .02         |
| 1147      | PIN for 6439.....   | .02         |
| 1156      | NUT for Screw 3057.....   | .02         |
| 1478      | PIN for 3040.....   | .02         |
| 1924      | CAP SCREW for 3040.....   | .06         |
| 1925      | LOCK WASHER for 3034.....   | .01         |
| 2552      | SCREW for Spring 3069.....  | .01         |
| 2639      | JAW for 3040.....   | .50         |
| 2649      | LOCK WASHER for 3040.....   | .01         |
| 2762      | CAP SCREW for 6533.....   | .06         |
| 2965      | LOCK WASHER double, for Screw 3034 when fastening 3026.....   | .02         |
| 3002      | CASE for 6533.....  | 9 00        |
| 3003      | COVER for 6533.....   | 1.50        |
| 3004      | CAP for 6533.....   | .70         |
| 3005      | FELT LINING for joint of Case and Cover.....  | .10         |
| 3013      | SHAFT, Driving, with Disc.....  | 1.50        |
| 3020      | ARMATURE with Cores, Contact and Connecting Rod Complete.....   | 3.50        |
| 3021      | ARMATURE for 3020.....  | 1.50        |
| 3022      | CONTACT BLOCK for 3020.....   | .30         |
| 3023      | CONTACT for 3020.....   | .20         |
| 3024      | CORES for 3020.....   | .50         |
| 3025      | ROD, Connecting, for 3020.....  | .40         |
| 3026      | CONTACT SPRINGS, Complete.....  | 3.00        |
| 3027      | CONTACT BLOCK for 3026.....   | .60         |
| 3028      | CONTACT SPRING for 3026.....  | .40         |
| 3030      | Square WASHER for 3026.....   | .04         |
| 3033      | CONTACT SPRING for 6489.....  | .40         |
| 3034      | CAP SCREW, fastening 3026 and 6489 to Case.....   | .06         |
| 3035      | SCREW, Binding Post, for 3026.....  | .08         |
| 3038      | WASHER used on Shaft 3013.....  | .06         |
| 3040      | ROD, Complete, connecting 6533 to Gear Frame.....   | 1.50        |
| 3041      | ROD for 3040.....   | .30         |
| 3043      | SCREW for 3020.....   | .02         |
| 3044      | SCREW for 3020.....   | .02         |
| 3057      | SET SCREW for adjusting 6533.....   | .03         |
| 3058      | WASHER for Bolt 3264.....   | .14         |
| 3069      | CONTACT SPRING for 6489.....  | .50         |
| 3089      | SCREW holding Cap 3004 to Case 3002.....  | .02         |
| 3257      | LEAD WIRES for 6533.....  | .30         |
| 3264      | BOLT and Nut holding 6533 to Gear Frame.....  | .09         |
| 3914      | BLOCK supporting Lead Wires 3257.....   | .10         |
| 6094      | SINGLE COIL for 6533. If a Set of Coils are required order 4 Coils,<br>but when required to replace a spool wound, order a Tube 6095<br>with each Coil..... | 5.00        |
| 6095      | TUBE used with Coil 6094.....   | .30         |
| 6439      | COMMUTATOR Complete for 6533.....   | 5.00        |
| 6440      | SPRING, Complete, with Roller for 6489.....   | .70         |
| 6443      | SPRING, Top Leaf, for 6489.....   | .30         |
| 6447      | SET SCREW for 6439.....   | .08         |
| 6460      | BLOCK, Contact Spring, for 6489.....  | .24         |
| 6489      | BLOCK, Complete, with Springs for 6533.....   | 2.50        |
| 6533      | REVERSIBLE POLE CHANGER, Complete. In ordering specify<br>whether right or left hand. Right hand shown in cut.....  | 50.00       |

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

COVERS, CONNECTING SHAFT, ETC.



**2056**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

**SWITCH AND LOCK MOVEMENT.**

| Order No. | COVERS, CONNECTING SHAFT, ETC.  | List Price. |
|-----------|---|-------------|
| 029       | NUT LOCK, for $\frac{3}{4}$ " Bolt.....   | .02         |
| 034       | COTTER PIN, $\frac{3}{32}$ " x $\frac{1}{2}$ " (per 100).....   | .80         |
| 068       | LAG SCREW, $\frac{3}{4}$ " x 5", fastening Plates 4743 and 5277 to Ties.....                                    | .08         |
| 073       | WASHER for $\frac{3}{4}$ " Bolt.....  | .02         |
| 085       | HASP with Staple for 7817 and 7818.....   | .10         |
| 094       | WOOD SCREW for 7817 and 7818.....   | .01         |
| 095       | WOOD SCREW for 7817 and 7818.....   | .01         |
| 0180      | BOLT and Nut, $\frac{3}{4}$ " x 12", fastening Plates 4743 and 5277 to Ties.....                                | .19         |
| 0203      | RIVET, fastening 085 and 5718 to Covers 6096 and 6097.....  | .01         |
| 0274      | BOLT and Nut, fastening Covers 6096 and 6097 when Plates 4743 and 5277 are used.....                            | .02         |
| 425       | Key for 2056.....   | .06         |
| 426       | SHORT KEY for 2056.....   | .04         |
| 460       | JAW for 2056.....   | .80         |
| 461       | SLIDING JAW for 2056.....   | 1.20        |
| 463       | SHAFT for 2056.....   | 1.00        |
| 464       | BLOCK for 2056.....   | .50         |
| 554       | NUT LOCK, Double, for Screw 2485, fastening Gear Frame to ties..  | .12         |
| 555       | NUT LOCK, Single, for Screws 2484 and 2485.....   | .06         |
| 646       | NUT for Screws 2484 and 2485.....   | .05         |
| 1286      | PIN for 2056.....   | .02         |
| 1520      | PIN for 2056.....   | .10         |
| 2006      | PIN, Jaw 460 to Shaft 463 for 2056.....   | .02         |
| 2056      | SHAFT, Complete, connecting Motors to Switch Machine.....   | 4.50        |
| 2484      | CAP SCREW holding Locking Frame to Tie Plates.....  | .16         |
| 2485      | CAP SCREW holding Gear Frame to Tie Plates.....   | .20         |
| 4333      | CAST WASHER for $\frac{3}{4}$ " Bolt.....   | .08         |
| 4638      | BOLT with Nut for fastening Switch Machine to Tie Plate and 10" tie (Special).....                              | .50         |
| 4743      | PLATE joining Switch Machine ends of ties, for Switches and Derails   | 7.50        |
| 5277      | PLATE joining Switch Machine ends of ties for Double Slip Switch..  | 8.00        |
| 5718      | PLATE for covering hole for Detector Bar Rod in Covers 6096 and 6097. (Used only in case of Track Circuit)..... | .20         |
| 6096      | COVER, Right Hand for 7817.....   | 13.50       |
| 6097      | COVER, Left Hand, for 7818.....   | 13.50       |
| 7817      | COVER with Hasp, etc., Complete for Right Hand Switch Machine..   | 13.70       |
| 7818      | COVER with Hasp, etc., Complete for Left Hand Switch Machine..  | 13.70       |

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

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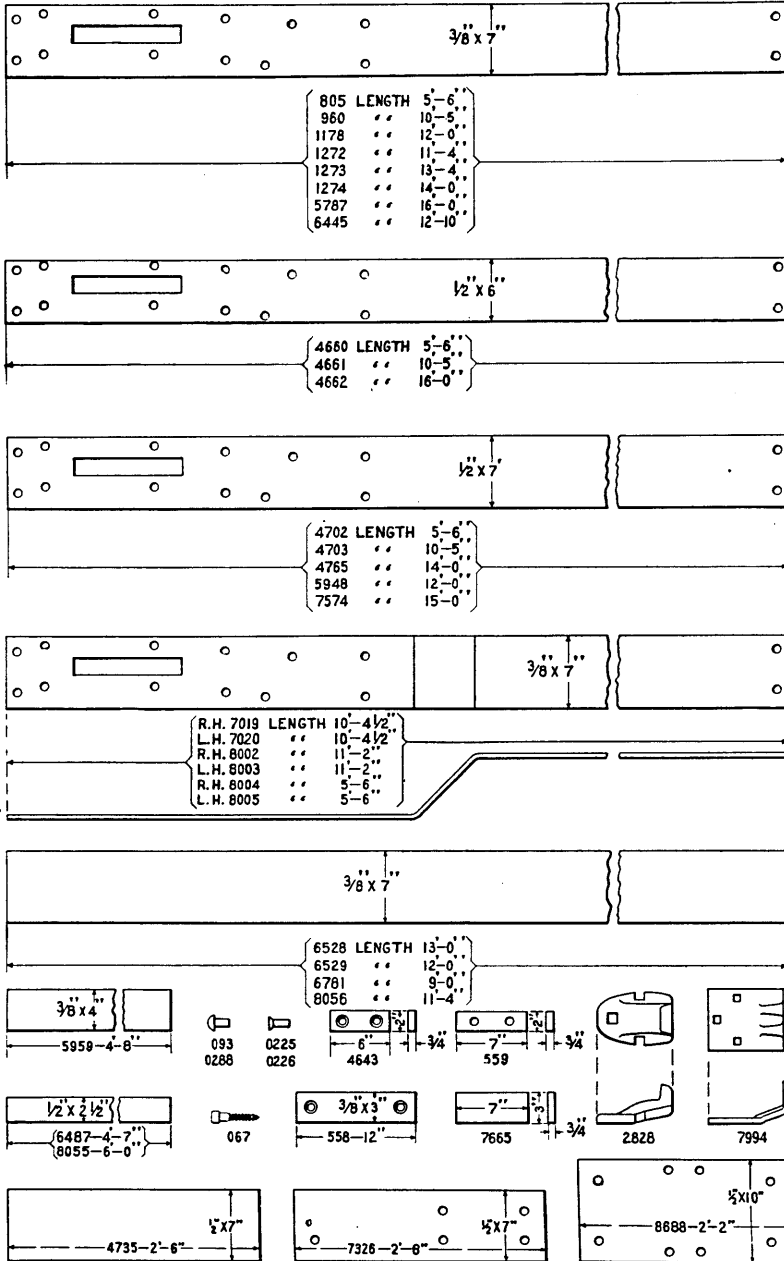
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SWITCH AND LOCK MOVEMENT.

TIE PLATES AND RAIL BRACES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

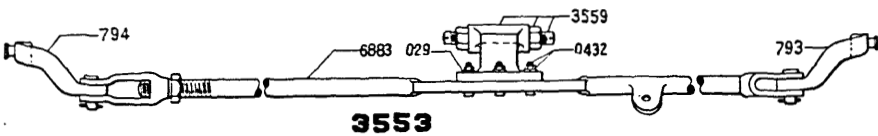
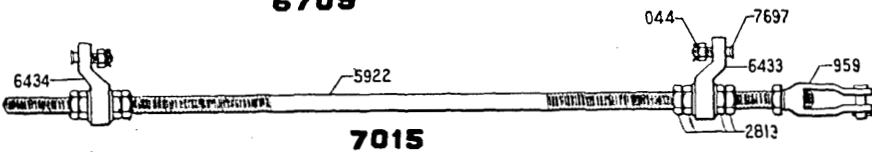
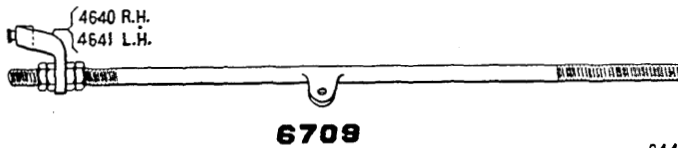
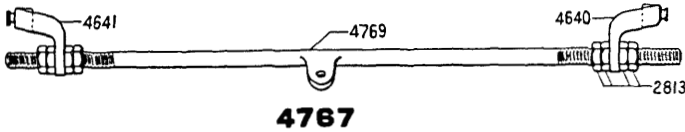
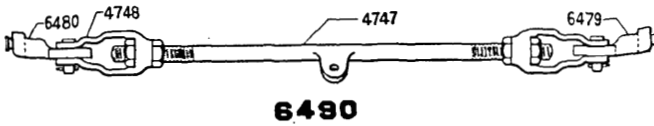
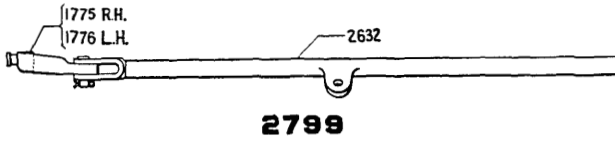
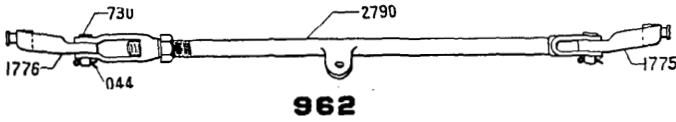
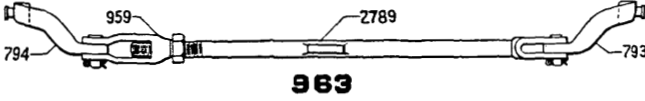
NOTE.—The list of Tie Plates below does not include Rivets, Slide or Rail Brace Plates, which should be ordered separately, if desired.

| Order No. | TIE PLATES AND RAIL BRACES.   | List Price. |
|-----------|---|-------------|
| 067       | LAG SCREW, $\frac{3}{8}$ " x 4" fastening Tie Plates to Ties. . . . .   | .07         |
| 093       | RIVET, $\frac{3}{4}$ " x $1\frac{1}{2}$ ", fastening Rail Brace Plates to a $\frac{3}{8}$ " Tie Plate. . . . .        | .03         |
| 0225      | RIVET, $\frac{3}{8}$ " x $1\frac{1}{4}$ ", for fastening Slide Plates No. 558 to Tie Plates. . . . .                  | .02         |
| 0226      | RIVET, $\frac{3}{8}$ " x $1\frac{3}{8}$ " for fastening Plate 4643 to Tie Plates 4660, etc. . . . .                   | .03         |
| 0288      | RIVET, $\frac{3}{4}$ " x $1\frac{3}{4}$ ", fastening Rail Brace Plate No. 559 to a $\frac{1}{2}$ " Tie Plate. . . . . | .03         |
| 558       | SLIDE PLATE for Tie Plates. . . . .   | .40         |
| 559       | PLATE, Rail Brace. . . . .  | .30         |
| 805       | TIE PLATE, $\frac{3}{8}$ " x 7" x 5' 6". See note above. . . . .  | 5.00        |
| 960       | TIE PLATE, " x 7" x 10' 5". See note above. . . . .   | 8.00        |
| 1178      | TIE PLATE, " x 7" x 12'. See note above. . . . .  | 9.00        |
| 1272      | TIE PLATE, " x 7" x 11' 4". See note above. . . . .   | 8.60        |
| 1273      | TIE PLATE, " x 7" x 13' 4". See note above. . . . .   | 9.80        |
| 1274      | TIE PLATE, " x 7" x 14'. See note above. . . . .  | 10.20       |
| 2828      | RAIL BRACE, (Cast Iron). When ordering send print of rail section . . . . .   | .60         |
| 4643      | PLATE, Rail Brace, for Tie Plate 6" wide. . . . .   | .30         |
| 4660      | TIE PLATE, $\frac{1}{2}$ " x 6" x 5' 6". See note above. . . . .  | 5.50        |
| 4661      | TIE PLATE, $\frac{1}{2}$ " x 6" x 10' 5". See note above. . . . .   | 9.00        |
| 4662      | TIE PLATE, $\frac{1}{2}$ " x 6" x 16'. See note above. . . . .  | 13.00       |
| 4702      | TIE PLATE, $\frac{1}{2}$ " x 7" x 5' 6". See note above. . . . .  | 6.20        |
| 4703      | TIE PLATE, $\frac{1}{2}$ " x 7" x 10' 5". See note above. . . . .   | 10.50       |
| 4735      | Crank Stand PLATE, $\frac{3}{8}$ " x 7" x 2' 6" Blank. . . . .  | 2.00        |
| 4765      | TIE PLATE, $\frac{1}{2}$ " x 7" x 14'. See note above. . . . .  | 13.50       |
| 5787      | TIE PLATE, " x 7" x 16'. See note above. . . . .  | 11.50       |
| 5948      | TIE PLATE, $\frac{1}{2}$ " x 7" x 12'. See note above. . . . .  | 12.00       |
| 5959      | PLATE, SLIDE, $\frac{3}{8}$ " x 4" x 4' 8". . . . .   | 1.60        |
| 6445      | TIE PLATE, $\frac{3}{8}$ " x 7" x 12' 10". See note above. . . . .  | 9.50        |
| 6487      | TIE STRAP, $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x 4' 7". . . . .   | 1.30        |
| 6528      | TIE PLATE, (Blank) $\frac{3}{8}$ " x 7" x 13'. See note above. . . . .  | 8.00        |
| 6529      | TIE PLATE, (Blank) $\frac{3}{8}$ " x 7" x 12'. See note above. . . . .  | 7.50        |
| 6781      | TIE PLATE, (Blank) $\frac{3}{8}$ " x 7" x 9'. See note above. . . . .   | 6.00        |
| 7019      | TIE PLATE, R. H. Offset, $\frac{3}{8}$ " x 7" x 10'-4 $\frac{1}{2}$ ". . . . .  | 9.50        |
| 7020      | TIE PLATE, L. H. Offset, $\frac{3}{8}$ " x 7" x 10'-4 $\frac{1}{2}$ ". . . . .  | 9.50        |
| 7326      | Crank Stand PLATE, $\frac{1}{2}$ " x 7" x 2' 6" punched. . . . .  | 2.20        |
| 7574      | TIE PLATE, $\frac{1}{2}$ " x 7" x 15'. See note above. . . . .  | 14.50       |
| 7665      | RAIL BRACE PLATE, $\frac{1}{2}$ " x 3" x 7" (Special). . . . .  | .24         |
| 7994      | RAIL BRACE, Wrought Iron. When ordering send print of rail section Prices furnished on application. . . . .           | . . . . .   |
| 8002      | TIE PLATE, R. H. Offset, $\frac{3}{8}$ " x 7" x 11' 2". See note above. . . . .                                       | 10.00       |
| 8003      | TIE PLATE, L. H. Offset, $\frac{3}{8}$ " x 7" x 11' 2". See note above. . . . .                                       | 10.00       |
| 8004      | TIE PLATE, R. H. Offset, $\frac{3}{8}$ " x 7" x 5' 6". See note above. . . . .  | 6.50        |
| 8005      | TIE PLATE, L. H. Offset, $\frac{3}{8}$ " x 7" x 5' 6". See note above. . . . .  | 6.50        |
| 8055      | TIE STRAP, $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x 6'. . . . .  | 1.70        |
| 8056      | TIE PLATE, (Blank) $\frac{3}{8}$ " x 7" x 11' 4". . . . .   | 7.20        |
| 8688      | Crank Stand PLATE, $\frac{1}{2}$ " x 10" x 2' 2", punched. . . . .  | 3.00        |

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

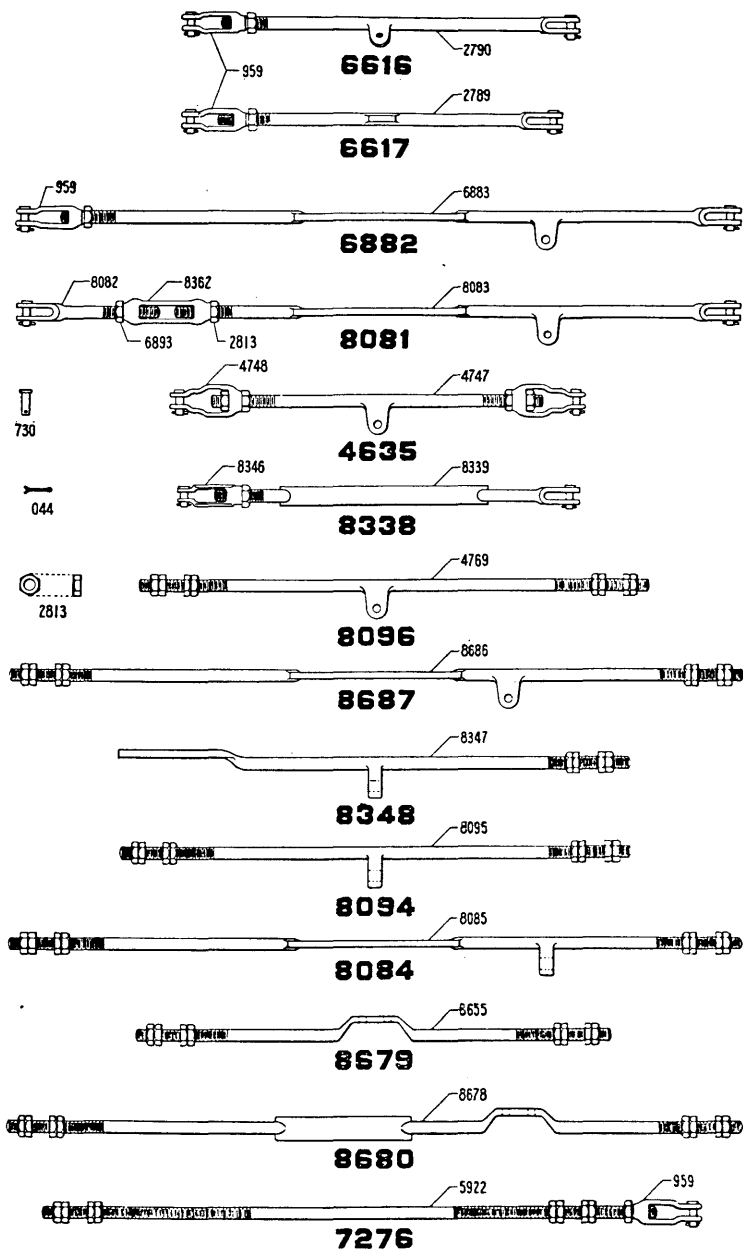
FRONT RODS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



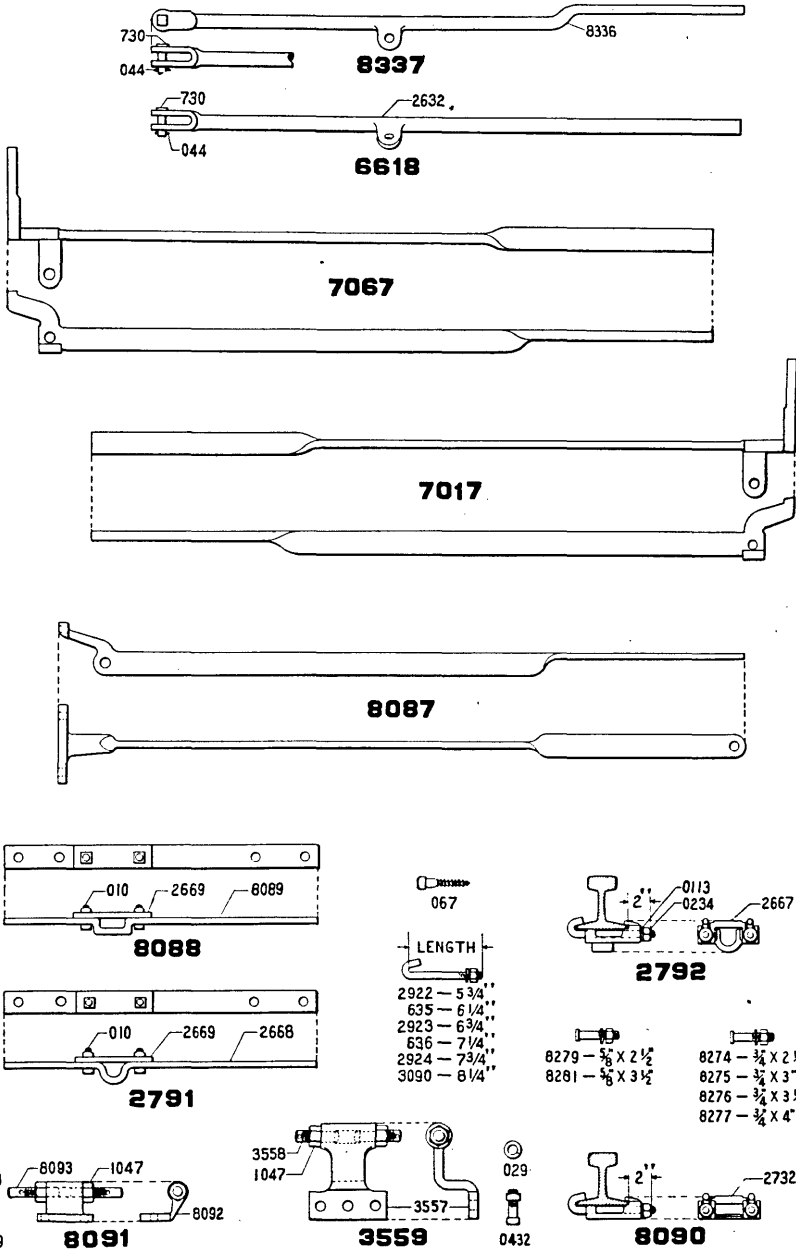
FRONT RODS.—CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

FRONT RODS.—CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## SWITCH AND LOCK MOVEMENT.

55

| Order No. | FRONT RODS.  | List Price. |
|-----------|--|-------------|
| 010       | BOLT with Nut for 2791 or 8088.....  | .04         |
| 029       | NUT LOCK, $\frac{3}{4}$ ".....   | .02         |
| 044       | COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ ", for Pin 730 (per 100).....                                  | .80         |
| 067       | LAG SCREW, $\frac{3}{4}$ " x 4", fastening 2791 or 8088 to ties.....   | .07         |
| 0113      | NUT LOCK, $\frac{3}{8}$ " for 0419, 2792 or 8090.....  | .02         |
| 0234      | NUT for Hook Bolts for 2792 or 8090.....   | .02         |
| 0419      | BOLT with Nut, $\frac{3}{8}$ " x $2\frac{1}{4}$ " holding 8091 to Front Rod.....                             | .07         |
| 0432      | BOLT with Nut, $\frac{3}{4}$ " x $2\frac{3}{4}$ " holding 3559 to Front Rod.....                             | .10         |
| 635       | HOOK BOLT, Complete, $6\frac{1}{4}$ " long.....  | .12         |
| 636       | HOOK BOLT, Complete, $7\frac{1}{4}$ " long.....  | .12         |
| 730       | PIN, $\frac{3}{8}$ " x $2\frac{3}{4}$ " for Front Rods.....  | .07         |
| 793       | SWITCH POINT LUG, Right Hand, for 963.....   | 1.70        |
| 794       | SWITCH POINT LUG, Left Hand, for 963.....  | 1.70        |
| 959       | WROUGHT SCREW JAW, $1\frac{1}{4}$ ", for various Rods.....   | 1.10        |
| 962       | FRONT ROD, Complete, for Switch. When ordering specify whether or not points are reinforced.....             | 7.70        |
| 963       | FRONT ROD, Complete, for S. S. or M. P. F. When ordering specify whether or not points are reinforced.....   | 7.90        |
| 1047      | NUT for 3559 or 8091.....  | .09         |
| 1775      | SWITCH POINT LUG, Right Hand, for 962 or 2799.....   | 1.60        |
| 1776      | SWITCH POINT LUG, Left Hand, for 962 or 2799.....  | 1.60        |
| 2632      | ROD with Lug for 2699 or 6618.....   | 3.00        |
| 2667      | GUIDE, casting only, for 2792.....   | .40         |
| 2668      | GUIDE for 2791.....  | 1.30        |
| 2669      | CAP for 2791 or 8088.....  | .40         |
| 2732      | GUIDE, casting only, for 8090.....   | .40         |
| 2789      | JAW ROD with Lug for 963 or 6617.....  | 2.70        |
| 2790      | JAW ROD with Lug for 962 or 6616.....  | 2.70        |
| 2791      | GUIDE, Complete, for round end Derail Front Rods.....  | 1.60        |
| 2792      | GUIDE, Complete, with Hook Bolts for round end Derail Front Rods. Specify width of rail base.....            | .64         |
| 2799      | FRONT ROD, Complete, for Derail. When ordering specify whether or not points are reinforced.....             | 4.90        |
| 2813      | NUT, $1\frac{1}{4}$ ". Used for various Rods.....  | .09         |
| 2922      | HOLT BOOK, Complete, $5\frac{1}{4}$ " long.....  | .12         |
| 2923      | HOOK BOLT, Complete, $6\frac{3}{4}$ " long.....  | .12         |
| 2924      | HOOK BOLT, Complete, $7\frac{3}{4}$ " long.....  | .12         |
| 3090      | HOOK BOLT, Complete, $8\frac{1}{4}$ " long.....  | .12         |
| 3553      | FRONT ROD, Complete, for Double Slip Switch. When ordering specify whether or not points are reinforced..... | 12.50       |
| 3557      | BRACKET casting only, for 3559.....  | 2.00        |
| 3558      | SCREW, Adjusting, for 3559.....  | .24         |
| 3559      | BRACKET, Complete. Point separator for Double Slip Switch.....   | 2.50        |
| 4635      | FRONT ROD, Complete, for Switch.....   | 3.70        |
| 4640      | SWITCH POINT LUG, Right Hand, for 4767 or 6709.....  | 3.40        |
| 4641      | SWITCH POINT LUG, Left Hand, for 4767 or 6709.....   | 3.40        |
| 4747      | ROD with Lug for 4635 or 6490.....   | 2.32        |
| 4748      | JAW, MALLEABLE, for 4635 or 6490.....  | .48         |
| 4767      | FRONT ROD, Complete, for Switch. When ordering, specify whether or not points are reinforced.....            | 11.30       |
| 4769      | ROD with Lug for 4767 or 8096.....   | 3.30        |
| 5922      | ROD for 7015 or 7276.....  | 2.00        |
| 6433      | SWITCH POINT LUG, Right Hand, for 7015.....  | 1.60        |
| 6434      | SWITCH POINT LUG, Left Hand, for 7015.....   | 1.60        |
| 6479      | SWITCH POINT LUG, Right Hand, for 6490.....  | 1.08        |
| 6480      | SWITCH POINT LUG, Left Hand, for 6490.....   | 1.08        |
| 6490      | FRONT ROD, Complete, for Switch. When ordering specify whether or not points are reinforced.....             | 6.25        |
| 6616      | FRONT ROD, Complete, as shown, for Switch.....   | 4.00        |

Order by NUMBER and NAME appearing in Large Type.

## SWITCH AND LOCK MOVEMENT.

| Order No. | FRONT RODS.—CONT.   | List Price. |
|-----------|---|-------------|
| 6617      | FRONT ROD, Complete, as shown, for Slip Switch or Movable Point Frog.....                         | 4.00        |
| 6618      | FRONT ROD, Complete, as shown, for Derail.....  | 3.08        |
| 6709      | FRONT ROD, Complete, for Derail. When ordering specify, whether or not points are reinforced..... | 7.30        |
| 6882      | FRONT ROD, Complete, as shown, for Double Slip Switch.....  | 6.30        |
| 6883      | JAW ROD, with Lug, for 3553 or 6882.....  | 5.00        |
| 6893      | NUT, 1 $\frac{1}{4}$ " , left hand thread for 8081.....   | .09         |
| 7015      | FRONT ROD, Complete, for Switch.....  | 8.00        |
| 7017      | FRONT ROD and Point Lug combined for Right Hand Derail with independent bolt lock connection..... | 10.30       |
| 7067      | FRONT ROD and Point Lug combined for Left Hand Derail with independent bolt lock connection.....  | 10.30       |
| 7276      | FRONT ROD, Complete, as shown, for Switch.....  | 4.30        |
| 7697      | Bolt with Nut for 7015.....   | .12         |
| 8081      | FRONT ROD, Complete, as shown, for Double Slip Switch.....  | 6.40        |
| 8082      | JAW ROD, with left hand threaded end.....   | .90         |
| 8083      | JAW ROD, with Lug for 8081.....   | 4.00        |
| 8084      | FRONT ROD, Complete, as shown, for Double Slip Switch.....  | 6.84        |
| 8085      | ROD with Lug for 8084.....  | 6.20        |
| 8087      | FRONT ROD, and Point Lug combined for either right or left hand Derail.....                       | 7.75        |
| 8088      | GUIDE, Complete, for flat end Derail Front Rods.....  | 2.00        |
| 8089      | GUIDE for 8088.....   | 1.70        |
| 8090      | GUIDE, Complete, for flat end Derail Front Rods. Specify width of rail base.....                  | .64         |
| 8091      | BRACKET, Complete, Point Separator for Double Slip Switch....                                     | 2.00        |
| 8092      | BRACKET only for 8091.....  | 1.40        |
| 8093      | SCREW, Adjusting, for 8091.....   | .24         |
| 8094      | FRONT ROD, Complete, as shown, for Switch.....  | 4.50        |
| 8095      | ROD, with Lug, for 8094.....  | 3.80        |
| 8096      | FRONT ROD, Complete, as shown, for Switch.....  | 4.00        |
| 8274      | LUG BOLT, $\frac{3}{4}$ " x 2 $\frac{1}{2}$ " , Complete, for plain points.....                   | .10         |
| 8275      | LUG BOLT, $\frac{3}{4}$ " x 3" , Complete, for plain points.....                                  | .10         |
| 8276      | LUG BOLT, $\frac{3}{4}$ " x 3 $\frac{1}{2}$ " , Complete, for reinforced points.....              | .10         |
| 8277      | LUG BOLT, $\frac{3}{4}$ " x 4" , Complete, for extra reinforced points.....                       | .12         |
| 8279      | LUG BOLT, $\frac{5}{8}$ " x 2 $\frac{1}{2}$ " , Complete, for plain points.....                   | .09         |
| 8281      | LUG BOLT, $\frac{5}{8}$ " x 3 $\frac{1}{2}$ " , Complete, for reinforced points.....              | .10         |
| 8336      | JAW ROD, with Lug and flat end for 8337.....  | 3.08        |
| 8337      | FRONT ROD, Complete, as shown, for Derail.....  | 3.16        |
| 8338      | FRONT ROD, Complete, as shown, for Switch.....  | 4.00        |
| 8339      | JAW ROD for 8338.....   | 3.35        |
| 8346      | JAW, Malleable, 1 $\frac{1}{4}$ " , for 8338.....   | .41         |
| 8347      | ROD with Lug and flat end for 8348.....   | 3.70        |
| 8348      | FRONT ROD, Complete, as shown, for Derail.....  | 3.92        |
| 8362      | TURNBUCKLE, 1 $\frac{1}{4}$ " for 8081.....   | 1.20        |
| 8655      | ROD for 8679.....   | 4.80        |
| 8678      | ROD for 8680.....   | 7.00        |
| 8679      | FRONT ROD, Complete as shown for Switch.....  | 5.50        |
| 8680      | FRONT ROD, Complete, as shown for Double Slip Switch.....   | 7.70        |
| 8686      | ROD for 8687.....   | 6.00        |
| 8687      | FRONT ROD, Complete, as shown, for Double Slip Switch.....  | 6.70        |

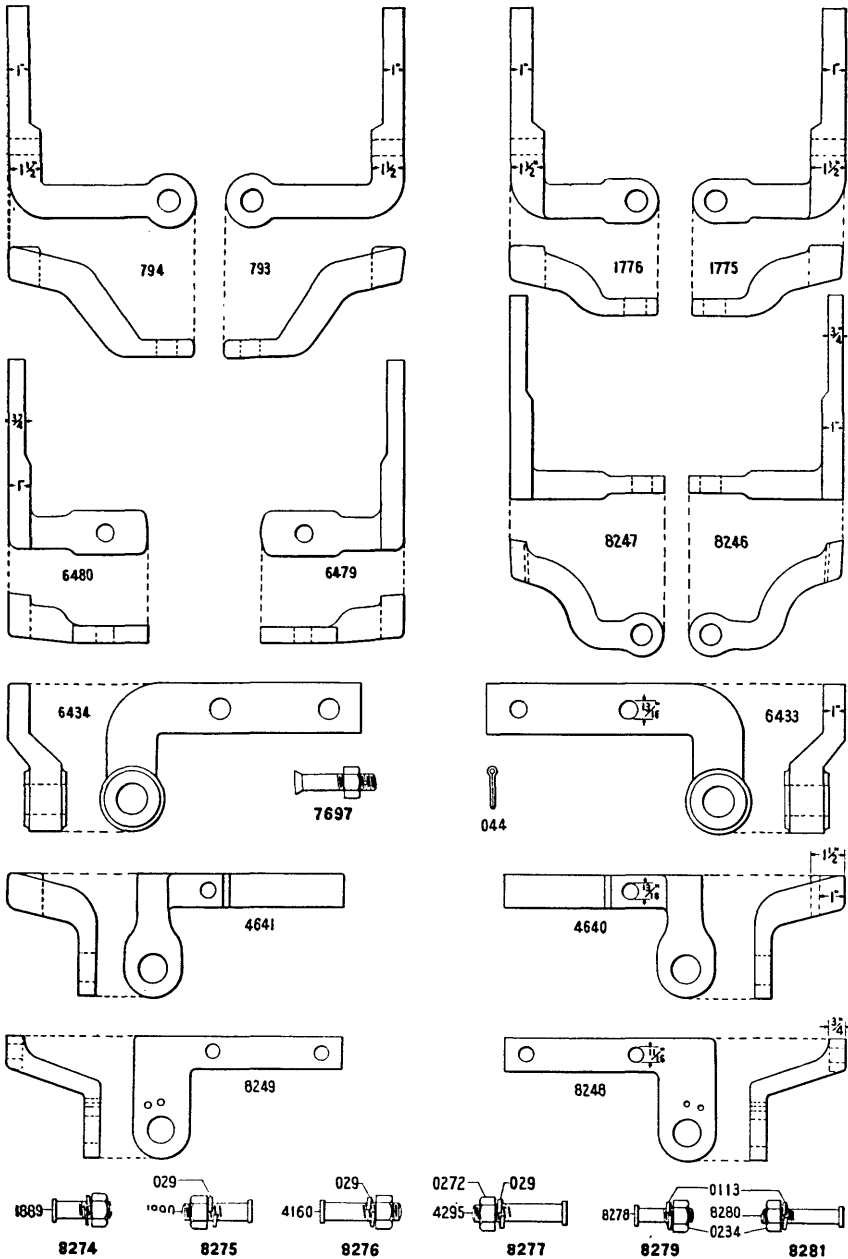
Order by NUMBER and NAME appearing in Large Type.

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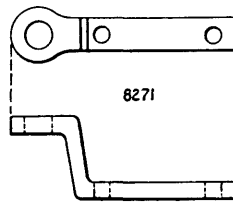
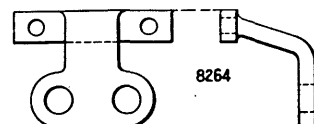
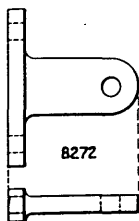
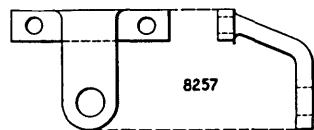
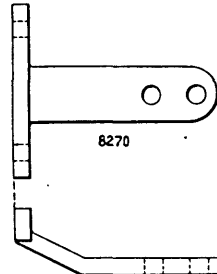
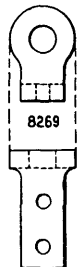
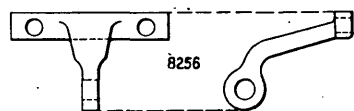
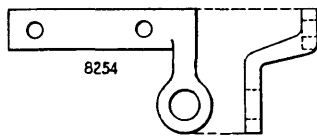
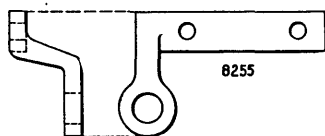
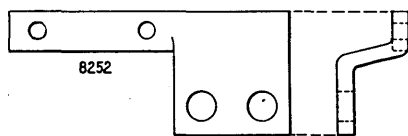
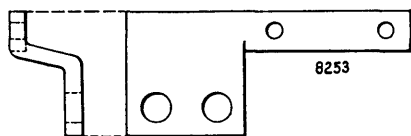
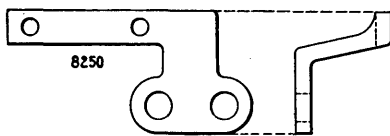
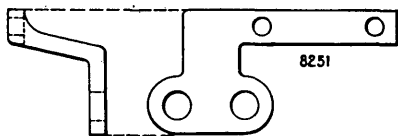
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SWITCH POINT LUGS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

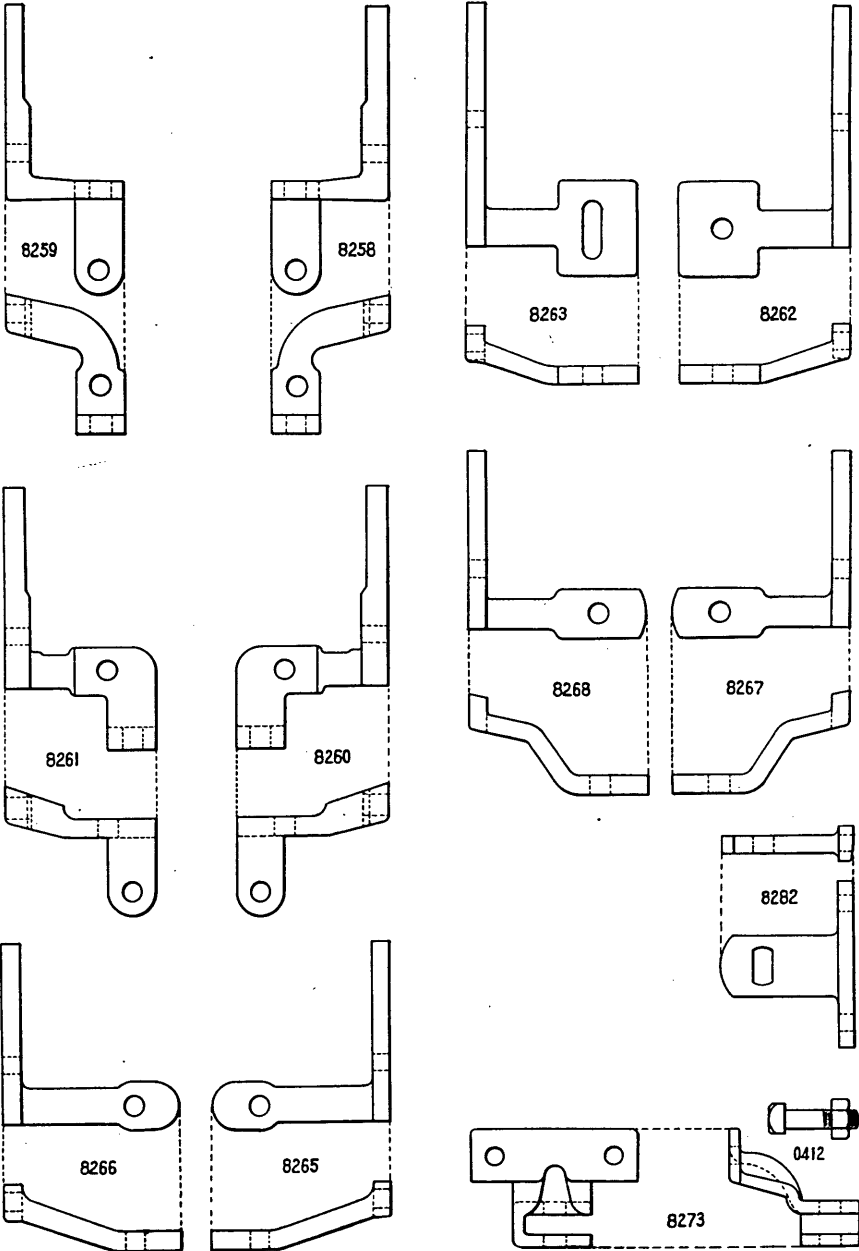
SWITCH POINT LUGS.--CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

SWITCH POINT LUGS.—CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



SWITCH AND LOCK MOVEMENT.

| Order No. | SWITCH POINT LUGS.  | List Price. |
|-----------|---|-------------|
| 029       | NUT LOCK, $\frac{3}{4}$ " for 8274, etc.  | .02         |
| 044       | COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)                                 | .80         |
| 0113      | NUT LOCK, $\frac{5}{8}$ ", for 8279 or 8281   | .02         |
| 0234      | NUT, $\frac{3}{8}$ ", for 8279 or 8281  | .02         |
| 0272      | NUT, $\frac{3}{4}$ ", for 8274, etc.  | .03         |
| 0412      | BOLT with Hexagon Nut, $\frac{1}{4}$ " x $3\frac{1}{2}$ ", for 8273                       | .10         |
| 793       | Switch POINT LUG, Right Hand, for Double Slip or M. P. Frog                               | 1.70        |
| 794       | Switch POINT LUG, Left Hand, for Double Slip or M. P. Frog                                | 1.70        |
| 1775      | Switch POINT LUG, Right Hand, for Single Switch or Derail                                 | 1.60        |
| 1776      | Switch POINT LUG, Left Hand, for Single Switch or Derail                                  | 1.60        |
| 1889      | BOLT, $\frac{3}{4}$ " x $2\frac{1}{2}$ " for 8274   | .08         |
| 1890      | BOLT, $\frac{3}{4}$ " x $3$ " for 8275  | .08         |
| 4160      | BOLT, $\frac{3}{4}$ " x $3\frac{1}{2}$ " for 8276   | .08         |
| 4295      | BOLT, $\frac{3}{4}$ " x $4$ " for 8277  | .10         |
| 4640      | Switch POINT LUG, Right Hand, for Switch or Derail  | 3.40        |
| 4641      | Switch POINT LUG, Left Hand, for Switch or Derail   | 3.40        |
| 6433      | Switch POINT LUG, Right Hand, for Switch or Derail  | 1.60        |
| 6434      | Switch POINT LUG, Left Hand, for Switch or Derail   | 1.60        |
| 6479      | Switch POINT LUG, Right Hand for Switch   | 1.08        |
| 6480      | Switch POINT LUG, Left Hand, for Switch   | 1.08        |
| 7697      | BOLT, $\frac{1}{4}$ " x $3\frac{1}{2}$ " used for Lugs 6433 or 6434                       | .12         |
| 8246      | Switch POINT LUG, Right Hand, for Movable Point Frog                                      | 2.12        |
| 8247      | Switch POINT LUG, Left Hand, for Movable Point Frog                                       | 2.12        |
| 8248      | Switch POINT LUG, Right Hand, for Slip or M. P. F. or Switch                              | 2.64        |
| 8249      | Switch POINT LUG, Left Hand, for Slip or M. P. F. or Switch                               | 2.64        |
| 8250      | Double POINT LUG, Right Hand, for Switch or Derail, with independent bolt lock connection | 3.80        |
| 8251      | Double POINT LUG, Left Hand, for Switch or Derail, with independent bolt lock connection  | 3.80        |
| 8252      | Double POINT LUG, Right Hand, for Switch or Derail with independent bolt lock connection  | 3.96        |
| 8253      | Double POINT LUG, Left Hand, for Switch or Derail, with independent bolt lock connection  | 3.96        |
| 8254      | Switch POINT LUG, Right Hand, for Switch or Derail  | 3.40        |
| 8255      | Switch POINT LUG, Left Hand, for Switch or Derail   | 3.40        |
| 8256      | Switch POINT LUG, for Derail Lock Rod, Right or Left                                      | 1.72        |
| 8257      | Switch POINT LUG, for Derail Lock Rod, Right or Left                                      | 1.80        |
| 8258      | Double Switch POINT LUG, Right Hand, for Derail with independent bolt lock connection     | 3.60        |
| 8259      | Double Switch POINT LUG, Left Hand, for Derail, with independent bolt lock connection     | 3.60        |
| 8260      | Double Switch POINT LUG, Right Hand, for Switch, with independent bolt lock connection    | 3.50        |
| 8261      | Double Switch POINT LUG, Left Hand, for Switch, with independent bolt lock connection     | 3.50        |
| 8262      | Switch POINT LUG, Right Hand, for Switch or Derail  | 3.10        |
| 8263      | Switch POINT LUG, Left Hand, for Switch or Derail   | 3.10        |
| 8264      | Double Switch POINT LUG for Derail, with independent bolt lock connection, right or left  | 2.30        |
| 8265      | Switch POINT LUG, R. H. for Switch or Derail  | .84         |
| 8266      | Switch POINT LUG, L. H. for Switch or Derail  | .84         |
| 8267      | Single POINT LUG, Right Hand, for Double Slip or M. P. F.                                 | 1.70        |
| 8268      | Single POINT LUG, Left Hand, for Double Slip or M. P. F.                                  | 1.70        |
| 8269      | LUG for bolt lock connection  | 1.00        |
| 8270      | Switch POINT LUG. Special   | 2.30        |
| 8271      | Switch POINT LUG, for Front Rod with independent bolt lock connection                     | 2.20        |

Order by NUMBER and NAME appearing in Large Type.

## SWITCH AND LOCK MOVEMENT.

| Order<br>No. | SWITCH POINT LUGS.—CONT.  | List Price. |
|--------------|---|-------------|
| 8272         | SWITCH POINT LUG, Right or Left, for Switch.....  | .84.....    |
| 8273         | SWITCH POINT LUG, Special.....  | 1.50.....   |
| 8274         | LUG BOLT, $\frac{3}{4}$ " x $2\frac{1}{2}$ ", Complete, for plain switch points.....      | .10.....    |
| 8275         | LUG BOLT, $\frac{3}{4}$ " x 3", Complete, for plain switch points.....                    | .10.....    |
| 8276         | LUG BOLT, $\frac{3}{4}$ " x $3\frac{1}{2}$ ", Complete, for reinforced switch points..... | .10.....    |
| 8277         | LUG BOLT, $\frac{3}{4}$ " x 4", Complete, for extra reinforced switch points.....         | .12.....    |
| 8278         | BOLT, $\frac{3}{8}$ " x $2\frac{1}{2}$ " for 8279.....                                    | .07.....    |
| 8279         | LUG BOLT, $\frac{5}{8}$ " x $2\frac{1}{2}$ ", Complete, for plain switch points.....      | .09.....    |
| 8280         | BOLT, $\frac{5}{8}$ " x $3\frac{1}{2}$ ", for 8281.....                                   | .08.....    |
| 8281         | LUG BOLT, $\frac{5}{8}$ " x $3\frac{1}{2}$ ", Complete, for reinforced switch points..... | .10.....    |
| 8282         | SWITCH POINT LUG, Right or Left, for Switch.....  | 1.35.....   |

Order by NUMBER and NAME appearing in Large Type.

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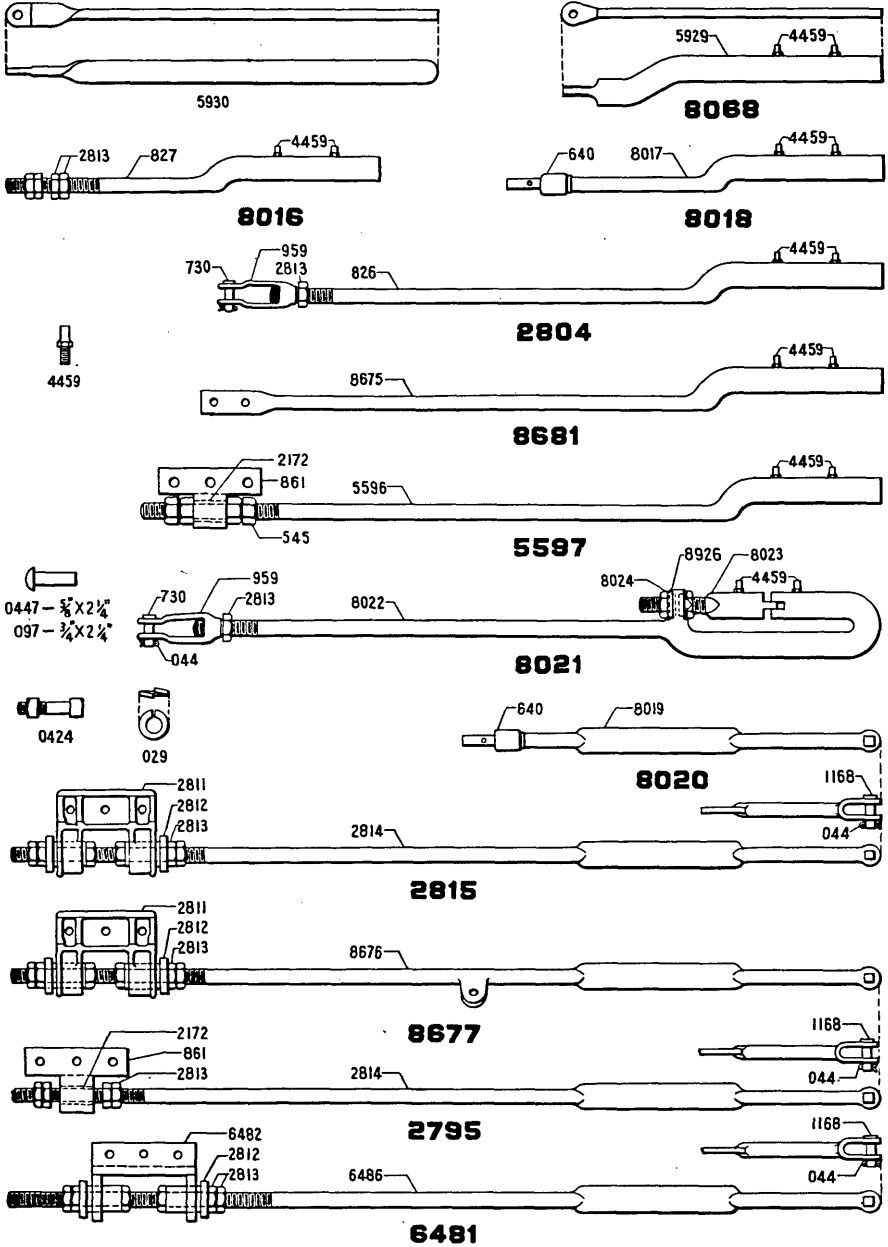
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# SWITCH AND LOCK MOVEMENT.

## LOCK AND THROW RODS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## SWITCH AND LOCK MOVEMENT.

65

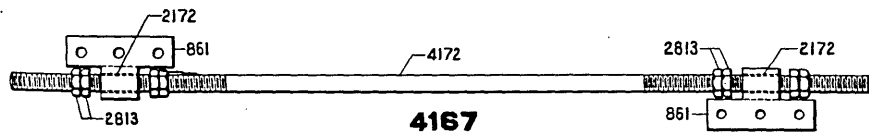
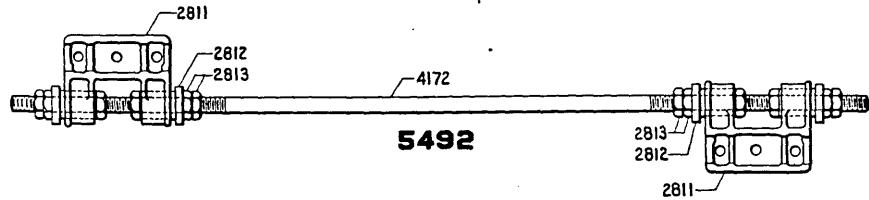
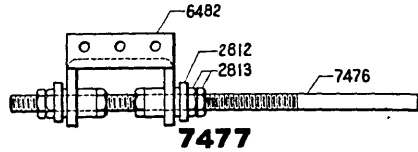
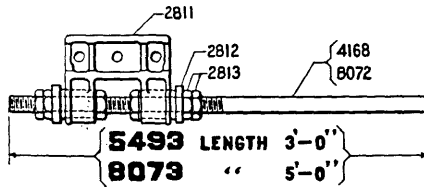
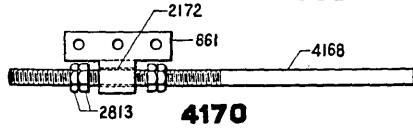
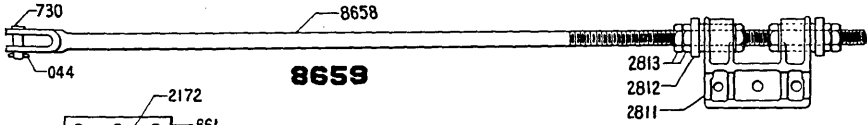
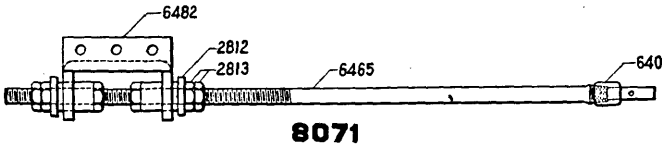
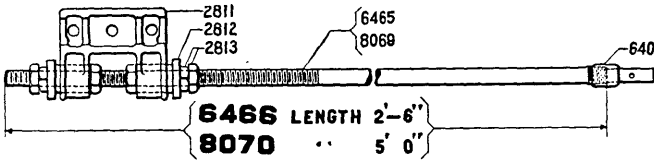
| Order No. | LOCK AND THROW RODS.   | List Price. |
|-----------|--|-------------|
| 029       | NUT Lock for $\frac{3}{4}$ " Bolt.....                                       | .02         |
| 044       | COTTER Pin, $\frac{3}{16}$ "x $1\frac{1}{2}$ " (per 100).....                | .80         |
| 097       | RIVET, $\frac{3}{4}$ "x $2\frac{1}{4}$ " for 2795, etc.....                  | .04         |
| 0424      | BOLT with Nut, $\frac{3}{4}$ "x $2\frac{1}{4}$ ".....                        | .10         |
| 0447      | RIVET, $\frac{5}{8}$ "x $2\frac{1}{4}$ " for 8681.....                       | .03         |
| 515       | NUT, $1\frac{1}{4}$ ", for 5597.....   | .19         |
| 640       | COUPLING, 1", reinforced for Pipe Connections.....                           | .19         |
| 730       | PIN, $\frac{7}{8}$ "x $2\frac{3}{8}$ " for Jaw 959 and others.....           | .07         |
| 826       | LOCK ROD for 2804.....   | 2.50        |
| 827       | LOCK ROD for 8016.....   | 2.20        |
| 861       | BRACKET, Throw Rod, Adjusting, for 2795 or 5597.....                         | 1.30        |
| 959       | WROUGHT SCREW JAW, $1\frac{1}{4}$ ", for various Rods.....                   | 1.10        |
| 1168      | PIN, $\frac{7}{8}$ "x $2\frac{3}{8}$ " for Throw Rods 2795, etc.....         | .10         |
| 2172      | SLEEVE, Brass, for Rods 2795 or 5597.....                                    | .30         |
| 2795      | THROW ROD Complete.....  | 5.60        |
| 2804      | LOCK ROD Complete.....   | 4.10        |
| 2811      | BRACKET. Throw Rod. Adjusting, for 2815 and 8677.....                        | 1.28        |
| 2812      | BUSHING for Bracket 2811 and 6482.....                                       | .32         |
| 2813      | NUT, Thin, $1\frac{1}{4}$ ", for various Rods.....                           | .09         |
| 2814      | ROD for 2815.....  | 3.60        |
| 2815      | THROW ROD Complete.....  | 6.10        |
| 4167      | DOUBLE SWITCH ADJUSTMENT Complete.....                                       | 6.10        |
| 4168      | $1\frac{1}{4}$ " THREADED ROD, 3' long, for 4170 or 5493.....                | 1.20        |
| 4170      | SWITCH ADJUSTMENT Complete, 3' long, stub end.....                           | 3.16        |
| 4172      | ROD, $1\frac{1}{4}$ "x6"—0", threaded each end.....                          | 2.20        |
| 4459      | SCREW PIN, operating Pole Changer on Lock Rods.....                          | .20         |
| 5492      | DOUBLE SWITCH ADJUSTMENT Complete.....                                       | 7.00        |
| 5493      | SWITCH ADJUSTMENT Complete, 3' long, stub end.....                           | 3.60        |
| 5596      | ROD for 5597.....  | 2.80        |
| 5597      | LOCK ROD Complete. (Special).....  | 5.50        |
| 5929      | LOCK ROD. (Special).....   | 2.00        |
| 5930      | LOCK ROD. (Special).....   | 2.00        |
| 6165      | ROD, $1\frac{1}{4}$ "x2"—6", threaded, with tang end.....                    | 1.16        |
| 6466      | SWITCH ADJUSTMENT, Complete, 2"—6" long, with tang end.....                  | 3.80        |
| 6481      | THROW ROD Complete with Wrought Bracket.....                                 | 7.90        |
| 6482      | WROUGHT BRACKET for Switch Adjustment.....                                   | 2.68        |
| 6486      | THROW ROD for 6481.....  | 4.00        |
| 7476      | $1\frac{1}{4}$ "x3' ROD, threaded 24", for 7477.....                         | 1.04        |
| 7477      | SWITCH ADJUSTMENT, Complete, with Wrought Bracket, 3'—0" long, stub end..... | 4.90        |
| 8016      | LOCK ROD Complete without Lug, for Derail.....                               | 2.90        |
| 8017      | LOCK ROD with tang end, for 8018.....  | 2.20        |
| 8018      | LOCK ROD Complete with tang end, for Derail.....                             | 2.80        |
| 8019      | THROW ROD with tang end, for 8020.....                                       | 3.00        |
| 8020      | THROW ROD Complete with tang end.....  | 3.30        |
| 8021      | ADJUSTABLE LOCK ROD Complete.....  | 14.80       |
| 8022      | LOCK ROD for 8021.....   | 7.30        |
| 8023      | ADJUSTING ROD for 8021.....  | 2.50        |
| 8024      | NUT, special, for 8021.....  | 1.50        |
| 8068      | LOCK ROD Complete. (Special).....  | 2.40        |
| 8069      | $1\frac{1}{4}$ "x5' THREADED ROD with tang end, for 8070.....                | 1.50        |
| 8070      | SWITCH ADJUSTMENT Complete, 5' long, with tang end.....                      | 4.15        |
| 8071      | SWITCH ADJUSTMENT Complete, 2' 6" long, tang end, with Wrought Bracket.....  | 5.20        |
| 8072      | $1\frac{1}{4}$ "x5' THREADED ROD, stub end, for 8073.....                    | 1.60        |
| 8073      | SWITCH ADJUSTMENT Complete, 5' long, stub end.....                           | 4.00        |
| 8658      | JAW ROD, threaded end, for 8659.....   | 2.80        |
| 8659      | SWITCH ADJUSTMENT, Complete for Double Slip Switch.....                      | 5.30        |
| 8675      | LOCK ROD. Special. Used with Front Rod 8679 or 8680.....                     | 2.50        |

## SWITCH AND LOCK MOVEMENT.

| Order<br>No. | LOCK AND THROW RODS.—CONT.                                  | List Price |
|--------------|---|------------|
| 8676         | THROW ROD with Lug, for 8677.....                           | 4.00 ..... |
| 8677         | THROW ROD, COMPLETE, with Lug for Double Slip Switch.....   | 6.50 ..... |
| 8681         | LOCK ROD, COMPLETE (Special). Used with Front Rods 8679 and |            |
|              | 8680 .....  | 2.90 ..... |
| 8926         | LOCKWASHER for Adjustable Lock Rod 8021.....                | .40 .....  |

Order by NUMBER and NAME appearing in Large Type.

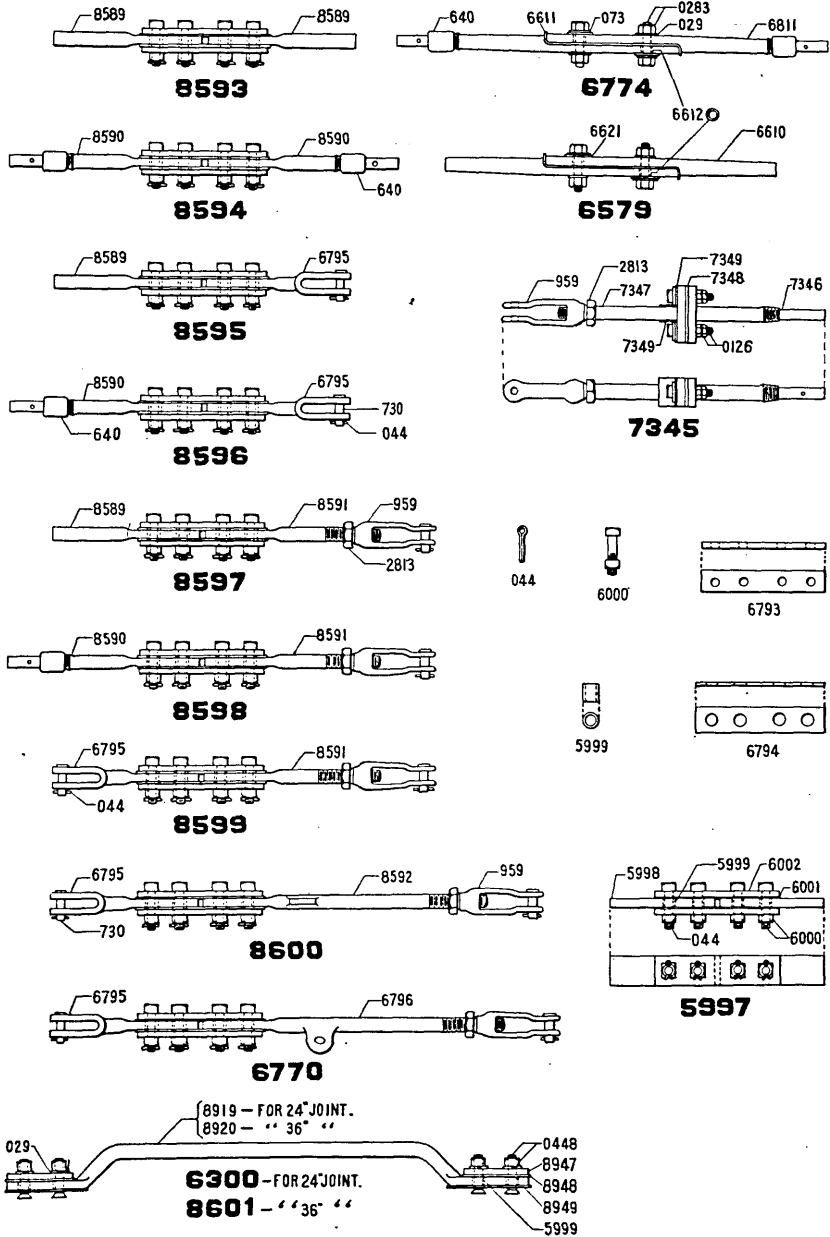
LOCK AND THROW RODS.—CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

INSULATED RODS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



**SWITCH AND LOCK MOVEMENT.**

| Order No. | INSULATED RODS.   | List Price. |
|-----------|---|-------------|
| 029       | NUT LOCK for $\frac{3}{8}$ " Bolt.....  | .02         |
| 044       | COTTER Pin, $\frac{3}{16}$ "x $1\frac{1}{2}$ " (per 100).....   | .80         |
| 073       | WASHER for $\frac{3}{4}$ " Bolt.....  | .07         |
| 0126      | BOLT with Nut, $\frac{3}{8}$ "x $3\frac{1}{2}$ ".....   | .02         |
| 0283      | Hex. Head BOLT with Nut, $\frac{3}{4}$ "x3".....  | .10         |
| 0448      | C. S. Head BOLT with Nut, $\frac{3}{4}$ "x $3\frac{1}{4}$ ".....  | .08         |
| 640       | 1" Reinforced Pipe COUPLING.....  | .19         |
| 730       | PIN, $\frac{1}{4}$ "x $2\frac{3}{8}$ ".....   | .07         |
| 959       | WROUGHT SCREW JAW, $1\frac{1}{4}$ ".....  | 1.10        |
| 2813      | THIN NUT, $1\frac{1}{4}$ ".....   | .09         |
| 5997      | INSULATED JOINT for Switch Rods. Special.....   |             |
| 5998      | HALF ROD for Insulated Joint 5997.....  |             |
| 5999      | INSULATED BUSHING for various Insulated Joints.....   |             |
| 6000      | BOLT and Nut, $\frac{3}{4}$ "x $3\frac{1}{4}$ ", with Cotter Hole, for various Insulated Rods.....        |             |
| 6001      | INSULATED PLATE for Insulated Joint 5997.....   |             |
| 6002      | CONNECTING PLATE for Insulated Joint 5997.....  |             |
| 6300      | INSULATED JOINT Complete, for connecting ends of Detector Bars when passing around a 24" Weber Joint..... |             |
| 6579      | INSULATED JOINT with Stub Ends Complete.....  |             |
| 6610      | HALF ROD for Insulated Joint 6579.....  |             |
| 6611      | INSULATOR for Insulated Joint 6579 or 6774.....   |             |
| 6612      | INSULATED BUSHING for Joints 6579 or 6774.....  |             |
| 6621      | INSULATED WASHER for Joints 6579 or 6774.....   |             |
| 6770      | INSULATED FRONT ROD Complete, for Switch.....   |             |
| 6774      | INSULATED JOINT Complete, Tang Ends.....  |             |
| 6793      | CONNECTING PLATE for Insulated Rods 6770, etc.....  |             |
| 6794      | INSULATION PLATE for Insulated Rods 6770, etc.....  |             |
| 6795      | SOLID JAW for Insulated Rods.....   |             |
| 6796      | LUG ROD for Insulated Rod 6770.....   |             |
| 6811      | HALF ROD with Tang End for Insulated Joint 6774.....  |             |
| 7345      | INSULATED SWITCH ROD Complete.....  |             |
| 7346      | HALF ROD with Tang End, for 7345.....   |             |
| 7347      | HALF ROD with Threaded End, for 7345.....   |             |
| 7348      | INSULATOR between Rods, for 7345.....   |             |
| 7349      | INSULATOR under Bolts.....  |             |
| 8589      | HALF ROD with Stub End for Insulated Rods 8593, etc.....  |             |
| 8590      | HALF ROD with Tang End, for Insulated Rods 8594, etc.....   |             |
| 8591      | HALF ROD with Threaded End, for Insulated Rods 8597, etc.....   |             |
| 8592      | LUG ROD for Insulated Rod 8600.....   |             |
| 8593      | INSULATED ROD Complete with Stub Ends.....  |             |
| 8594      | INSULATED ROD Complete with Tang Ends.....  |             |
| 8595      | INSULATED ROD Complete with Solid Jaw and Stub End.....   |             |
| 8596      | INSULATED ROD Complete with Solid Jaw and Tang End.....   |             |
| 8597      | INSULATED ROD Complete with Screw Jaw and Stub End.....   |             |
| 8598      | INSULATED ROD Complete with Screw Jaw and Tang End.....   |             |
| 8599      | INSULATED ROD Complete with One Screw and One Solid Jaw.....  |             |
| 8600      | INSULATED FRONT ROD Complete, for M. P. F.....  |             |
| 8601      | INSULATED JOINT Complete, for connecting ends of Detector Bars when passing around a 36" Weber Joint..... |             |
| 8919      | ROD for 24" Joint, for 6300.....  |             |
| 8920      | ROD for 36" Joint, for 8601.....  |             |
| 8947      | WROUGHT PLATE for 6300 or 8601.....   |             |
| 8948      | SHORT INSULATOR for 6300 or 8601.....   |             |
| 8949      | LONG INSULATOR for 6300 or 8601.....  |             |

Order by NUMBER and NAME appearing in Large Type.

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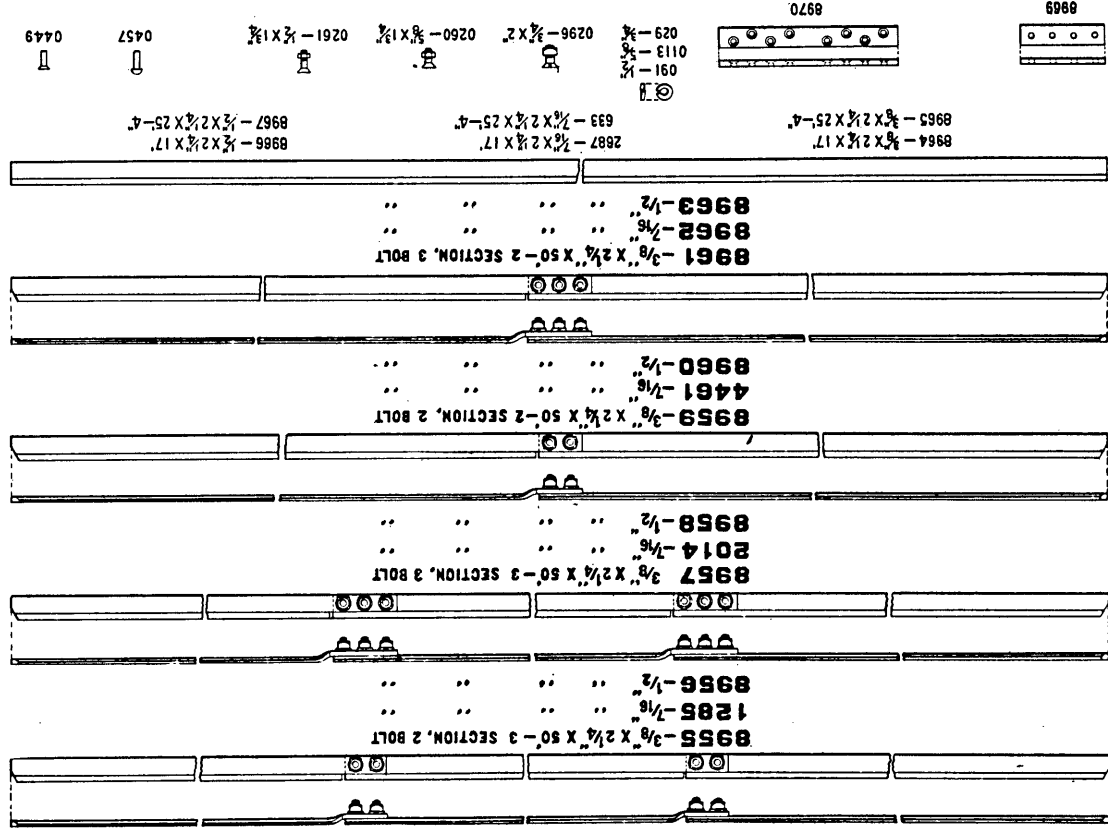
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SWITCH AND LOCK MOVEMENT.

DETECTOR BARS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

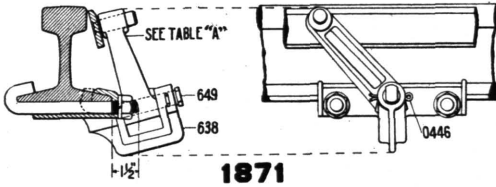
SWITCH AND LOCK MOVEMENT.

| Order No. | DETECTOR BARS.  | List Price. |
|-----------|---|-------------|
| 029       | NUT LOCK for $\frac{3}{8}$ " Bolt.....  | .02.....    |
| 091       | NUT LOCK for $\frac{1}{2}$ " Bolt.....  | .02.....    |
| 0113      | NUT LOCK for $\frac{5}{8}$ " Bolt.....  | .02.....    |
| 0260      | BOLT with Nut, $\frac{3}{8}$ "x $1\frac{1}{4}$ ", C. S. Hd.....                   | .06.....    |
| 0261      | BOLT with Nut, $\frac{1}{2}$ "x $1\frac{1}{4}$ ", C. S. Hd.....                   | .04.....    |
| 0296      | BOLT with Nut, $\frac{3}{4}$ " x 2", C. S. Hd.....                                | .09.....    |
| 0449      | RIVET, $\frac{1}{2}$ " x $1\frac{1}{4}$ ", C. S. Hd.....                          | .02.....    |
| 0457      | RIVET, $\frac{3}{8}$ " x $1\frac{1}{4}$ ", Rd. Hd.....                            | .02.....    |
| 633       | DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 25' 4" long.....              | 4.00.....   |
| 1285      | DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown..... | 8.00.....   |
| 2014      | DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown..... | 8.00.....   |
| 2687      | DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 17' long.....                 | 2.70.....   |
| 4461      | DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown..... | 8.00.....   |
| 8955      | DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....  | 7.20.....   |
| 8956      | DETECTOR BAR, $\frac{1}{2}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....  | 9.20.....   |
| 8957      | DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....  | 7.20.....   |
| 8958      | DETECTOR BAR, $\frac{1}{2}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....  | 9.20.....   |
| 8959      | DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....  | 7.20.....   |
| 8960      | DETECTOR BAR, $\frac{1}{2}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....  | 9.20.....   |
| 8961      | DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....  | 7.20.....   |
| 8962      | DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown..... | 8.00.....   |
| 8963      | DETECTOR BAR, $\frac{1}{2}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....  | 9.20.....   |
| 8964      | DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 17' long.....                  | 2.40.....   |
| 8965      | DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 25'-4" long.....               | 3.60.....   |
| 8966      | DETECTOR BAR, $\frac{1}{2}$ " x $2\frac{1}{4}$ " x 17' long.....                  | 3.00.....   |
| 8967      | DETECTOR BAR, $\frac{1}{2}$ " x $2\frac{1}{4}$ " x 25'-4" long.....               | 4.60.....   |
| 8969      | SPLICE BAR for Detector Bars, as required.....                                    | .36.....    |
| 8970      | SPLICE BAR for Detector Bars, as required.....                                    | .48.....    |

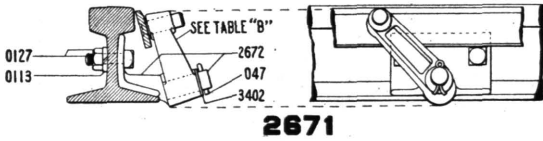
Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

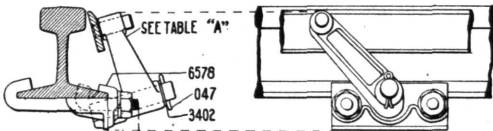
DETECTOR BARS. RAIL CLIPS.



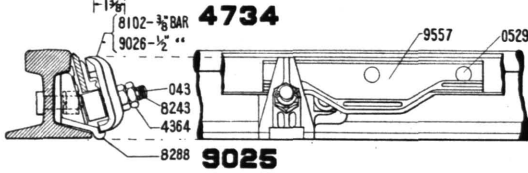
1871



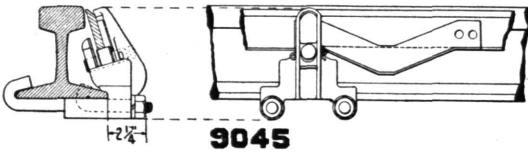
2671



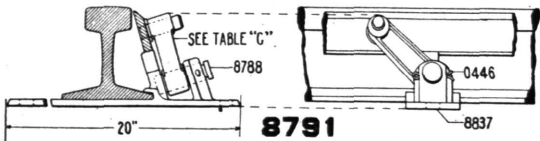
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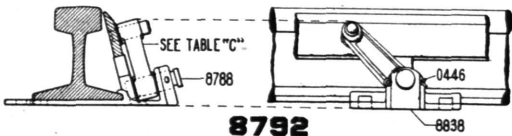
9025



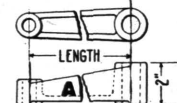
9045



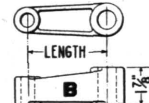
8791



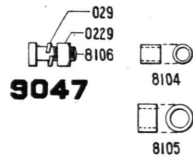
8792



| LENGTH        | SIZE OF RAIL     |
|---------------|------------------|
| 8978 - 4 1/2" | 3 3/4" TO 4 1/2" |
| 2976 - 5"     | 4 1/2" " 4 3/8"  |
| 8979 - 5 1/2" | 4 3/8" " 4 1/2"  |
| 642 - 5 3/4"  | 5" " 5 1/8"      |
| 8980 - 6"     | 5 1/4" " 5 3/8"  |
| 1230 - 6 1/4" | 5 1/2" " 5 3/4"  |
| 8982 - 6 1/2" | 5 3/4" " 6"      |



| LENGTH        | SIZE OF RAIL     |
|---------------|------------------|
| 2974 - 3 3/4" | 4 1/2" TO 4 1/2" |
| 2975 - 4 1/4" | 4 3/8" " 5"      |
| 8954 - 4 3/4" | 5 1/4" " 5 1/2"  |
| 8989 - 5 1/4" | 5 3/8" " 6"      |



9047

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

NOTE.—In ordering Rail Clips, complete information relative to dimensions of rail section, indicated by sketch or by reference to A. S. C. E. or other standard sections, or to plan on file with this company, should accompany the order, also specify centres of links.

| Order No. | DETECTOR BARS—RAIL CLIPS.   | List Price. |
|-----------|---|-------------|
| 029       | NUT LOCK for $\frac{3}{8}$ " Bolt.....  | .02         |
| 043       | COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (per 100).....                                | .80         |
| 047       | COTTER Pin, $\frac{1}{4}$ " x $1\frac{1}{4}$ " (per 100).....                                 | .80         |
| 0113      | NUT LOCK for $\frac{3}{8}$ " Bolt.....  | .02         |
| 0127      | BOLT with Hex. Nut, $\frac{3}{8}$ " x $2\frac{1}{4}$ ".....                                   | .07         |
| 0229      | NUT, $\frac{3}{4}$ " Square, for 9047.....  | .03         |
| 0234      | NUT, $\frac{3}{8}$ " Hex.....   | .02         |
| 0446      | COTTER Pin, $\frac{1}{4}$ " x $2'$ (per 100).....   | .80         |
| 0451      | BOLT with Hex. Nut, $\frac{3}{8}$ " x $2\frac{1}{4}$ ".....                                   | .14         |
| 0529      | RIVET, $\frac{1}{2}$ " x $1'$ , F. H.....   | .02         |
| 635       | HOOK BOLT, $\frac{3}{8}$ " x $6\frac{1}{2}$ ", with Nut and Nut Lock.....                     | .12         |
| 636       | HOOK BOLT, $\frac{3}{8}$ " x $7\frac{1}{4}$ ", with Nut and Nut Lock.....                     | .12         |
| 638       | RAIL CLIP, casting only, for 1871.....  | 1.10        |
| 642       | LINK, $5\frac{3}{4}$ " centers. (See Table A.) For Clip 1871 or 4734.....                     | .36         |
| 649       | PIN for 1871 or 8865.....   | .12         |
| 1230      | LINK, $6\frac{1}{4}$ " Centers. (See Table A.) For 1871 or 4734.....                          | .36         |
| 1871      | RAIL CLIP Complete with Pin, Link, Hook Bolts and Bar Stud.....                               | 1.86        |
| 2671      | WROUGHT RAIL CLIP Complete with Stud, Link, Web Bolts and Bar Stud. Used on Bridges, Etc..... | 2.52        |
| 2672      | WROUGHT RAIL CLIP with Stud for 2671.....   | 1.92        |
| 2922      | HOOK BOLT, $\frac{3}{8}$ " x $5\frac{1}{2}$ " with Nut and Nut Lock.....                      | .12         |
| 2923      | HOOK BOLT, $\frac{3}{8}$ " x $6\frac{1}{2}$ ", with Nut and Nut Lock.....                     | .12         |
| 2924      | HOOK BOLT, $\frac{3}{8}$ " x $7\frac{1}{2}$ ", with Nut and Nut Lock.....                     | .12         |
| 2974      | LINK, $3\frac{1}{4}$ " Centers. (See Table B.) for Clip 2671.....                             | .36         |
| 2975      | LINK, $4\frac{1}{4}$ " Centers. (See Table B.) for Clip 2671.....                             | .36         |
| 2976      | LINK, $5"$ Centers. (See Table A.) for Clip 1871 or 4734.....                                 | .36         |
| 2982      | HOOK BOLT, $\frac{3}{8}$ " x $2\frac{1}{2}$ ", with Nut and Nut Lock.....                     | .12         |
| 3090      | HOOK BOLT, $\frac{3}{8}$ " x $8\frac{1}{4}$ ", with Nut and Nut Lock.....                     | .12         |
| 3402      | WASHER for $1"$ Pin for various Clips.....  | .02         |
| 3469      | STUD for 8790.....  | .12         |
| 4364      | NUT, $\frac{3}{4}$ " Hex. for 9025.....   | .04         |
| 4734      | RAIL CLIP Complete with Pin, Hook Bolts and Bar Stud.....                                     | 1.32        |
| 4804      | HOOK BOLT, $\frac{3}{8}$ " x $3\frac{1}{2}$ ", with Nut and Nut Lock.....                     | .12         |
| 6578      | CLIP, with Stud for 4734.....   | .64         |
| 8102      | GUIDE CAP for 9025 when $\frac{3}{8}"$ Bar is used.....                                       | .02         |
| 8104      | BUSHING used on 9025.....   | .02         |
| 8105      | ROLLER used on 9025.....  | .02         |
| 8106      | SPECIAL HEAD BOLT for 9047.....   | .02         |
| 8243      | CENTER BOLT for 9025.....   | .02         |
| 8288      | CLIP, casting only, for 9025.....   | .02         |
| 8760      | HOOK BOLT, $\frac{3}{8}$ " x $9"$ with Nut and Nut Lock.....                                  | .12         |
| 8761      | HOOK BOLT, $\frac{3}{8}$ " x $9\frac{1}{2}"$ with Nut and Nut Lock.....                       | .12         |
| 8762      | HOOK BOLT, $\frac{3}{8}$ " x $10"$ with Nut and Nut Lock.....                                 | .12         |
| 8788      | PIN for 8791 or 8792.....   | .12         |
| 8790      | RAIL CLIP Complete with Pin, Link, Hook Bolts and Bar Stud.....                               | 1.56        |
| 8791      | RAIL CLIP Complete for rear of Switch with $1"$ Pin, Link and Bar Stud.....                   | 1.80        |
| 8792      | RAIL CLIP Complete for front of Switch with $1"$ Pin, Link and Bar Stud.....                  | 1.80        |
| 8793      | LINK, $3\frac{5}{16}"$ Centers (See Table C.) for 8791 or 8792.....                           | .36         |
| 8794      | LINK, $4\frac{7}{16}"$ Centers. (See Table C.) for 8791 or 8792.....                          | .36         |
| 8795      | LINK, $4\frac{11}{16}"$ Centers. (See Table C.) for 8791 or 8792.....                         | .36         |

Order by NUMBER and NAME appearing in Large Type.

## SWITCH AND LOCK MOVEMENT.

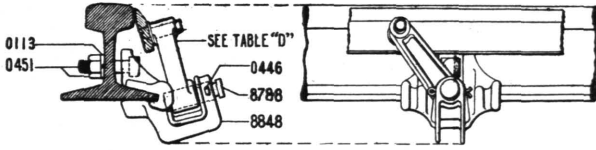
| Order No. | DETECTOR BARS—RAIL CLIPS.—CONT.  | List Price. |
|-----------|--|-------------|
| 8798      | LINK, 6 $\frac{1}{2}$ " Centers. (See Table E.) for 8865 or 8790.....  | .40         |
| 8799      | LINK, 6 $\frac{3}{4}$ " Centers. (See Table E) for 8865 or 8790.....   | .40         |
| 8800      | LINK, 7" Centers. (See Table E.) for 8865 or 8790.....   | .40         |
| 8801      | LINK, 7 $\frac{1}{4}$ " Centers. (See Table E.) for 8865 or 8790.....  | .40         |
| 8836      | RAIL CLIP, casting only, for 8790.....   | .72         |
| 8837      | CLIP for 8791.....   | 1.30        |
| 8838      | CLIP for 8792.....   | 1.30        |
| 8847      | RAIL CLIP, casting only, for 8865.....   | 1.20        |
| 8848      | RAIL CLIP, casting only, for 8863 or 8864.....   | .70         |
| 8849      | GIB for inside of rail, for Clip 8864 or 8858.....   | .12         |
| 8851      | LINK, 4 $\frac{1}{2}$ " Centers. (See Table D) for Clip 8863 or 8864.....  | .36         |
| 8852      | LINK, 4 $\frac{1}{2}$ " Centers. (See Table D) for Clip 8863 or 8864.....  | .36         |
| 8853      | LINK, 4 $\frac{3}{4}$ " Centers. (See Table D) for Clip 8863 or 8864.....  | .36         |
| 8854      | LINK, 5" Centers. (See Table D) for Clip 8863 or 8864.....   | .36         |
| 8855      | LINK, 5 $\frac{1}{2}$ " Centers. (See Table D) for Clip 8863 or 8864.....  | .36         |
| 8856      | LINK, 6" Centers. (See Table D) for Clip 8863 or 8864.....   | .36         |
| 8857      | LINK, 6 $\frac{1}{2}$ " Centers. (See Table D) for Clip 8863 or 8864.....  | .36         |
| 8858      | RAIL CLIP Complete with Pin, Link, T Bolt, Inside Gib and Bar Stud. (T. Bolt should be 2" longer than width of Rail.....                 | 1.75        |
| 8859      | T. BOLT, $\frac{3}{8}$ " x 5 $\frac{1}{2}$ ", with Nut and Nut Lock.....   | .12         |
| 8860      | T. BOLT, $\frac{3}{8}$ " x 6", with Nut and Nut Lock.....  | .12         |
| 8861      | T. BOLT, $\frac{3}{8}$ " x 6 $\frac{1}{2}$ ", with Nut and Nut Lock.....   | .12         |
| 8862      | T. BOLT, $\frac{3}{8}$ " x 7", with Nut and Nut Lock.....  | .12         |
| 8863      | RAIL CLIP Complete with Pin, Link, Web Bolt and Bar Stud.....  | 1.50        |
| 8864      | RAIL CLIP Complete with Pin, Link, T Bolt, Inside Gib and Bar Stud. (T. Bolt should be 1 $\frac{1}{2}$ " longer than width of rail)..... | 1.60        |
| 8865      | RAIL CLIP Complete with Pin, Link, Hook Bolts and Bar Stud.....  | 1.96        |
| 8866      | RAIL CLIP with Stud for 8858 for 5" to 6" rails.....   | 1.00        |
| 8867      | RAIL CLIP with Stud for 8790.....  | .84         |
| 8897      | LINK, 7 $\frac{1}{2}$ " Centers. (See Table E) for Clip 8865 or 8790.....  | .40         |
| 8898      | LINK, 7 $\frac{3}{4}$ " Centers. (See Table E) for Clip 8865 or 8790.....  | .40         |
| 8899      | LINK, 8" Centers. (See Table E) for Clip 8865 or 8790.....   | .40         |
| 8900      | LINK, 8 $\frac{1}{4}$ " Centers. (See Table E) for Clip 8865 or 8790.....  | .40         |
| 8910      | DETECTOR BAR STUD for $\frac{3}{8}$ " Bar (per 100).....   | 6.40        |
| 8921      | LINK, 8 $\frac{1}{2}$ " Centers. (See Table E) for Clip 8865 or 8790.....  | .40         |
| 8953      | RAIL CLIP, with Stud for 8858, for 4" to 4 $\frac{3}{4}$ " rails.....  | 1.00        |
| 8954      | LINK, 4 $\frac{3}{4}$ " Centers. (See Table B) for Clip 2671.....  | .36         |
| 8978      | LINK, 4 $\frac{1}{2}$ " Centers. (See Table A) for Clip 1871 or 4734.....  | .36         |
| 8979      | LINK, 5 $\frac{1}{2}$ " Centers. (See Table A) for Clip 1871 or 4734.....  | .36         |
| 8981      | LINK, 6" Centers. (See Table A) for Clip 1871 or 4734.....   | .36         |
| 8982      | LINK, 6 $\frac{1}{2}$ " Centers. (See Table A) for Clip 1871 or 4734.....  | .36         |
| 8989      | LINK, 5 $\frac{1}{2}$ " Centers. (See Table B) for Clip 2671.....  | .36         |
| 8994      | T. BOLT, $\frac{5}{8}$ " x 8", with Nut and Nut Lock.....  | .12         |
| 9025      | RAIL CLIP Complete with Motion Plate, Rivets, Guide, Center and Web Bolts. Specify thickness of Bar.....                                 | .....       |
| 9026      | GUIDE CAP for 9025 when $\frac{1}{2}$ " Bar is used.....   | .....       |
| 9045      | RAIL CLIP Complete with Motion Plate, Rivets and Hook Bolts.....   | 1.84        |
| 9047      | BOLT Complete with Nut and Nut Lock, fastening 9025 to Web of rail.....  | .....       |
| 9557      | MOTION PLATE for 9025.....   | .....       |
| 17590     | DETECTOR BAR STUD for $\frac{7}{16}$ " Bar (per 100).....  | 6.40        |
| 18591     | DETECTOR BAR STUD for $\frac{1}{2}$ " Bar (per 100).....   | 6.40        |

Order by NUMBER and NAME appearing in Large Type.

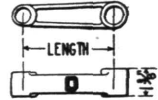


# SWITCH AND LOCK MOVEMENT.

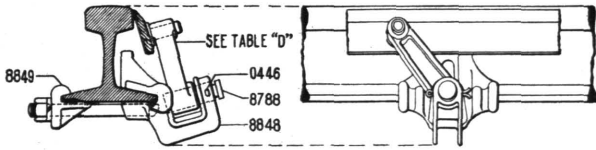
## DETECTOR BARS. RAIL CLIPS.—CONT.



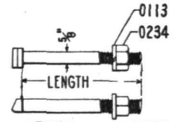
**8863**



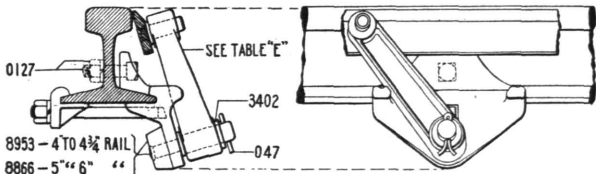
| LENGTH        | SIZE OF RAIL    |
|---------------|-----------------|
| 8851 - 4 1/2" | 4" TO 4 1/2"    |
| 8852 - 4 1/2" | 4 1/2" " 4 1/2" |
| 8853 - 4 3/4" | 4 1/2" " 4 3/4" |
| 8854 - 5"     | 4 3/4" " 5"     |
| 8855 - 5 1/2" | 5" " 5 1/2"     |
| 8856 - 6"     | 5 1/2" " 5 1/2" |
| 8857 - 6 1/4" | 5 1/2" " 6"     |



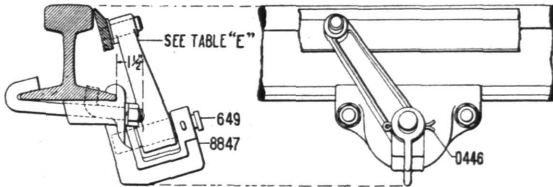
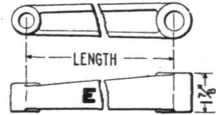
**8864**



| LENGTH        | SIZE OF RAIL |
|---------------|--------------|
| 8859 - 5 1/2" | 8862 - 7"    |
| 8860 - 6"     | 8894 - 8"    |
| 8861 - 6 1/2" |              |

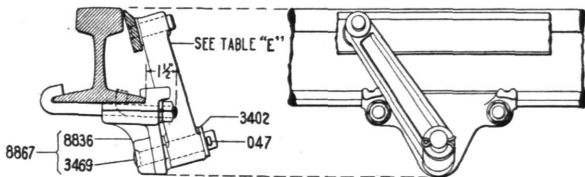


**8858**

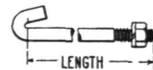


**8865**

| LENGTH        |
|---------------|
| 8798 - 6 1/2" |
| 8799 - 6 3/4" |
| 8800 - 7"     |
| 8801 - 7 1/4" |
| 8897 - 7 1/2" |
| 8898 - 7 3/4" |
| 8899 - 8"     |
| 8900 - 8 1/4" |
| 8921 - 8 1/2" |



**8790**



|                     |
|---------------------|
| 8910 - FOR 3/8" BAR |
| 17590 - " 7/16" "   |
| 17591 - " 1/2" "    |

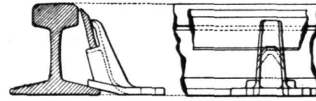
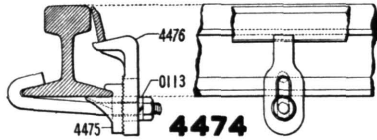
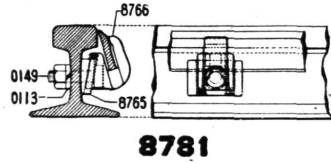
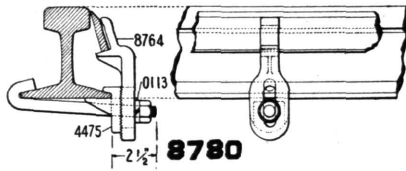
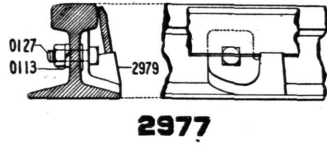
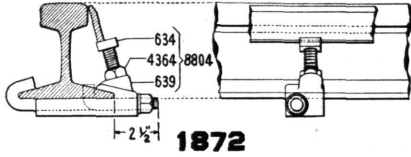
| LENGTH        |
|---------------|
| 2982 - 2 1/2" |
| 4804 - 3 1/2" |

|               |
|---------------|
| 2922 - 5 3/4" |
| 635 - 6 1/4"  |
| 2923 - 6 3/4" |
| 636 - 7 1/4"  |
| 2924 - 7 3/4" |
| 3090 - 8 1/4" |
| 8760 - 9"     |
| 8761 - 9 1/2" |
| 8762 - 10"    |

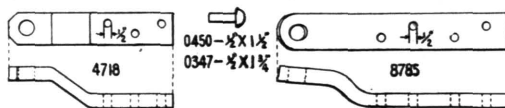
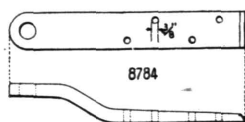
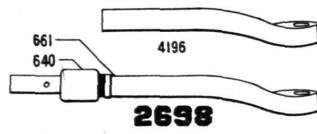
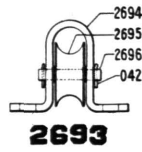
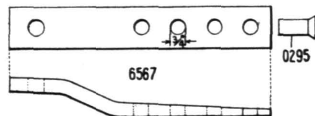
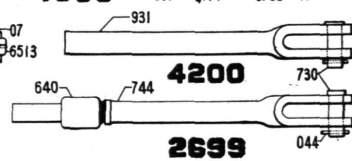
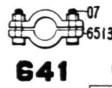
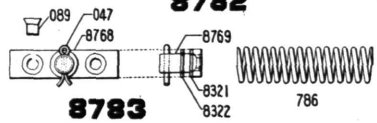
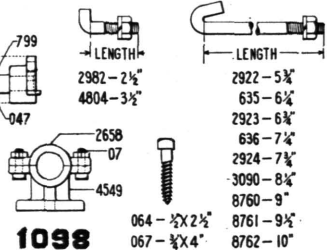
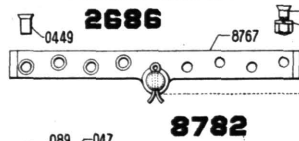
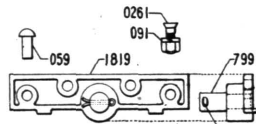
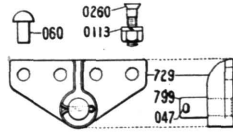
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

DETECTOR BARS, STOPS AND DRIVING PLATES.



- 8770 - FOR 4" RAIL.
- 8771 - " 4 1/2 "
- 8772 - " 4 3/4 "
- 8773 - " 4 1/2 "
- 8774 - FOR 5" RAIL.
- 8775 - " 5 1/4 "
- 8776 - " 5 1/2 "
- 8777 - " 5 3/4 "



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

| Order No. | DETECTOR BARS. STOPS AND DRIVING PLATES.   | List Price. |
|-----------|--|-------------|
| 07        | BOLT and Nut, $\frac{3}{8}$ " x $1\frac{1}{4}$ "   | .02         |
| 042       | COTTER Pin, $\frac{3}{16}$ " x 1" (per 100)  | .80         |
| 044       | COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)  | .80         |
| 047       | COTTER Pin, $\frac{1}{4}$ " x $1\frac{1}{2}$ " (per 100)   | .80         |
| 059       | RIVET, $\frac{1}{2}$ " x $1\frac{1}{8}$ "  | .02         |
| 060       | RIVET, $\frac{5}{8}$ " x $1\frac{1}{8}$ "  | .02         |
| 064       | LAG SCREW, $\frac{1}{2}$ " x $2\frac{1}{2}$ "  | .03         |
| 067       | LAG SCREW, $\frac{3}{8}$ " x 4"  | .07         |
| 089       | RIVET, C. S. Head, $\frac{5}{8}$ " x 1"  | .01         |
| 091       | NUT LOCK for $\frac{1}{2}$ " Bolt  | .02         |
| 0113      | NUT LOCK for $\frac{5}{8}$ " Bolt  | .02         |
| 0127      | BOLT with Hex. Nut, $\frac{5}{8}$ " x $2\frac{1}{4}$ "   | .07         |
| 0149      | BOLT with Nut, $\frac{5}{8}$ " x $2\frac{1}{4}$ "  | .07         |
| 0171      | RIVET, $\frac{3}{8}$ " x $1\frac{1}{4}$ " Used with Driving Plate 8784   | .01         |
| 0260      | COUNTERSUNK BOLT with Nut, $\frac{5}{8}$ " x $1\frac{3}{4}$ "  | .06         |
| 0261      | COUNTERSUNK BOLT with Nut, $\frac{1}{2}$ " x $1\frac{3}{4}$ "  | .04         |
| 0295      | RIVET, $\frac{3}{4}$ " x 2" Used with Driving Piece 6567   | .03         |
| 0347      | RIVET, $\frac{1}{2}$ " x $1\frac{3}{4}$ ", Round Head  | .02         |
| 0449      | RIVET, $\frac{1}{2}$ " x $1\frac{1}{4}$ "  | .02         |
| 0450      | RIVET, $\frac{1}{2}$ " x $1\frac{1}{4}$ "  | .02         |
| 634       | ADJUSTING SCREW, special for 1872  | .14         |
| 635       | HOOK BOLT, $\frac{5}{8}$ " x $6\frac{1}{4}$ ", with Nut and Nut Lock   | .12         |
| 636       | HOOK BOLT, $\frac{5}{8}$ " x $7\frac{1}{4}$ ", with Nut and Nut Lock   | .12         |
| 639       | CLIP for Adjustable Detector Bar Stop 1872   | .40         |
| 640       | PIPE COUPLING, 1" reinforced   | .19         |
| 641       | CLAMP Complete. Used on Detector Bar Operating Rod for compressing Spring 786  | .24         |
| 661       | EYE ROD only with Tang End, for 2698   | .72         |
| 729       | DRIVING BRACKET Casting, for 2686  | .50         |
| 730       | PIN, $\frac{1}{8}$ " x $2\frac{3}{8}$ ", for Solid Jaws  | .07         |
| 744       | SOLID JAW, $1\frac{1}{4}$ " with tang end  | .84         |
| 786       | SPRING, used on Detector Bar Operating Rod   | .36         |
| 799       | STUD, used on Driving Brackets 2685 and 2686   | .12         |
| 931       | SOLID JAW, $1\frac{1}{4}$ ", stub end  | .74         |
| 1098      | Cast PIPE GUIDE Complete. Applied only when Spring 786 is used   | .52         |
| 1819      | DRIVING BRACKET Casting, for 2685  | .50         |
| 1872      | ADJUSTABLE DETECTOR BAR STOP Complete. In ordering specify width of rail. Hook Bolts should be $2\frac{1}{4}$ inches longer than width of rail | .70         |
| 2658      | CAP for 1098   | .12         |
| 2685      | Detector Bar DRIVING PIECE Complete  | .64         |
| 2686      | Detector Bar DRIVING PIECE Complete  | .64         |
| 2693      | Single Roller WROUGHT PIPE CARRIER Complete. For other Pipe Carriers see page 94   | .31         |
| 2694      | STAND for Pipe Carrier 2693  | .21         |
| 2695      | ROLLER for Pipe Carrier 2693   | .09         |
| 2696      | PIN for Pipe Carrier 2693  | .05         |
| 2698      | EYE ROD Complete, $1\frac{1}{2}$ " with tang end   | .92         |
| 2699      | SOLID JAW, Complete, $1\frac{1}{4}$ " with tang end  | 1.08        |
| 2922      | HOOK BOLT, $\frac{5}{8}$ " x $5\frac{3}{4}$ ", with Nut and Nut Lock   | .12         |
| 2923      | HOOK BOLT, $\frac{5}{8}$ " x $6\frac{3}{4}$ ", with Nut and Nut Lock   | .12         |
| 2924      | HOOK BOLT, $\frac{5}{8}$ " x $7\frac{3}{4}$ ", with Nut and Nut Lock   | .12         |
| 2977      | WROUGHT DETECTOR BAR STOP Complete. Used with Detector Bar Clip 2671. In ordering send print of rail section                                   | .70         |
| 2979      | WROUGHT CLIP only for 2977. In ordering send print of rail section   | .64         |
| 2982      | SHORT HOOK BOLT, $\frac{3}{8}$ " x $2\frac{1}{2}$ ", with Nut and Nut Lock. Required when long Hook Bolts cannot be used                       | .12         |

Order by NUMBER and NAME appearing in Large Type.

## SWITCH AND LOCK MOVEMENT.

| Order No. | DETECTION BARS. STOPS AND DRIVING PLATES.—CONT.  | List Price. |
|-----------|--|-------------|
| 3090      | HOOK BOLT, $\frac{5}{8}$ " x 8 $\frac{1}{2}$ ", with Nut and Nut Lock.....   | .12         |
| 4196      | Detector Bar EYE ROD, with Stub End.....   | .72         |
| 4200      | SOLID JAW, Complete, 1 $\frac{1}{4}$ ", with stub end.....   | .80         |
| 4364      | NUT, Thin $\frac{3}{4}$ ".....   | .04         |
| 4474      | ADJUSTABLE Detector BAR STOP Complete. When ordering specify width of rail. Hook Bolts should be 2 $\frac{1}{2}$ inches longer than width of rail.....           | .76         |
| 4475      | CLIP half of ADJUSTABLE Detector BAR STOP, for 4474 or 8780.....   | .28         |
| 4476      | ADJUSTABLE STOP Casting for 4474.....  | .36         |
| 4549      | BASE Casting for 1098.....   | .28         |
| 4718      | WROUGHT Detector Bar DRIVING PIECE, using three $\frac{1}{2}$ " Rivets.....  | .80         |
| 4804      | SHORT HOOK BOLT, $\frac{5}{8}$ " x 3 $\frac{1}{2}$ ", with Nut and Nut Lock.....   | .12         |
| 6513      | HALF CLAMP for Clamp 641.....  | .12         |
| 6567      | WROUGHT Detector Bar DRIVING PIECE, using four $\frac{3}{4}$ " Rivets.....   | .80         |
| 8321      | WASHER for 8782 or 8783.....   | .02         |
| 8322      | WASHER for 8782 or 8783.....   | .02         |
| 8760      | HOOK BOLT, $\frac{5}{8}$ " x 9", with Nut and Nut Lock.....  | .12         |
| 8761      | HOOK BOLT, $\frac{5}{8}$ " x 9 $\frac{1}{2}$ ", with Nut and Nut Lock.....   | .12         |
| 8762      | HOOK BOLT, $\frac{5}{8}$ " x 10", with Nut and Nut Lock.....   | .12         |
| 8764      | Detector Bar STOP AND GUIDE, for 8780.....   | .36         |
| 8765      | ADJUSTABLE Detector Bar STOP, RAIL HALF, for 8781.....   | .08         |
| 8766      | ADJUSTABLE Detector Bar STOP AND GUIDE, for 8781.....  | .16         |
| 8767      | WROUGHT Detector Bar DRIVING and SPLICE PLATE.....   | 1.20        |
| 8768      | PLATE for Detector Bar Driving Piece 8783.....   | .40         |
| 8769      | STUD for 8782 and 8783.....  | .12         |
| 8770      | Detector Bar STOP AND GUIDE for 4" Rail.....   | .22         |
| 8771      | Detector Bar STOP AND GUIDE for 4 $\frac{1}{4}$ " Rail.....  | .22         |
| 8772      | Detector Bar STOP AND GUIDE for 4 $\frac{1}{2}$ " Rail.....  | .22         |
| 8773      | Detector Bar STOP AND GUIDE for 4 $\frac{3}{4}$ " Rail.....  | .22         |
| 8774      | Detector Bar STOP AND GUIDE for 5" Rail.....   | .22         |
| 8775      | Detector Bar STOP AND GUIDE for 5 $\frac{1}{4}$ " Rail.....  | .22         |
| 8776      | Detector Bar STOP AND GUIDE for 5 $\frac{1}{2}$ " Rail.....  | .22         |
| 8777      | Detector Bar STOP AND GUIDE for 5 $\frac{3}{4}$ " Rail.....  | .22         |
| 8780      | ADJUSTABLE Detector Bar STOP AND GUIDE Complete. When ordering specify width of rail. Hook Bolts should be 2 $\frac{1}{2}$ inches longer than width of rail..... | .76         |
| 8781      | ADJUSTABLE Detector Bar STOP AND GUIDE for fastening to web of rail.....   | .16         |
| 8782      | WROUGHT DRIVING and SPLICE PLATE Complete.....   | 1.36        |
| 8783      | WROUGHT DRIVING PLATE Complete for Two Rivets.....   | .54         |
| 8784      | WROUGHT Detector Bar DRIVING PIECE using Four $\frac{3}{8}$ " Rivets.....  | .80         |
| 8785      | WROUGHT Detector Bar DRIVING PIECE using Four $\frac{1}{2}$ " Rivets.....  | .80         |
| 8804      | ADJUSTABLE Detector Bar STOP without Hook Bolt.....  | .56         |

Order by NUMBER and NAME appearing in Large Type.

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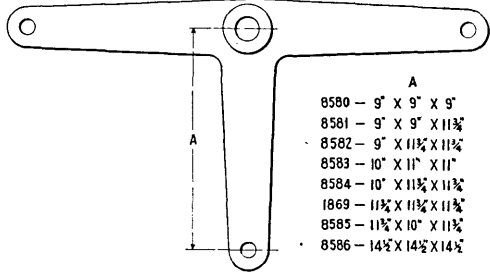
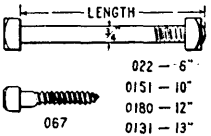
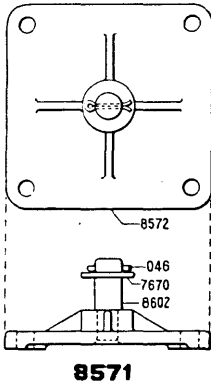
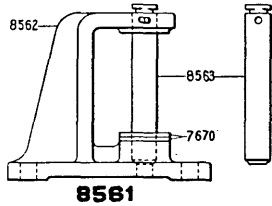
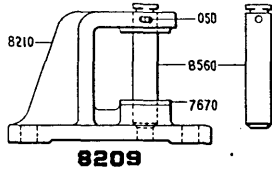
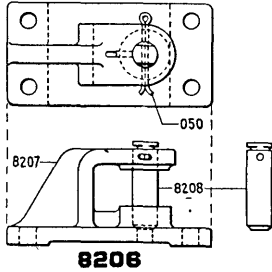
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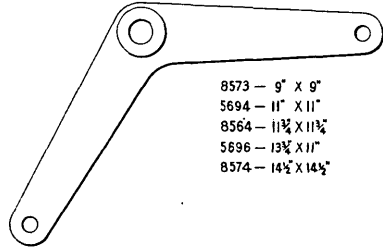
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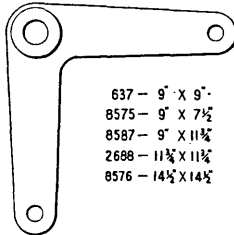
CRANKS, STANDS AND COMPENSATORS.



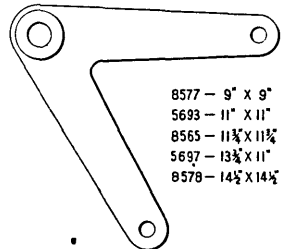
- 8580 - 9" X 9" X 9"
- 8581 - 9" X 9" X 11 $\frac{1}{2}$ "
- 8582 - 9" X 11 $\frac{1}{2}$ " X 11 $\frac{1}{2}$ "
- 8583 - 10" X 11" X 11"
- 8584 - 10" X 11 $\frac{1}{2}$ " X 11 $\frac{1}{2}$ "
- 1869 - 11 $\frac{1}{2}$ " X 11 $\frac{1}{2}$ " X 11 $\frac{1}{2}$ "
- 8585 - 11 $\frac{1}{2}$ " X 10" X 11 $\frac{1}{2}$ "
- 8586 - 14 $\frac{1}{2}$ " X 14 $\frac{1}{2}$ " X 14 $\frac{1}{2}$ "



- 8573 - 9" X 9"
- 5694 - 11" X 11"
- 8564 - 11 $\frac{1}{2}$ " X 11 $\frac{1}{2}$ "
- 5696 - 13 $\frac{1}{2}$ " X 11"
- 8574 - 14 $\frac{1}{2}$ " X 14 $\frac{1}{2}$ "



- 637 - 9" X 9"
- 8575 - 9" X 7 $\frac{1}{2}$ "
- 8587 - 9" X 11 $\frac{1}{2}$ "
- 2688 - 11 $\frac{1}{2}$ " X 11 $\frac{1}{2}$ "
- 8576 - 14 $\frac{1}{2}$ " X 14 $\frac{1}{2}$ "



- 8577 - 9" X 9"
- 5693 - 11" X 11"
- 8565 - 11 $\frac{1}{2}$ " X 11 $\frac{1}{2}$ "
- 5697 - 13 $\frac{1}{2}$ " X 11"
- 8578 - 14 $\frac{1}{2}$ " X 14 $\frac{1}{2}$ "



- 743 - 9" X 9"
- 2300 - 11 $\frac{1}{2}$ " X 11 $\frac{1}{2}$ "
- 8579 - 14 $\frac{1}{2}$ " X 14 $\frac{1}{2}$ "
- 3649 - 16 $\frac{1}{2}$ " X 16 $\frac{1}{2}$ "
- 7856 - 17 $\frac{1}{2}$ " X 17 $\frac{1}{2}$ "
- 8588 - 18" X 18"
- 6686 - 20 $\frac{1}{2}$ " X 20 $\frac{1}{2}$ "
- 6685 - 24" X 24"
- 7212 - 31" X 31"



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

| Order No. | CRANKS, STANDS AND COMPENSATORS.   | List Price. |
|-----------|--|-------------|
| 022       | BOLT with Nut, $\frac{3}{4}$ " x 6".....   | .14         |
| 041       | COTTER Pin, $\frac{1}{8}$ " x $1\frac{1}{4}$ ", for 6270 (per 100).....                                    | .80         |
| 046       | COTTER Pin, $\frac{3}{16}$ " x 2" for 8571 (per 100).....  | .80         |
| 050       | COTTER Pin, $\frac{1}{4}$ " x 4" for Crank Stands (per 100).....   | .80         |
| 066       | LAG SCREW, $\frac{5}{8}$ " x 3".....   | .05         |
| 067       | LAG SCREW, $\frac{3}{4}$ " x 4".....   | .07         |
| 073       | WASHER for $\frac{3}{4}$ " Bolt.....   | .02         |
| 0131      | BOLT with Nut, $\frac{3}{4}$ " x 13".....  | .19         |
| 0151      | BOLT with Nut, $\frac{3}{4}$ " x 10".....  | .16         |
| 0180      | BOLT with Nut, $\frac{3}{4}$ " x 12".....  | .19         |
| 0195      | BOLT with Nut, $\frac{3}{8}$ " x 3".....   | .07         |
| 637       | Right Angle CRANK, 9" x 9".....  | 1.12        |
| 743       | Straight Arm COMPENSATOR, 9" x 9".....   | 1.12        |
| 1869      | T. CRANK, $11\frac{3}{4}$ " x $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....                                   | 3.02        |
| 2300      | Straight Arm COMPENSATOR, $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....                                       | 1.36        |
| 2688      | Right Angle CRANK, $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....  | 1.36        |
| 3264      | BOLT and Nut with Cotter Hole, for 6270.....   | .09         |
| 3649      | Straight Arm COMPENSATOR, $16\frac{1}{2}$ " x $16\frac{1}{2}$ ".....                                       | 3.50        |
| 4063      | GUIDE Complete. Used when one Detector Bar is operated from two machines.....                              | 2.00        |
| 4064      | STRAP for 4063.....  | .40         |
| 4065      | GUIDE Casting for 4063.....  | 1.45        |
| 4066      | LEVER, Special, Used when one Detector Bar is operated from two Machines.....                              | 2.00        |
| 4067      | Straight Arm COMPENSATOR, Special, $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....                              | 1.00        |
| 4333      | CAST WASHER for $\frac{3}{4}$ " Bolt.....  | .08         |
| 5693      | ACUTE Angle CRANK, 11" x 11".....  | 1.28        |
| 5694      | OBTUSE Angle CRANK, 11" x 11".....   | 1.28        |
| 5696      | OBTUSE Angle CRANK, 11" x $13\frac{3}{4}$ ".....   | 1.96        |
| 5697      | ACUTE Angle CRANK, 11" x $13\frac{3}{4}$ ".....  | 1.96        |
| 6270      | GUIDE Complete for Compensator 4067. Used when one Detector Bar is operated from two Machines.....         | 3.80        |
| 6271      | GUIDE Casting for 6270.....  | 2.60        |
| 6685      | Straight Arm COMPENSATOR, 24" x 24".....   | 5.50        |
| 6686      | Straight Arm COMPENSATOR, $20\frac{1}{2}$ " x $20\frac{1}{2}$ ".....                                       | 5.00        |
| 7212      | Straight Arm COMPENSATOR, 31" x 31".....   | 7.00        |
| 7670      | WASHER, special.....   | .02         |
| 7856      | Straight Arm COMPENSATOR, $17\frac{1}{2}$ " x $17\frac{1}{2}$ ".....                                       | 4.40        |
| 8206      | ONE-WAY CRANK STAND with Pin and Cotter.....   | 1.44        |
| 8207      | ONE-WAY CRANK STAND. Casting Only.....   | 1.20        |
| 8208      | PIN for One-way Crank Stand.....   | .22         |
| 8209      | TWO-WAY CRANK STAND with Pin and Cotter.....   | 1.80        |
| 8210      | TWO-WAY CRANK STAND. Casting only.....   | 1.48        |
| 8560      | PIN for Two-way Crank Stand.....   | .27         |
| 8561      | THREE-WAY CRANK STAND with Pin and Cotter.....   | 2.00        |
| 8562      | THREE-WAY CRANK STAND. Casting only.....   | 1.60        |
| 8563      | PIN for Three-way Crank Stand.....   | .34         |
| 8564      | OBTUSE Angle CRANK, $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....   | 1.36        |
| 8565      | ACUTE Angle CRANK, $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....  | 1.36        |
| 8566      | ONE-WAY CRANK STAND Complete with T. Crank, $11\frac{3}{4}$ " x $11\frac{3}{4}$ " x $11\frac{3}{4}$ "..... | 4.50        |
| 8567      | ONE-WAY CRANK STAND Complete with a Right Angle Crank, $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....          | 2.84        |
| 8568      | ONE-WAY CRANK STAND Complete with Compensator, $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....                  | 2.84        |
| 8569      | ONE-WAY CRANK STAND Complete with Obtuse Angle Crank, $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....           | 2.84        |
| 8570      | ONE-WAY CRANK STAND Complete, with Acute Angle Crank, $11\frac{3}{4}$ " x $11\frac{3}{4}$ ".....           | 2.84        |

Order by NUMBER and NAME appearing in Large Type.

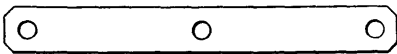
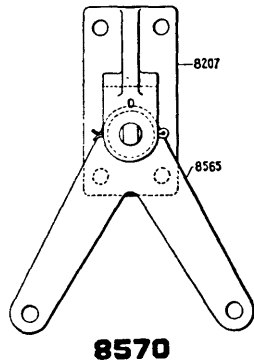
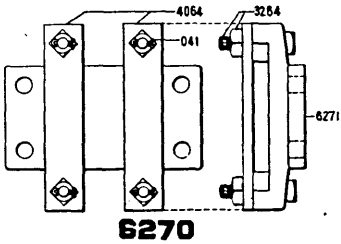
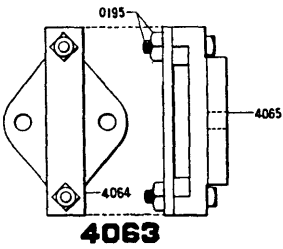
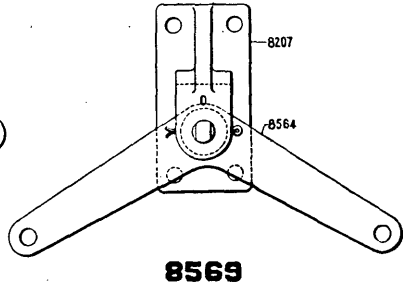
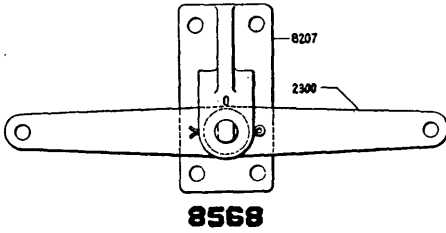
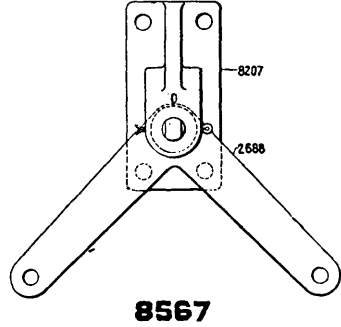
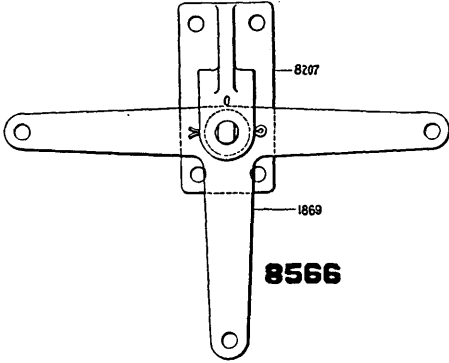
## SWITCH AND LOCK MOVEMENT.

| Order No. | CRANKS, STANDS AND COMPENSATORS.—CONT.                      | List Price. |
|-----------|---|-------------|
| 8571      | ONE-WAY Plate CRANK STAND Complete with Pin and Cotter..... | 1.50.....   |
| 8572      | ONE-WAY Plate CRANK STAND, Casting only.....                | 1.20.....   |
| 8573      | OBTUSE Angle CRANK, 9" x 9".....                            | 1.12.....   |
| 8574      | OBTUSE Angle CRANK, 14½" x 14½".....                        | 2.56.....   |
| 8575      | Right Angle CRANK, 9" x 7½".....                            | 1.24.....   |
| 8576      | Right Angle CRANK, 14½" x 14½".....                         | 2.56.....   |
| 8577      | ACUTE Angle CRANK, 9" x 9".....                             | 1.12.....   |
| 8578      | ACUTE Angle CRANK, 14½" x 14½".....                         | 2.56.....   |
| 8579      | Straight Arm COMPENSATOR, 14½" x 14½".....                  | 2.56.....   |
| 8580      | T. CRANK, 9" x 9" x 9".....                                 | 1.53.....   |
| 8581      | T. CRANK, 9" x 9" x 11¾".....                               | 2.30.....   |
| 8582      | T. CRANK, 9" x 11¾" x 11¾".....                             | 3.58.....   |
| 8583      | T. CRANK, 10" x 11" x 11".....                              | 2.08.....   |
| 8584      | T. CRANK, 10" x 11¾" x 11¾".....                            | 2.58.....   |
| 8585      | T. CRANK, 11¾" x 10" x 11¾".....                            | 2.58.....   |
| 8586      | T. CRANK, 14½" x 14½" x 14½".....                           | 3.90.....   |
| 8587      | Right Angle CRANK, 9" x 11¾".....                           | 1.48.....   |
| 8588      | Straight Arm COMPENSATOR, 18" x 18".....                    | 4.50.....   |
| 8602      | STUD for One-Way Plate Crank Stand.....                     | .22.....    |

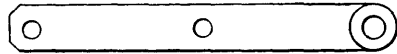
Order by NUMBER and NAME appearing in Large Type.



CRANKS, STANDS AND COMPENSATORS.—CONT.



4067—11½" x 11½"

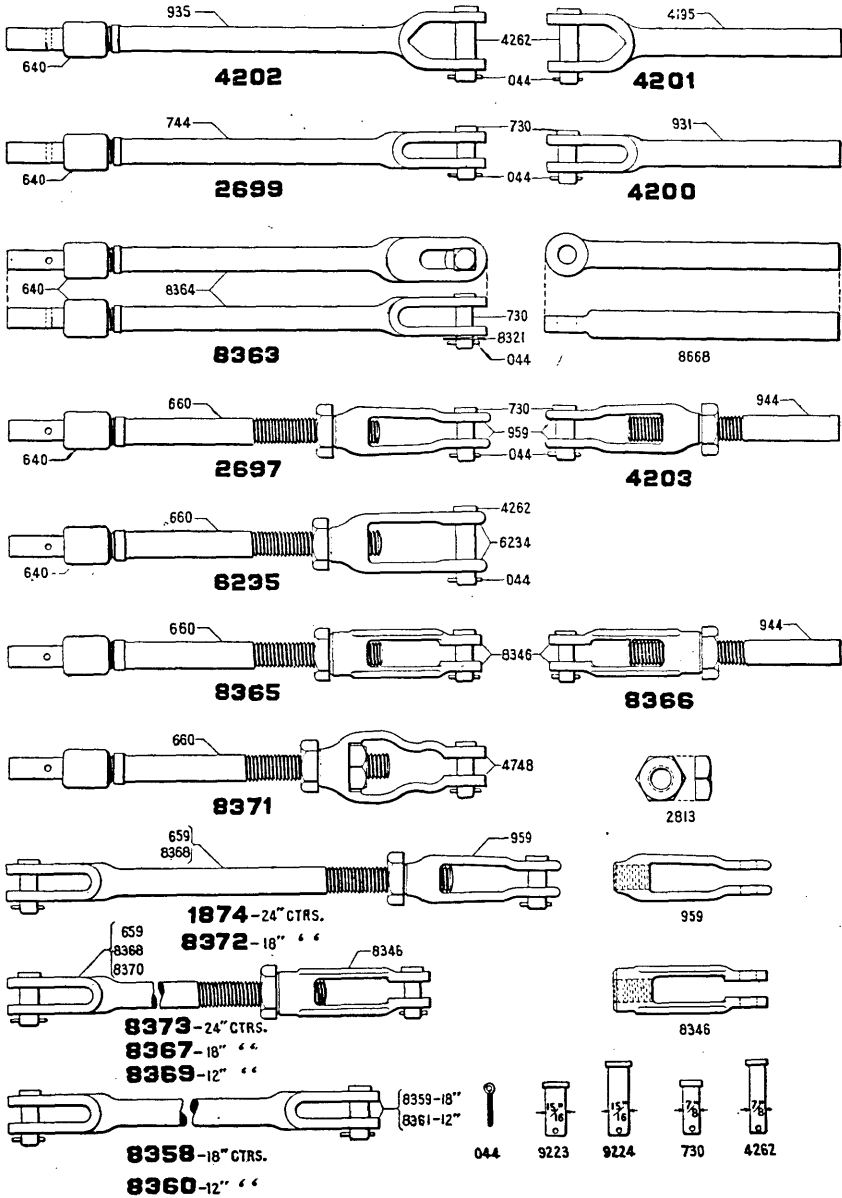


4066—11½" x 11½"

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

RODS, LUGS, JAWS, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

**SWITCH AND LOCK MOVEMENT.**

| Order No. | RODS, LUGS, JAWS, ETC.  | List Price. |
|-----------|---|-------------|
| 044       | COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)   | .80         |
| 0114      | RIVET, $\frac{1}{4}$ " x $1\frac{1}{2}$ ", Rd. Hd.  | .01         |
| 640       | PIPE COUPLING, 1", reinforced   | .19         |
| 653       | 1" BLACK PIPE, per foot   | .00         |
| 659       | SOLID JAW, $1\frac{1}{4}$ ", with threaded end, for 1874, or 8373   | 1.34        |
| 660       | SCREW ROD, $1\frac{1}{4}$ ", with tang end for 2697, etc.   | .50         |
| 730       | PIN, $\frac{1}{4}$ " x $2\frac{3}{8}$ "   | .07         |
| 744       | SOLID JAW, $1\frac{1}{4}$ ", with tang end  | .84         |
| 931       | SOLID JAW, $1\frac{1}{4}$ ", stub end   | .74         |
| 933       | DOUBLE JAW, $1\frac{1}{4}$ ", for 4205  | 2.00        |
| 935       | WIDE SOLID JAW, $1\frac{1}{4}$ ", with tang end   | 1.14        |
| 944       | SCREW ROD, $1\frac{1}{4}$ ", stub end   | .44         |
| 959       | WROUGHT SCREW JAW, $1\frac{1}{4}$ "   | 1.10        |
| 1361      | LUG, $1\frac{1}{4}$ ", with tanged ends for 4374  | 1.12        |
| 1874      | ADJUSTABLE LINK COMPLETE, $1\frac{1}{4}$ ", 24" centers, with Solid Jaw<br>one end and Wrought Screw Jaw at the other end | 2.60        |
| 2697      | WROUGHT SCREW JAW COMPLETE, $1\frac{1}{4}$ ", with tang end   | 1.90        |
| 2699      | SOLID JAW COMPLETE, $1\frac{1}{4}$ "  | 1.08        |
| 2813      | THIN NUT, $1\frac{1}{4}$ "  | .09         |
| 2933      | PLUG, 1" x 6", two holes  | .07         |
| 4195      | WIDE SOLID JAW, $1\frac{1}{4}$ ", stub end  | 1.10        |
| 4197      | DOUBLE JAW, $1\frac{1}{4}$ ", for 4204  | 1.90        |
| 4198      | DOUBLE JAW, $1\frac{1}{4}$ ", for 4206  | 2.00        |
| 4199      | LUG, $1\frac{1}{4}$ ", for 4375   | 1.12        |
| 4200      | SOLID JAW COMPLETE, $1\frac{1}{4}$ ", with stub end   | .80         |
| 4201      | WIDE SOLID JAW COMPLETE, $1\frac{1}{4}$ ", with stub end  | 1.20        |
| 4202      | WIDE SOLID JAW COMPLETE, $1\frac{1}{4}$ ", with tang end  | 1.44        |
| 4203      | WROUGHT SCREW JAW COMPLETE, $1\frac{1}{4}$ ", with stub end   | 1.70        |
| 4204      | DOUBLE JAW COMPLETE, $1\frac{1}{4}$ ", with two stub ends   | 2.00        |
| 4205      | DOUBLE JAW COMPLETE, $1\frac{1}{4}$ ", with two tang ends   | 2.46        |
| 4206      | DOUBLE JAW COMPLETE, $1\frac{1}{4}$ ", with one tang and one stub end   | 2.26        |
| 4207      | WROUGHT LUG, $1\frac{1}{4}$ ", with stub ends   | 1.10        |
| 4262      | PIN, $\frac{7}{8}$ " x $3\frac{3}{8}$ ", for Wide Jaw   | .11         |
| 4374      | WROUGHT LUG COMPLETE, $1\frac{1}{4}$ ", with tanged ends  | 1.50        |
| 4375      | WROUGHT LUG COMPLETE, $1\frac{1}{4}$ ", with one tang and one stub end  | 1.32        |
| 4748      | MALLEABLE JAW, for 8371. (Special)  | .48         |
| 6234      | WIDE WROUGHT SCREW JAW, $1\frac{1}{4}$ ", for 6235  | 1.70        |
| 6235      | WIDE WROUGHT SCREW JAW COMPLETE, $1\frac{1}{4}$ ", with tang end  | 2.50        |
| 6663      | 1" Black Pipe with 6" Plug, Coupling and Rivet, per foot  | .00         |
| 6891      | SCREW ROD, $1\frac{1}{4}$ ", with left hand thread and tang end   | .50         |
| 6892      | WROUGHT TURNBUCKLE COMPLETE, $1\frac{1}{4}$ ", with tang ends   | 2.80        |
| 6893      | THIN NUT, $1\frac{1}{4}$ ", Left Hand Thread  | .09         |
| 7426      | WROUGHT TURNBUCKLE COMPLETE, $1\frac{1}{4}$ ", with stub ends   | 2.30        |
| 7428      | SCREW ROD, $1\frac{1}{4}$ ", with left hand thread and stub end   | .44         |
| 8321      | IRON WASHER for 8363  | .02         |
| 8346      | MALLEABLE SCREW JAW, $1\frac{1}{4}$ "   | .41         |
| 8349      | DOUBLE JAW COMPLETE, $1\frac{1}{4}$ ", with eye at one end and tang at the<br>other                                       | 2.76        |
| 8350      | DOUBLE JAW for 8349   | 2.50        |
| 8351      | SCREW ROD COMPLETE, $1\frac{1}{4}$ ", with tang end   | .68         |
| 8352      | CLAMPED PIPE LUG COMPLETE for 1" Pipe   | 1.00        |
| 8355      | PLUG, 1" x 10", four holes  | .14         |
| 8356      | WROUGHT TURNBUCKLE COMPLETE, $1\frac{1}{4}$ ", with one stub and one<br>tang end  | 2.50        |
| 8357      | 1" BLACK PIPE, with 10" Plug, Coupling and Rivets, per foot   | .00         |
| 8358      | SOLID LINK COMPLETE, $1\frac{1}{4}$ ", 18" centers  | 2.00        |

Order by NUMBER and NAME appearing in Large Type.

## SWITCH AND LOCK MOVEMENT.

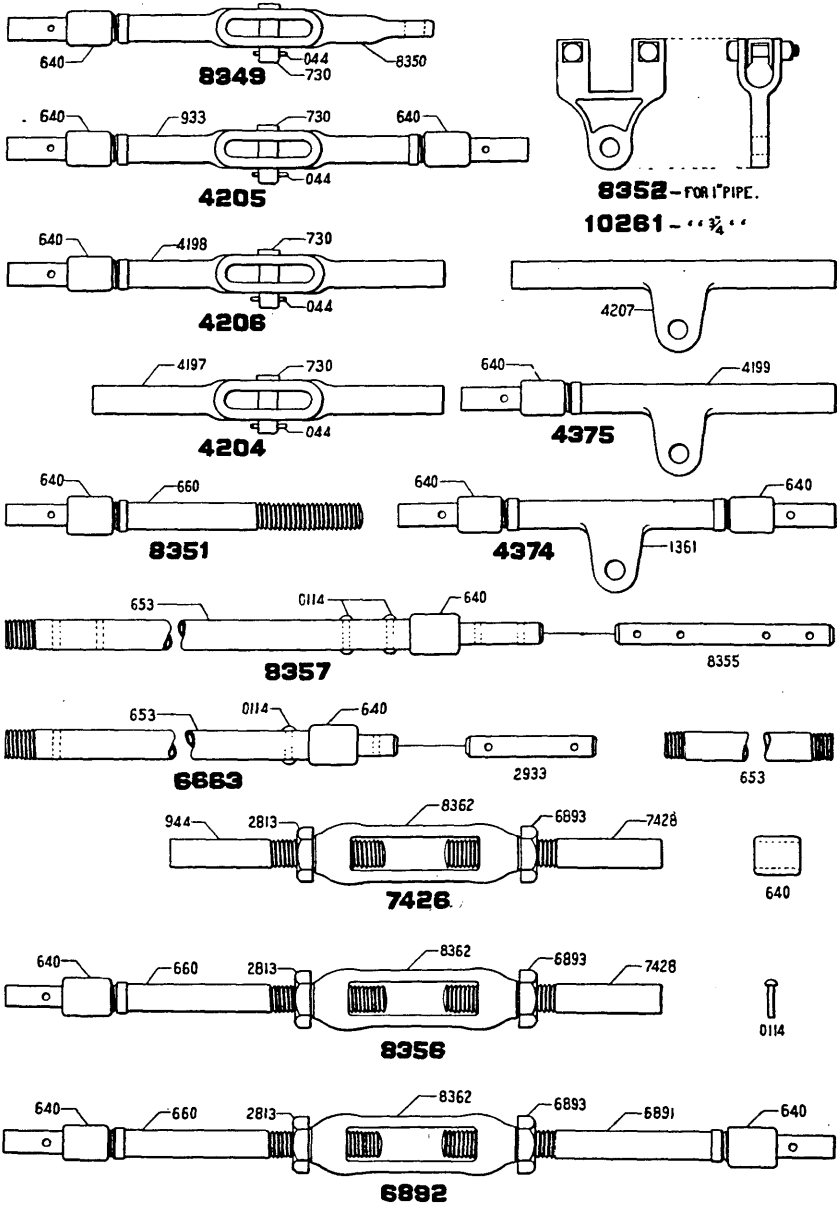
| Order No. | RODS, LUGS, JAWS, ETC.—CONT.   | List Price. |
|-----------|--|-------------|
| 8359      | LINK for 8358.....   | 1.90.....   |
| 8360      | SOLID LINK COMPLETE, 1 $\frac{1}{4}$ ", 12" centers.....   | 1.90.....   |
| 8361      | LINK for 8360.....   | 1.80.....   |
| 8362      | WROUGHT TURNBUCKLE, 1 $\frac{1}{4}$ ", for 6892, etc.....  | 1.20.....   |
| 8363      | SLOTTED JAW COMPLETE, 1 $\frac{1}{4}$ ", with tang end.....  | 1.94.....   |
| 8364      | SLOTTED JAW for 8363.....  | 1.66.....   |
| 8365      | MALLEABLE SCREW JAW COMPLETE, 1 $\frac{1}{4}$ ", with tang end.....  | 1.28.....   |
| 8366      | MALLEABLE SCREW JAW COMPLETE, 1 $\frac{1}{4}$ ", with stub end.....  | 1.04.....   |
| 8367      | ADJUSTABLE LINK COMPLETE, 1 $\frac{1}{4}$ ", 18" centers, with Solid Jaw at one end, and Malleable Screw Jaw at the other..... | 1.90.....   |
| 8368      | SOLID JAW, 1 $\frac{1}{4}$ ", with threaded end, for 8367 or 8372.....   | 1.26.....   |
| 8369      | ADJUSTABLE LINK COMPLETE, 1 $\frac{1}{4}$ ", 12" centers, with Solid Jaw at one end and Malleable Screw Jaw at the other.....  | 1.84.....   |
| 8370      | SOLID JAW, 1 $\frac{1}{4}$ ", with threaded end, for 8369.....   | 1.20.....   |
| 8371      | SCREW JAW COMPLETE, 1 $\frac{1}{4}$ ", with tang end. (Special).....   | 1.44.....   |
| 8372      | ADJUSTABLE LINK COMPLETE, 1 $\frac{1}{4}$ ", 18" centers, with Solid Jaw at one end, and Wrought Screw Jaw at the other.....   | 2.50.....   |
| 8373      | ADJUSTABLE LINK COMPLETE, 1 $\frac{1}{4}$ ", 24" centers, with Solid Jaw at one end, and Malleable Screw Jaw at the other..... | 2.00.....   |
| 8668      | EYE ROD, 1 $\frac{1}{4}$ ", stub end. (Special for use with Jaws).....   | .70.....    |
| 9223      | PIN, $\frac{1}{16}$ " x 2 $\frac{3}{8}$ ".....   | .09.....    |
| 9224      | PIN, $\frac{1}{16}$ " x 3 $\frac{3}{8}$ ".....   | .12.....    |
| 10261     | CLAMPED PIPE LUG COMPLETE, for $\frac{3}{4}$ " Pipe.....   | 1.00.....   |

## NOTE:

Where prices are not extended same will be furnished on application.

Order by NUMBER and NAME appearing in Large Type.

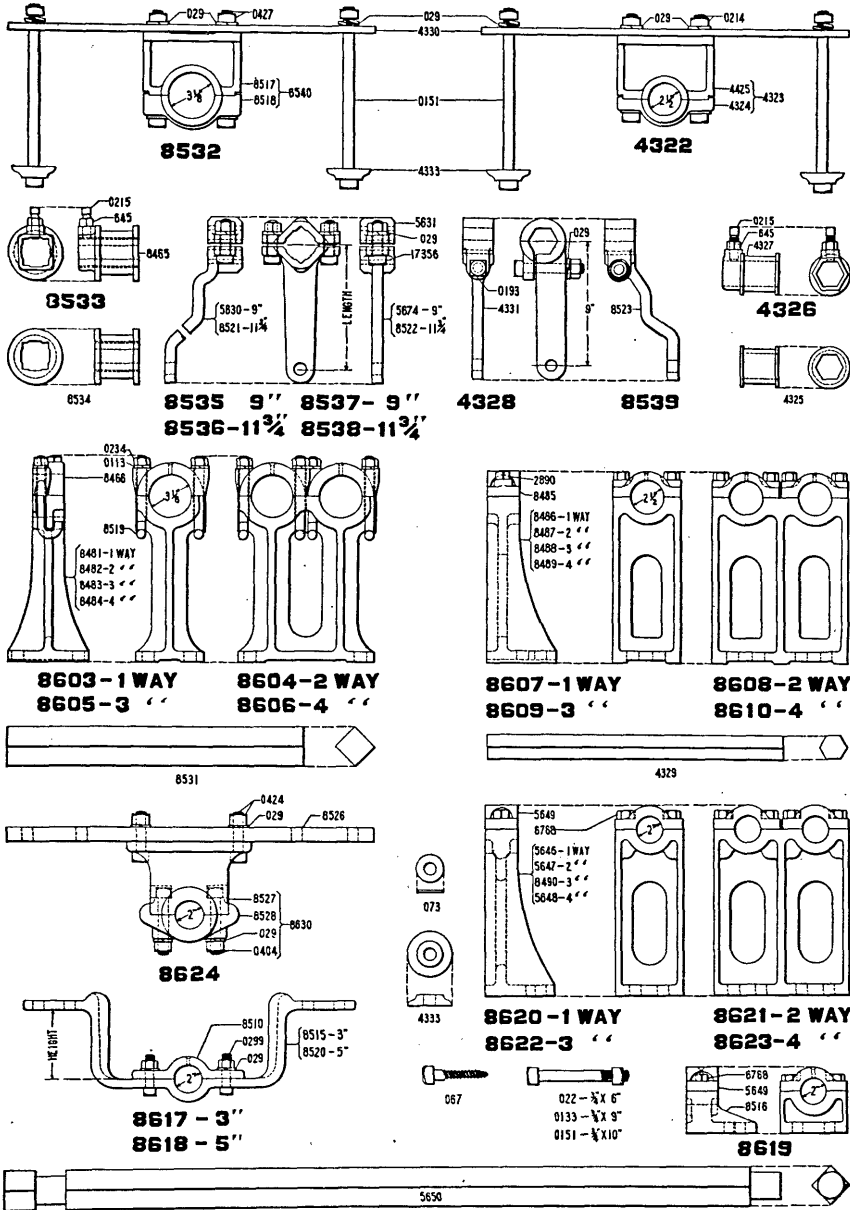
RODS, LUGS, JAWS, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

ROCKER SHAFT MATERIAL.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

| Order No. | ROCKER SHAFT MATERIAL.  | List Price. |
|-----------|---|-------------|
| 022       | BOLT with Nut, $\frac{3}{4}$ " x 6"   | .14         |
| 029       | NUT LOCK for $\frac{3}{4}$ " Bolt   | .02         |
| 067       | LAG SCREW, $\frac{3}{4}$ " x 4"   | .07         |
| 073       | WASHER for $\frac{3}{4}$ " Bolt   | .02         |
| 0113      | NUT LOCK for $\frac{5}{8}$ " Bolt   | .02         |
| 0133      | BOLT with Nut, $\frac{3}{4}$ " x 9"   | .16         |
| 0151      | BOLT with Nut, $\frac{3}{4}$ " x 10"  | .16         |
| 0193      | BOLT with Nut, $\frac{3}{4}$ " x 4 $\frac{1}{2}$ "  | .12         |
| 0214      | BOLT with Nut, $\frac{3}{4}$ " x 7 $\frac{1}{2}$ "  | .14         |
| 0215      | SET SCREW, $\frac{3}{8}$ " x 1 $\frac{3}{4}$ "  | .04         |
| 0234      | NUT for $\frac{5}{8}$ " Bolt  | .02         |
| 0299      | BOLT with Nut, $\frac{3}{4}$ " x 2 $\frac{1}{2}$ "  | .10         |
| 0404      | BOLT with Nut, $\frac{3}{4}$ " x 4"   | .12         |
| 0424      | BOLT with Nut, $\frac{3}{4}$ " x 2 $\frac{3}{4}$ "  | .10         |
| 0427      | BOLT with Nut, $\frac{3}{4}$ " x 8"   | .16         |
| 645       | NUT, $\frac{3}{8}$ "  | .04         |
| 2890      | CAP SCREW, $\frac{5}{8}$ " x 2 $\frac{1}{4}$ "  | .14         |
| 4322      | Rocker Shaft BEARING Complete for 1 $\frac{1}{8}$ " Hexagon Shaft Journal, for use between ties           | 5.50        |
| 4323      | CAP AND BASE for 4322   | 2.80        |
| 4324      | CAP for 4323  | 1.30        |
| 4325      | INTERMEDIATE JOURNAL for Hex. Shaft   | .50         |
| 4326      | END JOURNAL Complete, for Hex. Shaft  | .72         |
| 4327      | END JOURNAL Casting, for 4326   | .62         |
| 4328      | STRAIGHT ARM Complete for Hexagon Shaft   | 1.48        |
| 4329      | ROCKER SHAFT, 1 $\frac{1}{8}$ " Hex. (per foot)   | 1.40        |
| 4330      | PLATE, $\frac{1}{2}$ " x 6" x 2' 6", supporting Rocker Shaft Bearings between ties, for 4322 or 8532      | 2.00        |
| 4331      | STRAIGHT ARM only, for Hex. Rocker Shaft, for 4328  | 1.36        |
| 4333      | CAST WASHER, for $\frac{3}{4}$ " Bolt   | .08         |
| 4425      | BASE for 4323   | 1.70        |
| 5630      | OFFSET ARM, only, for 8535  | 1.74        |
| 5631      | CAP for Arm, for Square Rocker Shaft  | .80         |
| 5646      | BASE for 8620   | 1.32        |
| 5647      | BASE for 8621   | 2.80        |
| 5648      | BASE for 8623   | 5.30        |
| 5649      | CAP for turned Rocker Shaft Bearing   | .40         |
| 5650      | SQUARE ROCKER SHAFT, with turned Journals. Specify length of shaft and number of journals. Shaft per foot | 1.60        |
|           | For each turned Journal, add  | .84         |
| 5674      | STRAIGHT ARM, only, for 8537  | 1.46        |
| 6768      | CAP SCREW, $\frac{5}{8}$ " x 1 $\frac{1}{4}$ " for 8619, etc.   | .12         |
| 8465      | END JOURNAL Casting, for 8533   | 1.44        |
| 8466      | CAP for Rocker Shaft Bearings 8603, etc.  | .90         |
| 8481      | BASE for 8603   | 1.80        |
| 8482      | BASE for 8604   | 3.40        |
| 8483      | BASE for 8605   | 4.80        |
| 8484      | BASE for 8606   | 6.00        |
| 8485      | CAP for Bearing 8607, etc.  | .40         |
| 8486      | BASE for 8607   | 1.32        |
| 8487      | BASE for 8608   | 2.80        |
| 8488      | BASE for 8609   | 4.10        |
| 8489      | BASE for 8610   | 5.30        |
| 8490      | BASE for 8622   | 4.10        |
| 8510      | CAP for 8617 or 8618  | .60         |
| 8515      | BEARING, casting only, for 8617   | 1.90        |
| 8516      | BASE for 8619   | .92         |
| 8517      | BASE for 8540   | 1.70        |

Order by NUMBER and NAME appearing in Large Type.

## SWITCH AND LOCK MOVEMENT.

| Order No. | ROCKER SHAFT MATERIAL.—CONT.   | List Price. |
|-----------|--|-------------|
| 8518      | CAP for 8540.....  | 1.30.....   |
| 8519      | HOOK BOLT only for 8603, etc.....  | .10.....    |
| 8520      | BEARING, Casting Only, for 8618.....   | 2.00.....   |
| 8521      | OFFSET ARM, only, for 8536.....  | 2.50.....   |
| 8522      | STRAIGHT ARM, only, for 8538.....  | 1.90.....   |
| 8523      | OFFSET ARM, only, for 8539.....  | 1.44.....   |
| 8526      | PLATE, 1" x 3½" x 2' 6", for 8624.....   | 2.28.....   |
| 8527      | BASE for 8630.....   | 1.60.....   |
| 8528      | CAP for 8630.....  | 1.05.....   |
| 8531      | ROCKER SHAFT, 2" Square (per foot).....  | 1.60.....   |
| 8532      | Rocker Shaft BEARING Complete for 2" Square Shaft Journal, for use between ties.....                     | 5.50.....   |
| 8533      | END JOURNAL, Complete, for 2" Square Rocker Shaft.....   | 1.50.....   |
| 8534      | INTERMEDIATE JOURNAL for 2" Square Rocker Shaft.....   | 1.20.....   |
| 8535      | OFFSET ARM Complete, 9", for 2" Square Rocker Shaft.....   | 2.80.....   |
| 8536      | OFFSET ARM Complete, 12" for 2" Square Rocker Shaft.....   | 3.56.....   |
| 8537      | STRAIGHT ARM Complete, 9" for 2" Square Rocker Shaft.....  | 2.50.....   |
| 8538      | STRAIGHT ARM Complete, 12" for 2" Square Rocker Shaft.....   | 2.94.....   |
| 8539      | OFFSET ARM, Complete, for Hex. Rocker Shaft.....   | 1.56.....   |
| 8540      | CAP AND BASE for 8532.....   | 2.80.....   |
| 8603      | HIGH, ONE-WAY, Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft Journal.....                    | 2.80.....   |
| 8604      | HIGH, TWO-WAY Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft Journal.....                     | 5.40.....   |
| 8605      | HIGH, THREE-WAY, Rocker Shaft BEARING Complete for 2" Square Rocker Shaft Journal.....                   | 7.80.....   |
| 8606      | HIGH, FOUR-WAY, Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft Journal.....                   | 10.00.....  |
| 8607      | HIGH, ONE-WAY, Rocker Shaft BEARING Complete, for Hexagon Rocker Shaft Journal.....                      | 1.80.....   |
| 8608      | HIGH, TWO-WAY, Rocker Shaft BEARING Complete, for Hexagon Rocker Shaft Journal.....                      | 3.70.....   |
| 8609      | HIGH, THREE-WAY, Rocker Shaft BEARING Complete, for Hexagon Rocker Shaft Journal.....                    | 5.50.....   |
| 8610      | HIGH, FOUR-WAY, Rocker Shaft BEARING Complete, for Hexagon Rocker Shaft Journal.....                     | 7.14.....   |
| 8617      | Rocker Shaft BEARING Complete, for use between ties, 3" drop.....  | 2.60.....   |
| 8618      | Rocker Shaft BEARING, Complete, for use between ties, 5" drop.....                                       | 2.70.....   |
| 8619      | ONE-WAY LOW Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft, with turned Journal.....          | 1.50.....   |
| 8620      | HIGH, ONE-WAY Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft with turned Journals.....        | 1.80.....   |
| 8621      | HIGH, TWO-WAY, Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft, with turned Journals.....      | 3.70.....   |
| 8622      | HIGH, THREE-WAY, Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft, with turned Journals.....    | 5.50.....   |
| 8623      | HIGH, FOUR-WAY, Rocker Shaft BEARING Complete, for 2" SQUARE ROCKER SHAFT, with turned Journals.....     | 7.14.....   |
| 8624      | Rocker Shaft BEARING Complete for Square Rocker Shaft with 2" turned Journals. For use between ties..... | 5.00.....   |
| 8630      | CAP AND BEARING Complete for 8624.....   | 2.80.....   |
| 17356     | Bolt with Hex. Nut, ¾" x 2½". (Special).....   | .12.....    |

Order by NUMBER and NAME appearing in Large Type.



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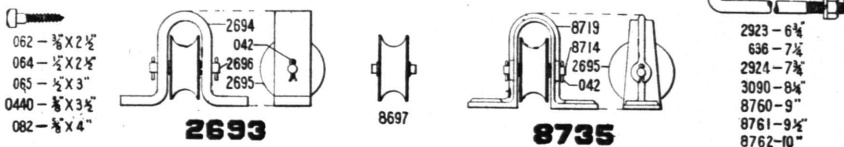
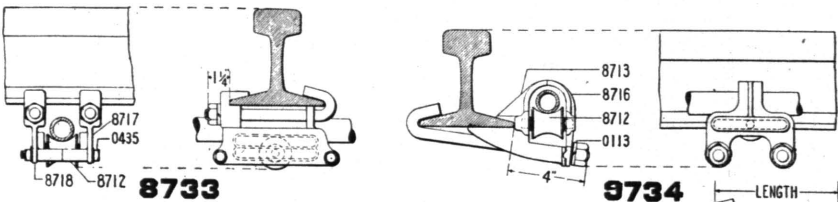
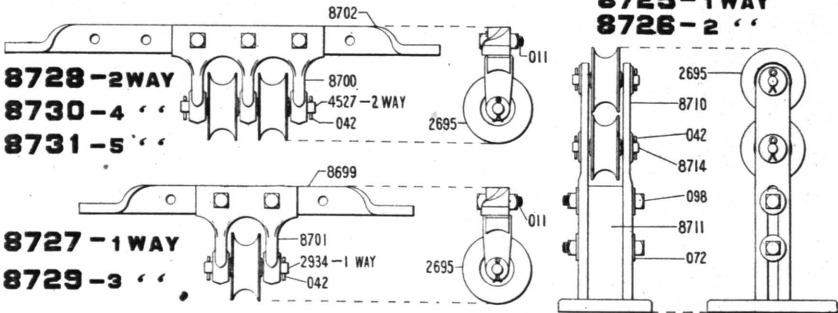
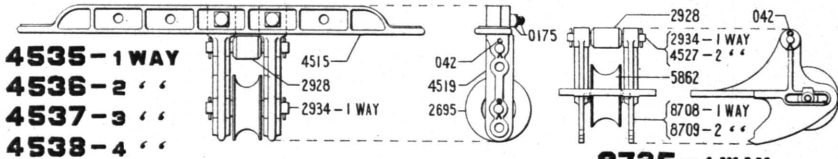
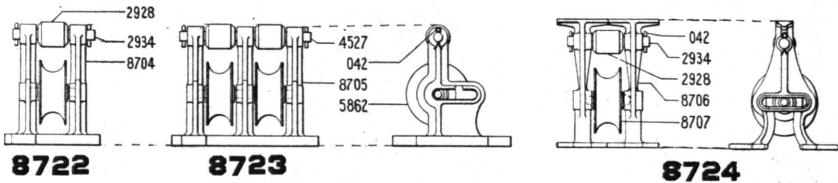
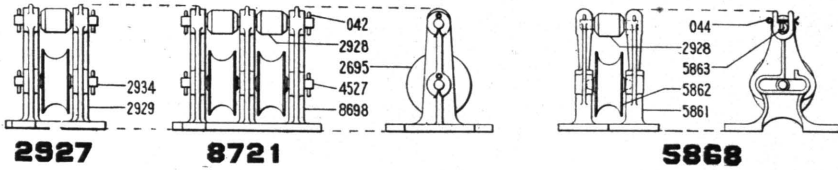
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SWITCH AND LOCK MOVEMENT.

PIPE CARRIERS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## SWITCH AND LOCK MOVEMENT.

95

| Order No. | PIPE CARRIERS.   | List Price. |
|-----------|--|-------------|
| 011       | BOLT with Nut, $\frac{1}{8}$ " x 2" for 8727, etc.                     | .04         |
| 042       | COTTER Pin, $\frac{3}{16}$ " x 1" (per 100)                            | .80         |
| 044       | COTTER Pin, $\frac{3}{16}$ " x 1 $\frac{1}{2}$ " (per 100)             | .80         |
| 062       | LAG SCREW, $\frac{3}{8}$ " x 2 $\frac{1}{2}$ "                         | .02         |
| 064       | LAG SCREW, $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "                         | .03         |
| 065       | LAG SCREW, $\frac{1}{2}$ " x 3"  | .03         |
| 072       | WASHER for $\frac{1}{2}$ " Bolt, for 8732.                             | .01         |
| 082       | LAG SCREW, $\frac{5}{8}$ " x 4"  | .06         |
| 098       | BOLT with Nut, $\frac{1}{2}$ " x 3 $\frac{3}{4}$ "                     | .05         |
| 0113      | NUT LOCK for $\frac{3}{8}$ " Bolt.                                     | .02         |
| 0175      | BOLT and Nut, $\frac{3}{8}$ " x 1 $\frac{1}{2}$ "                      | .03         |
| 0435      | BOLT with Nut, $\frac{3}{8}$ " x 4"                                    | .04         |
| 0440      | LAG SCREW, $\frac{5}{8}$ " x 3 $\frac{1}{2}$ "                         | .05         |
| 636       | HOOK BOLT, $\frac{5}{8}$ " x 7 $\frac{1}{2}$ ", with Nut and Nut Lock. | .12         |
| 2693      | WROUGHT PIPE CARRIER with Single Roller. Complete                      | .31         |
| 2694      | STAND for 2693.  | .21         |
| 2695      | BOTTOM ROLLER with Pin Hole for 2693, etc.                             | .09         |
| 2696      | PIN for 2693.  | .05         |
| 2923      | HOOK BOLT, $\frac{5}{8}$ " x 6 $\frac{3}{4}$ ", with Nut and Nut Lock. | .12         |
| 2924      | HOOK BOLT, $\frac{5}{8}$ " x 7 $\frac{3}{4}$ ", with Nut and Nut Lock. | .12         |
| 2927      | ONE-WAY PLAIN PIPE CARRIER. For prices see page 97                     | .05         |
| 2928      | TOP ROLLER for 2927, etc. (per 100)                                    | 2.40        |
| 2929      | STAND for One-way Pipe Carrier 2927.                                   | .31         |
| 2934      | PIN for One-way Pipe Carrier, 2927, etc.                               | .05         |
| 3090      | HOOK BOLT, $\frac{5}{8}$ " x 8 $\frac{1}{4}$ ", with Nut and Nut Lock. | .12         |
| 4515      | Malleable BEARING PLATE for Pipe Carriers 4535, etc.                   | .48         |
| 4519      | SIDE PLATE for Transverse Pipe Carrier 4535, etc.                      | .16         |
| 4527      | PIN for Two-way Pipe Carrier, 8721, etc.                               | .05         |
| 4535      | ONE-WAY Transverse PIPE CARRIER, Complete. For prices see page 97.     | .05         |
| 4536      | TWO-WAY Transverse PIPE CARRIER Complete. For prices see page 97.      | .05         |
| 4537      | THREE-WAY Transverse PIPE CARRIER Complete. For prices see page 97.    | .05         |
| 4538      | FOUR-WAY Transverse PIPE CARRIER Complete. For prices see page 97.     | .05         |
| 5861      | STAND for Universal E. Z. Pipe Carrier.                                | .15         |
| 5862      | BOTTOM ROLLER with Cast Trunnions.                                     | .09         |
| 5863      | PIN for Top Roller, E. Z. Pipe Carrier.                                | .03         |
| 5868      | ONE-WAY Universal E. Z. PIPE CARRIER Complete. For price see page 97.  | .05         |
| 8697      | BOTTOM ROLLER with Steel Pin. (Special)                                | .14         |
| 8698      | STAND for Two-way plain Pipe Carrier 8721.                             | .45         |
| 8699      | Wrought BEARING PLATE for Transverse Pipe Carriers 8727 or 8729        | .96         |
| 8700      | BEARING for Two-way Transverse Pipe Carrier. (Special)                 | .45         |
| 8701      | BEARING for One-way Transverse Pipe Carrier. (Special)                 | .31         |
| 8702      | Wrought BEARING PLATE for Transverse Pipe Carriers 8728, etc.          | 1.02        |
| 8704      | STAND for One-way Anti-friction Pipe Carrier 8722.                     | .31         |
| 8705      | STAND for Two-way Anti-friction Pipe Carrier 8723.                     | .45         |
| 8706      | STAND for Universal Pipe Carrier. (Malleable)                          | .19         |
| 8707      | BOTTOM ROLLER with Cast Trunnions. (Malleable)                         | .14         |
| 8708      | STAND for special One-way Anti-friction Pipe Carrier 8725.             | .31         |
| 8709      | STAND for special Two-way Anti-friction Pipe Carrier 8726.             | .45         |
| 8710      | ADJUSTABLE SIDE PLATE for Vertical Pipe Guide.                         | .31         |
| 8711      | BASE for Adjustable Pipe Guide 8732.                                   | .86         |
| 8712      | SMALL ROLLER with Cast Trunnions, for 4733 or 4734.                    | .05         |
| 8713      | CLIP for Anti-friction Rail Clip Pipe Carrier. (Rail Half)             | .26         |
| 8714      | PIN for One-way Pipe Carrier 8735.                                     | .05         |
| 8716      | CLIP for Anti-friction Rail Clip Pipe Carrier. (Outside Half)          | .24         |

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

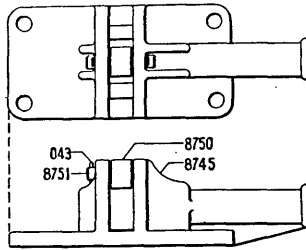
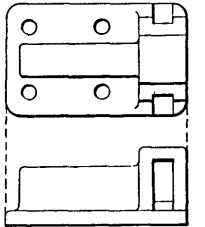
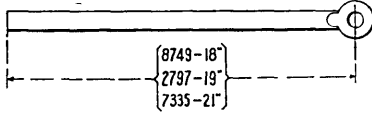
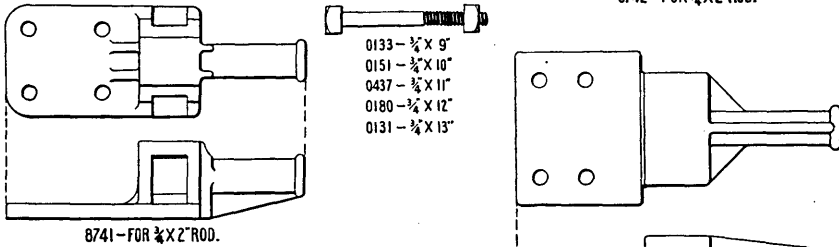
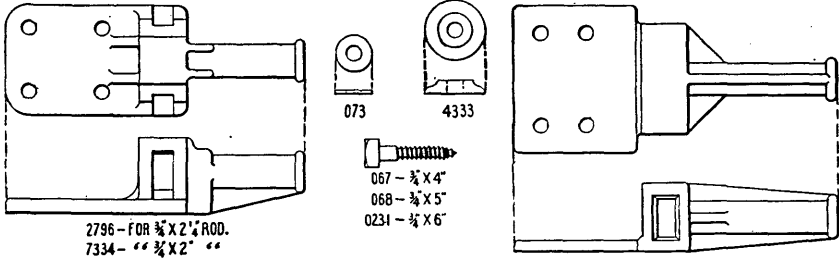
| Order No. | PIPE CARRIERS.—CONT.   | List Price. |
|-----------|--|-------------|
| 8717      | RIGHT HAND CLIP for Transverse Pipe Carrier, 8733.....   | .29.....    |
| 8718      | LEFT HAND CLIP for Transverse Pipe Carrier, 8733.....  | .29.....    |
| 8719      | STAND for 8735.....  | .21.....    |
| 8721      | TWO-WAY Plain PIPE CARRIER Complete. For price see page 97.....  |             |
| 8722      | ONE-WAY Anti-friction PIPE CARRIER Complete. For price see page 97.....  |             |
| 8723      | TWO-WAY Anti-friction PIPE CARRIER Complete. For price see page 97.....  |             |
| 8724      | ONE-WAY Universal PIPE CARRIER Comp. (Mall.) For price see page 97.....  |             |
| 8725      | ONE-WAY Anti-friction PIPE CARRIER Complete. (Special) for fastening to Ties.....                                    | .57.....    |
| 8726      | TWO-WAY Anti-friction PIPE CARRIER Complete. (Special) for fastening to Ties.....                                    | .91.....    |
| 8727      | ONE-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....                      |             |
| 8728      | TWO-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....                      |             |
| 8729      | THREE-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....                    |             |
| 8730      | FOUR-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....                     |             |
| 8731      | FIVE-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....                     |             |
| 8732      | ADJUSTABLE PIPE GUIDE Complete.....  | 1.82.....   |
| 8733      | ONE-WAY Transverse PIPE CARRIER Complete with Hook Bolts for clamping to rail. When ordering give width of rail..... | 1.10.....   |
| 8734      | RAIL CLIP PIPE CARRIER Complete with Hook Bolts. When ordering give width of rail.....                               | .64.....    |
| 8735      | Cast PIPE CARRIER with Single Roller Complete.....   | .34.....    |
| 8760      | HOOK BOLT, $\frac{5}{8}$ " x 9", with Nut and Nut Lock.....  | .12.....    |
| 8761      | HOOK BOLT, $\frac{3}{4}$ " x 9 $\frac{1}{2}$ ", with Nut and Nut Lock.....   | .12.....    |
| 8762      | HOOK BOLT, $\frac{3}{4}$ " x 10", with Nut and Nut Lock.....   | .12.....    |

Order by NUMBER and NAME appearing in Large Type.

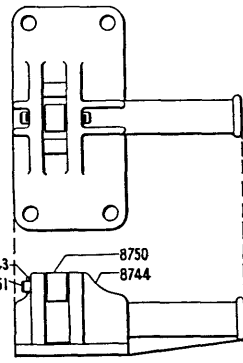
PRICE LIST OF PIPE CARRIERS.

| Number of Ways. | 2927<br>or<br>8721 |              | 4535 1-Way.<br>4536 2-Way.<br>4537 3-Way.<br>4538 3-Way. |              | 5868            |              | 8722<br>or<br>8723 |              | .8724           |              | 8727 1-Way.<br>8728 2-Way.<br>8729 3-Way.<br>8730 4-Way.<br>8731 5-Way. |              |
|-----------------|--------------------|--------------|--|--------------|-----------------|--------------|--------------------|--------------|-----------------|--------------|---|--------------|
|                 | Without Screws.    | With Screws. | Without Screws.  | With Screws. | Without Screws. | With Screws. | Without Screws.    | With Screws. | Without Screws. | With Screws. | Without Screws.   | With Screws. |
| 1               | .53                | .60          | 1.10   | 1.20         | .44             | .52          | .52                | .60          | .58             | .64          | 1.48  | 1.58         |
| 2               | .82                | .91          | 1.38   | 1.48         | .76             | .91          | .82                | .91          | .94             | 1.04         | 1.78  | 1.88         |
| 3               | 1.13               | 1.27         | 1.66   | 1.76         | 1.10            | 1.30         | 1.12               | 1.28         | 1.30            | 1.42         | 2.04  | 2.14         |
| 4               | 1.39               | 1.58         | 1.94   | 2.04         | 1.44            | 1.68         | 1.40               | 1.58         | 1.66            | 1.82         | 2.40  | 2.50         |
| 5               | 1.70               | 1.90         | ...  | ...          | 1.78            | 2.06         | 1.70               | 1.90         | 2.02            | 2.20         | 2.66  | 2.76         |
| 6               | 1.99               | 2.23         | ...  | ...          | 2.11            | 2.45         | 2.00               | 2.24         | 2.38            | 2.60         | ...   | ...          |
| 7               | 2.28               | 2.57         | ...  | ...          | 2.45            | 2.83         | 2.28               | 2.56         | 2.74            | 3.00         | ...   | ...          |
| 8               | 2.59               | 2.88         | ...  | ...          | 2.78            | 3.22         | 2.60               | 2.88         | 3.10            | 3.38         | ...   | ...          |
| 9               | 2.88               | 3.22         | ...  | ...          | 3.12            | 3.60         | 2.88               | 3.22         | 3.46            | 3.78         | ...   | ...          |
| 10              | 3.17               | 3.55         | ...  | ...          | 3.46            | 3.98         | 3.17               | 3.55         | 3.80            | 4.16         | ...   | ...          |
| 11              | 3.45               | 3.86         | ...  | ...          | 3.79            | 4.37         | 3.46               | 3.86         | 4.18            | 4.58         | ...   | ...          |
| 12              | 3.77               | 4.20         | ...  | ...          | 4.13            | 4.75         | 3.76               | 4.20         | 4.54            | 4.96         | ...   | ...          |
| 13              | 4.05               | 4.54         | ...  | ...          | 4.46            | 5.14         | 4.06               | 4.54         | 4.90            | 5.34         | ...   | ...          |
| 14              | 4.34               | 4.85         | ...  | ...          | 4.80            | 5.52         | 4.34               | 4.84         | 5.26            | 5.74         | ...   | ...          |
| 15              | 4.65               | 5.18         | ...  | ...          | 5.14            | 5.90         | 4.66               | 5.18         | 5.62            | 6.12         | ...   | ...          |
| 16              | 4.94               | 5.52         | ...  | ...          | 5.48            | 6.28         | 4.94               | 5.52         | 5.99            | 6.52         | ...   | ...          |
| 17              | 5.23               | 5.83         | ...  | ...          | 5.80            | 6.68         | 5.23               | 5.83         | 6.34            | 6.92         | ...   | ...          |
| 18              | 5.52               | 6.16         | ...  | ...          | 6.14            | 7.06         | 5.52               | 6.16         | 6.68            | 7.30         | ...   | ...          |
| 19              | 5.83               | 6.50         | ...  | ...          | 6.48            | 7.44         | 5.84               | 6.50         | 7.06            | 7.70         | ...   | ...          |
| 20              | 6.12               | 6.84         | ...  | ...          | 6.82            | 7.82         | 6.12               | 6.84         | 7.42            | 8.08         | ...   | ...          |
| 21              | 6.40               | 7.15         | ...  | ...          | 7.16            | 8.20         | 6.40               | 7.15         | 7.78            | 8.48         | ...   | ...          |
| 22              | 6.70               | 7.49         | ...  | ...          | 7.48            | 8.60         | 6.70               | 7.49         | 8.13            | 8.86         | ...   | ...          |
| 23              | 7.00               | 7.82         | ...  | ...          | 7.82            | 8.98         | 7.00               | 7.82         | 8.49            | 9.26         | ...   | ...          |
| 24              | 7.30               | 8.14         | ...  | ...          | 8.16            | 9.36         | 7.30               | 8.14         | 8.85            | 9.66         | ...   | ...          |
| 25              | 7.58               | 8.47         | ...  | ...          | 8.50            | 9.74         | 7.60               | 8.47         | 9.20            | 10.04        | ...   | ...          |
| 26              | 7.87               | 8.80         | ...  | ...          | 8.84            | 10.12        | 7.87               | 8.80         | 9.57            | 10.44        | ...   | ...          |
| 27              | 8.18               | 9.12         | ...  | ...          | 9.16            | 10.52        | 8.18               | 9.12         | 9.94            | 10.84        | ...   | ...          |
| 28              | 8.47               | 9.44         | ...  | ...          | 9.50            | 10.90        | 8.48               | 9.44         | 10.30           | 11.22        | ...   | ...          |
| 29              | 8.76               | 9.80         | ...  | ...          | 9.84            | 11.28        | 8.76               | 9.80         | 10.66           | 11.62        | ...   | ...          |
| 30              | 9.04               | 10.10        | ...  | ...          | 10.16           | 11.66        | 9.04               | 10.10        | 11.00           | 12.00        | ...   | ...          |

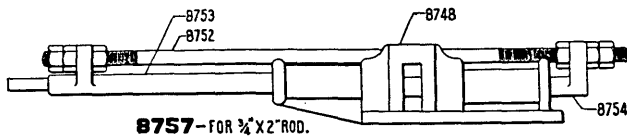
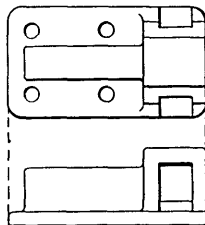
FACING POINT LOCKS.



8756 - FOR  $\frac{1}{4}$ " X 2" ROD.



8755 - FOR  $\frac{1}{4}$ " X 2" ROD.



8757 - FOR  $\frac{1}{4}$ " X 2" ROD.

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

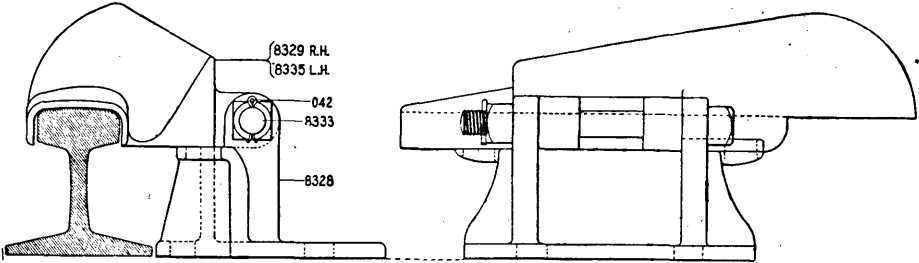
SWITCH AND LOCK MOVEMENT.

| Order No. | FACING POINT LOCKS.  | List Price. |
|-----------|--|-------------|
| 043       | COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (per 100).....                     | .80.....    |
| 067       | LAG SCREW, $\frac{3}{4}$ " x 4" .....  | .07.....    |
| 068       | LAG SCREW, $\frac{3}{4}$ " x 5" .....  | .08.....    |
| 073       | WASHER for $\frac{3}{4}$ " Bolt.....   | .02.....    |
| 0131      | BOLT with Nut, $\frac{3}{4}$ " x 13".....  | .19.....    |
| 0133      | BOLT with Nut, $\frac{3}{4}$ " x 9".....   | .16.....    |
| 0151      | BOLT with Nut, $\frac{3}{4}$ " x 10".....  | .16.....    |
| 0180      | BOLT with Nut, $\frac{3}{4}$ " x 12".....  | .19.....    |
| 0231      | LAG SCREW, $\frac{3}{4}$ " x 6".....   | .09.....    |
| 0437      | BOLT with Nut, $\frac{3}{4}$ " x 11".....  | .19.....    |
| 2796      | SINGLE OUTSIDE PLUNGER STAND for Lock Rod, $\frac{3}{4}$ " x $2\frac{1}{4}$ "..... | 2.20.....   |
| 2797      | 1" PLUNGER, 19 inches long.....  | .64.....    |
| 4333      | CAST WASHER for $\frac{3}{4}$ " Bolt.....  | .08.....    |
| 4737      | SINGLE PLUNGER STAND, for Lock Rod, $\frac{3}{4}$ " x $2\frac{1}{2}$ ".....        | 1.80.....   |
| 7334      | SINGLE OUTSIDE PLUNGER STAND for Lock Rod, $\frac{3}{4}$ " x 2".....               | 2.04.....   |
| 7335      | 1" PLUNGER, 21 inches long.....  | .70.....    |
| 8741      | DOUBLE OUTSIDE PLUNGER STAND for Two Lock Rods $\frac{3}{4}$ " x 2".....           | 2.04.....   |
| 8742      | SINGLE OUTSIDE PLUNGER STAND for Lock Rod, $\frac{3}{4}$ " x 2".....               | 2.10.....   |
| 8743      | DOUBLE OUTSIDE PLUNGER STAND for Two Lock Rods, $\frac{3}{4}$ " x 2".....          | 2.22.....   |
| 8744      | SINGLE INSIDE PLUNGER STAND, casting only, for 8755.....                           | 2.28.....   |
| 8745      | SINGLE INSIDE PLUNGER STAND, casting only, for 8756.....                           | 2.04.....   |
| 8746      | SINGLE PLUNGER STAND for Lock Rod, $\frac{3}{4}$ " x 2".....                       | 1.64.....   |
| 8747      | DOUBLE PLUNGER STAND for Two Lock Rods, $\frac{3}{4}$ " x 2".....                  | 2.10.....   |
| 8748      | DUPLEX PLUNGER STAND for 8757.....   | 2.22.....   |
| 8749      | 1" PLUNGER, 18" long.....  | .60.....    |
| 8750      | ROLLER, for 8755 or 8756.....  | .17.....    |
| 8751      | PIN for 8755 or 8756.....  | .08.....    |
| 8752      | ROD for 8757.....  | .68.....    |
| 8753      | PLUNGER for 8757.....  | 3.80.....   |
| 8754      | SHORT PLUNGER for 8757.....  | 2.60.....   |
| 8755      | INSIDE PLUNGER STAND, Complete for Lock Rod, $\frac{3}{4}$ " x 2".....             | 2.50.....   |
| 8756      | INSIDE PLUNGER STAND, Complete for Lock Rod, $\frac{3}{4}$ " x 2".....             | 2.30.....   |
| 8757      | DUPLEX PLUNGER STAND, Complete with Plungers.....                                  | 7.10.....   |

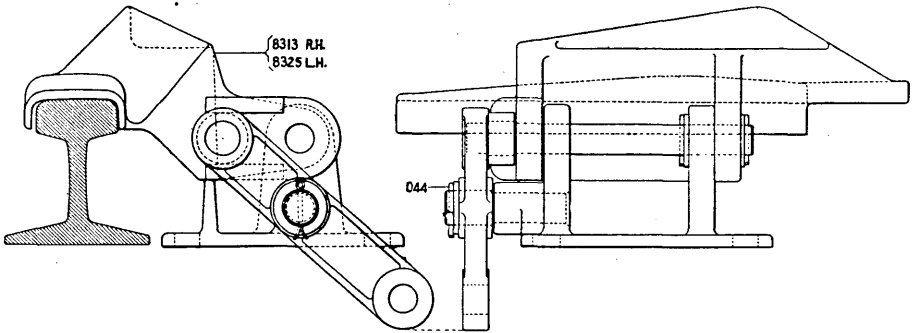
Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

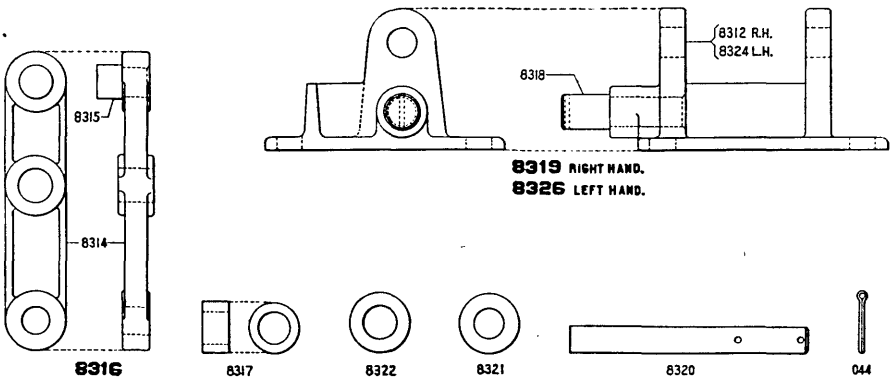
ANDERSON-BEVAN DERAIL,



**8327** RIGHT HAND.  
**8334** LEFT HAND.



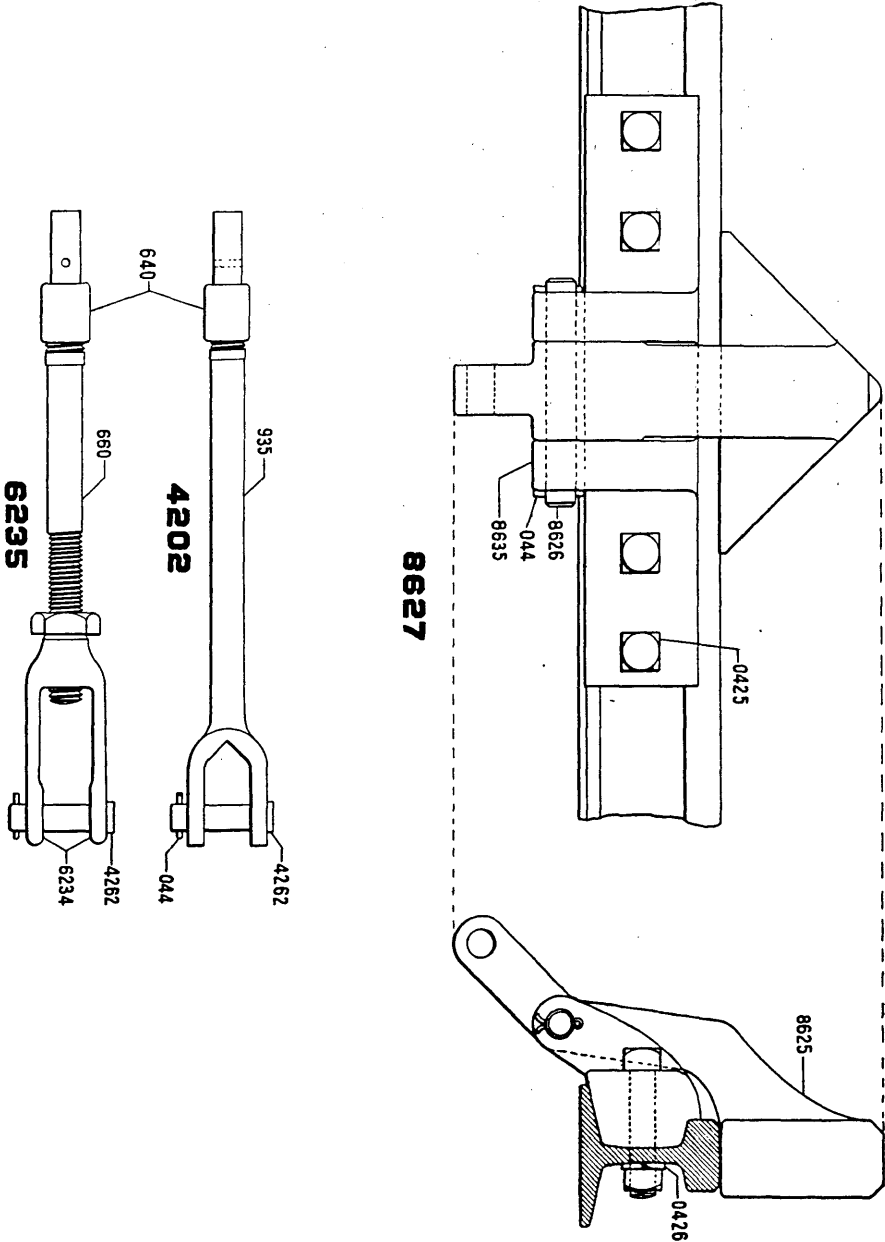
**8311** RIGHT HAND.  
**8323** LEFT HAND.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



SCOTCH BLOCK.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## SWITCH AND LOCK MOVEMENT.

| Order No. | ANDERSON-BEVAN DERAIL AND SCOTCH BLOCK.   | List Price. |
|-----------|---|-------------|
| 042       | COTTER PIN, $\frac{3}{16}$ " x 1" (per 100).....  | .80         |
| 044       | COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100).....                          | .80         |
| 0425      | BOLT with Nut, $\frac{7}{8}$ " x $\frac{5}{8}$ ", fastening Scotch Block to Rail.....   | .16         |
| 0426      | NUT LOCK for $\frac{7}{8}$ " Bolt.....  | .02         |
| 640       | PIPE COUPLING, 1" reinforced.....   | .19         |
| 660       | SCREW ROD, $1\frac{1}{4}$ ", with Tang End.....   | .50         |
| 935       | WIDE SOLID JAW, $1\frac{1}{4}$ ", with Tang End.....                                    | 1.14        |
| 4202      | WIDE SOLID JAW COMPLETE, $1\frac{1}{4}$ ", with Tang End.....                           | 1.44        |
| 4262      | PIN, $\frac{7}{8}$ " x $3\frac{3}{8}$ ", for Wide Jaws.....                             | .11         |
| 6234      | WIDE WROUGHT SCREW JAW, $1\frac{1}{4}$ ".....   | 1.70        |
| 6235      | WIDE ADJUSTABLE WROUGHT JAW COMPLETE, $1\frac{1}{4}$ ", with Tang End.....              | 2.50        |
| 8311      | ANDERSON-BEVAN DERAIL COMPLETE, Right Hand.....   | 24.00       |
| 8312      | BRACKET for 8319.....   | 7.80        |
| 8313      | DERAIL CASTING, Right Hand, for 8311.....   | 12.00       |
| 8314      | LEVER for 8316.....   | 3.80        |
| 8315      | STUD for 8316.....  | .30         |
| 8316      | LEVER, Complete with Stud, for 8311 or 8323.....  | 4.00        |
| 8317      | ROLLER for 8311 or 8323.....  | .30         |
| 8318      | STUD for Brackets for 8319 or 8326.....   | .30         |
| 8319      | BRACKET COMPLETE with Stud, Right Hand, for 8311.....                                   | 8.00        |
| 8320      | HINGE PIN for 8311 or 8323.....   | .20         |
| 8321      | WASHER, Special, for 8320.....  | .02         |
| 8322      | WASHER for 8318.....  | .02         |
| 8323      | ANDERSON-BEVAN DERAIL COMPLETE, Left Hand.....  | 24.00       |
| 8324      | BRACKET for 8326.....   | 7.80        |
| 8325      | DERAIL CASTING, Left Hand for 8323.....   | 12.00       |
| 8326      | BRACKET COMPLETE with Stud, Left Hand, for 8323.....                                    | 8.00        |
| 8327      | ANDERSON-BEVAN DERAIL COMPLETE, Right Hand (hand throw).....                            | 14.00       |
| 8328      | BRACKET for 8327 or 8334.....   | 6.00        |
| 8329      | DERAIL CASTING, Right Hand, for 8327.....   | 8.00        |
| 8333      | BOLT with Nut, with Cotter Hole, $\frac{3}{4}$ " x 7".....                              | .18         |
| 8334      | ANDERSON-BEVAN DERAIL COMPLETE, Left Hand (hand throw).....                             | 14.00       |
| 8335      | DERAIL Casting, Left Hand, for 8327.....  | 8.00        |
| 8625      | WEDGE BLOCK only, for 8627 (steel casting).....   | 14.10       |
| 8626      | HINGE PIN with Cotter Holes for 8627.....   | .17         |
| 8627      | SCOTCH BLOCK COMPLETE. When ordering send print of Rail Section.....                    | 28.80       |
| 8635      | BRACKET, Casting only, for Scotch Block. When ordering, send print of Rail Section..... | 13.70       |

Order by NUMBER and NAME appearing in Large Type.

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SWITCH AND LOCK MOVEMENT.

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## HIGH SIGNALS.

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**O**N THE following pages are illustrated a number of the various styles of High Signal of both enclosed and outside connected types, which are shown in diagram on pages 107 and 118 respectively. By reference to these diagrams, signals can be ordered in complete form, exclusive of Lamps, Glass, Roundels and Foundations.

On other pages some of the styles of signals in general use have been illustrated, together with a great variety of signal fittings, such as Spectacle Castings, Lamps, Glass, Roundels, Locks, Slots, Selectors, Circuit Breakers, Etc., all of which are listed in detail.

Other styles of signals not shown in this catalogue will be furnished on specifications.

**DIRECTIONS FOR ORDERING COMPLETE SIGNALS.**

Lamps, Glass, Roundels and Foundations are not included with complete signal and should be ordered separately. For Lamps, see page 212. For Glass or Roundels, see page 210.

**GROUND SIGNALS.**

In ordering specify as follows:

- (1) Style number (see page opposite.)
- (2) Distance between arms.
- (3) Home or Distant.
- (4) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (5) Slotted if required.
- (6) Three position if required.

**BRIDGE SIGNALS.**

In ordering specify as follows:

- (1) Style number (see page opposite.)
- (2) Depth of Bridge Truss.
- (3) Distance from Top Chord of Truss to First Arm.
- (4) Distance between Arms.
- (5) Home or Distant.
- (6) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (7) Slotted if required.
- (8) Three position if required.

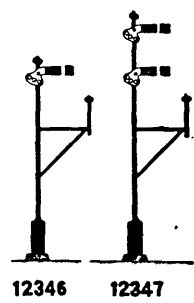
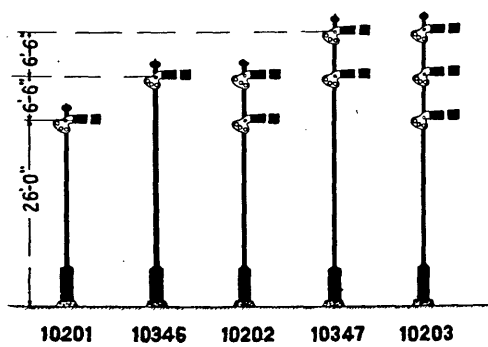
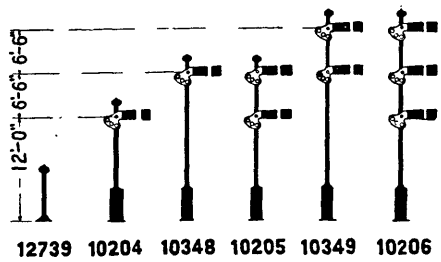
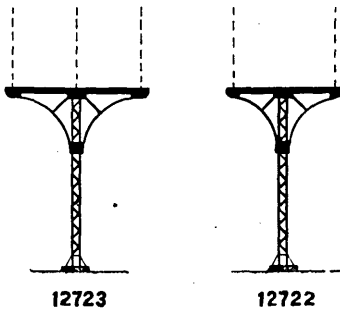
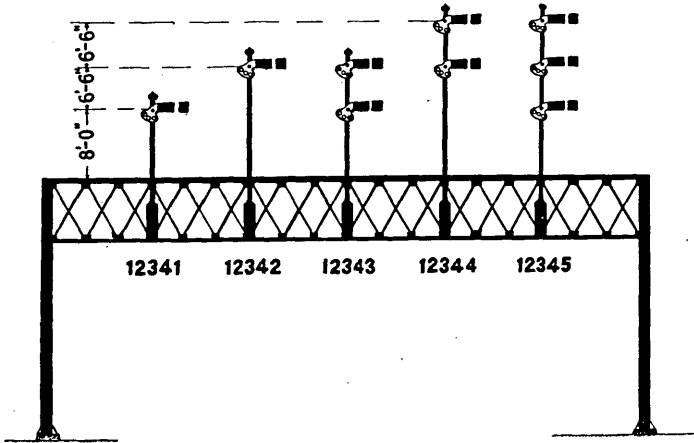
**BRACKET SIGNALS.**

In ordering specify as follows:

- (1) Style number of Main Post (see page opposite.)
- (2) Style number of Dolls (see page opposite.)
- (3) Distance from Platform to First Arm.
- (4) Distance between Arms.
- (5) Distance between Dolls, center to center.
- (6) Home or Distant.
- (7) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (8) Slotted if required.
- (9) Three position if required.

NOTE:—Unless otherwise specified, signals will be furnished in accordance with cuts shown on pages 109, 110 and 111.

DIAGRAMS OF VARIOUS STYLES OF SIGNALS. ENCLOSED TYPE.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

**HIGH SIGNALS.**

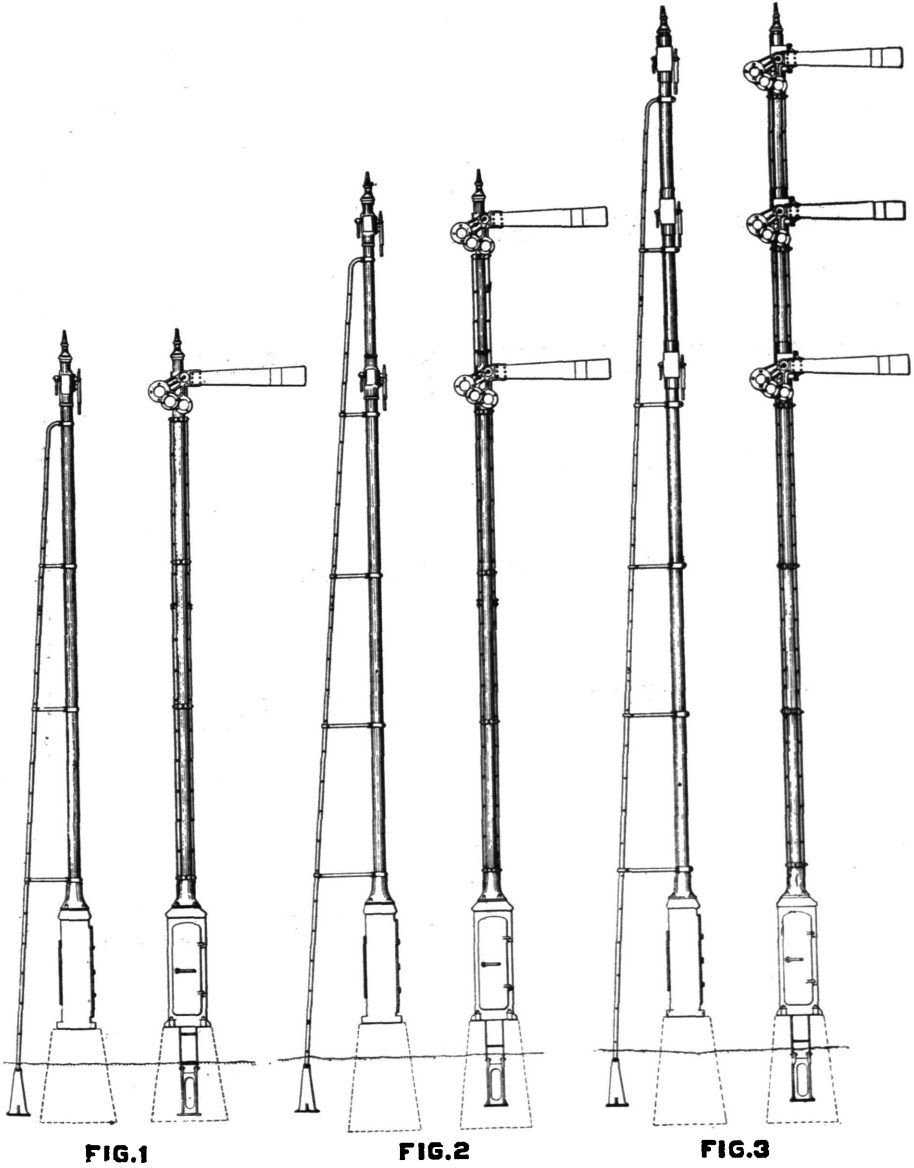
NOTE:—When ordering the following signals see directions on preceding page.

| Order No.   | DIAGRAMS OF VARIOUS STYLES OF SIGNALS.—ENCLOSED TYPE.                          | List Price.  |
|---|--|--------------|
| 10201   | ONE ARM SIGNAL Complete. See Fig. 1, page 109.....                             | 370.00 ..... |
| 10202   | TWO ARM SIGNAL Complete. See Fig 2, page 109.....                              | 490.00 ..... |
| 10203   | THREE ARM SIGNAL Complete. See Fig. 3, page 109 .....                          | 600.00 ..... |
| 10204   | ONE ARM BRACKET SIGNAL Complete See Fig. 4, page 110 .....                     | 355.00 ..... |
| 10205   | TWO ARM BRACKET SIGNAL Complete. See Fig. 5, page 110.....                     | 475.00 ..... |
| 10206   | THREE ARM BRACKET SIGNAL Complete. See Fig. 6, page 110..                      | 585.00 ..... |
| 10346   | High ONE ARM SIGNAL Complete. See Fig 1, page 109.....                         | 375.00 ..... |
| 10347   | High TWO ARM SIGNAL Complete. See Fig 2, page 109.....                         | 495.00 ..... |
| 10348   | High ONE ARM BRACKET SIGNAL Complete. See Fig. 4, page 110                     | 360.00 ..... |
| 10349   | High TWO ARM BRACKET SIGNAL Complete. See Fig. 5, page 110                     | 480.00 ..... |
| 12341   | ONE ARM BRIDGE SIGNAL Complete. See Fig. 4, page 110.....                      | 360.00 ..... |
| 12342   | High ONE ARM BRIDGE SIGNAL Complete. See Fig 4, page 110..                     | 365.00 ..... |
| 12343   | TWO ARM BRIDGE SIGNAL Complete. See Fig 5, page 110.....                       | 480.00 ..... |
| 12344   | High TWO ARM BRIDGE SIGNAL Complete. See Fig. 5, page 110..                    | 485.00 ..... |
| 12345   | THREE ARM BRIDGE SIGNAL Complete See Fig 6, page 110....                       | 595.00 ..... |
| 12346   | ONE ARM SIGNAL Complete with Offset Bracket.....                               | 395.00 ..... |
| 12347   | TWO ARM SIGNAL Complete with Offset Bracket.....                               | 515.00 ..... |
| 12722   | Lattice BRACKET POST Complete for Two Signals See page 107...                  | 310.00 ..... |
| 12723   | Lattice BRACKET POST Complete for Three Signals. See page 107.                 | 350.00 ..... |
| 12739   | Blank BRACKET DOLL with Iron Base for fastening to top of Bracket<br>Post..... | 20.00 .....  |
| NOTE.—For each Slotted Arm on any of the foregoing signals, add to<br>List Price.....   |  | 20.00 .....  |
| For each Three Position Arm on any of the foregoing signals, add to<br>List Price ..... |  | 80.00 .....  |

Order by NUMBER and NAME appearing in Large Type.



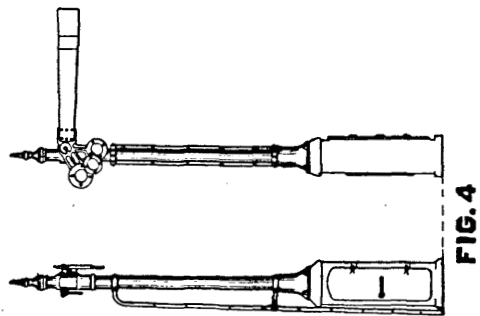
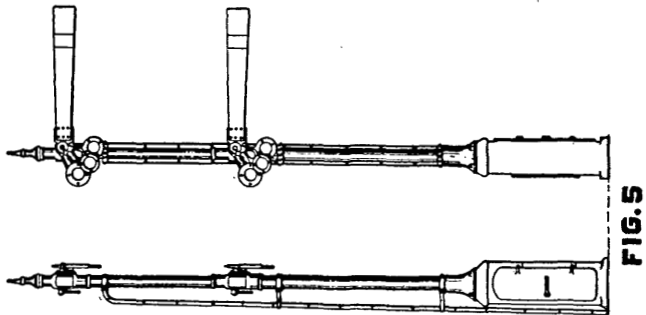
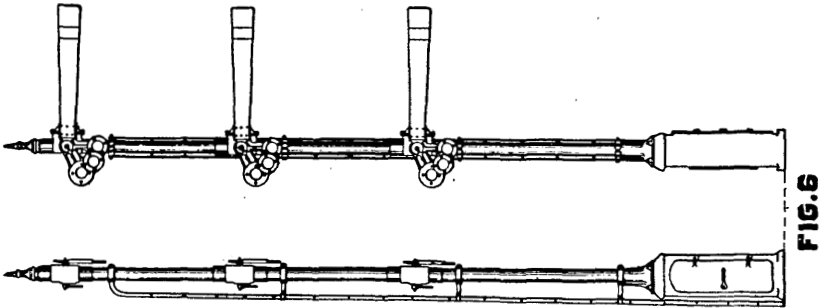
ONE, TWO AND THREE ARM ENCLOSED SIGNALS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

ONE, TWO AND THREE ARM ENCLOSED BRIDGE OR BRACKET SIGNALS.



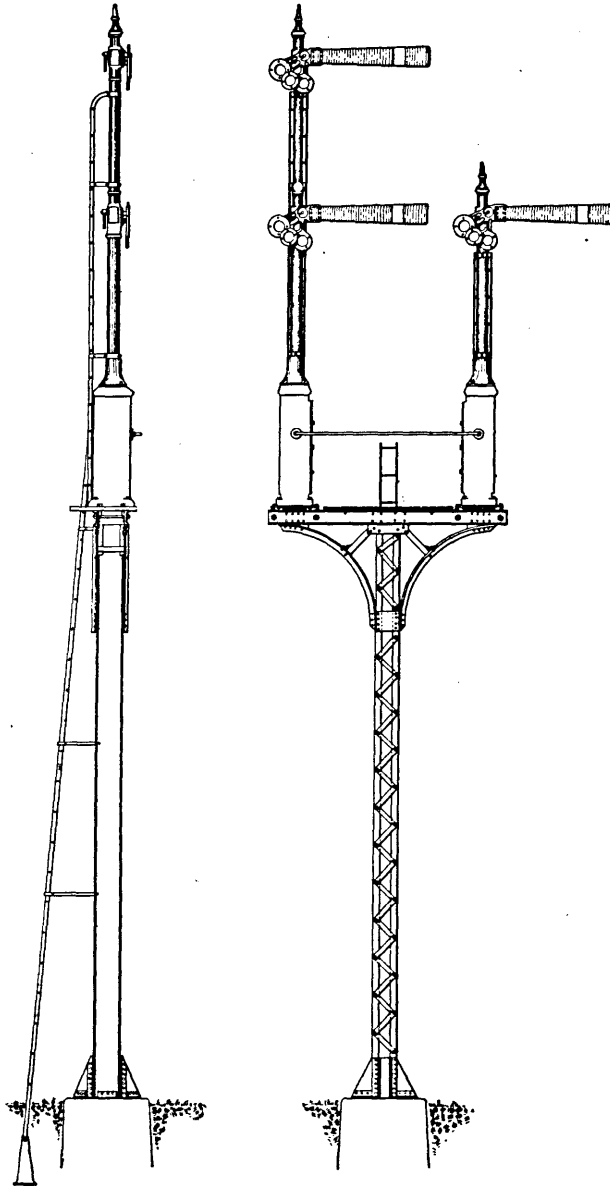
BRIDGE OR BRACKET SIGNALS

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

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ENCLOSED BRACKET SIGNAL—LATTICE POST.

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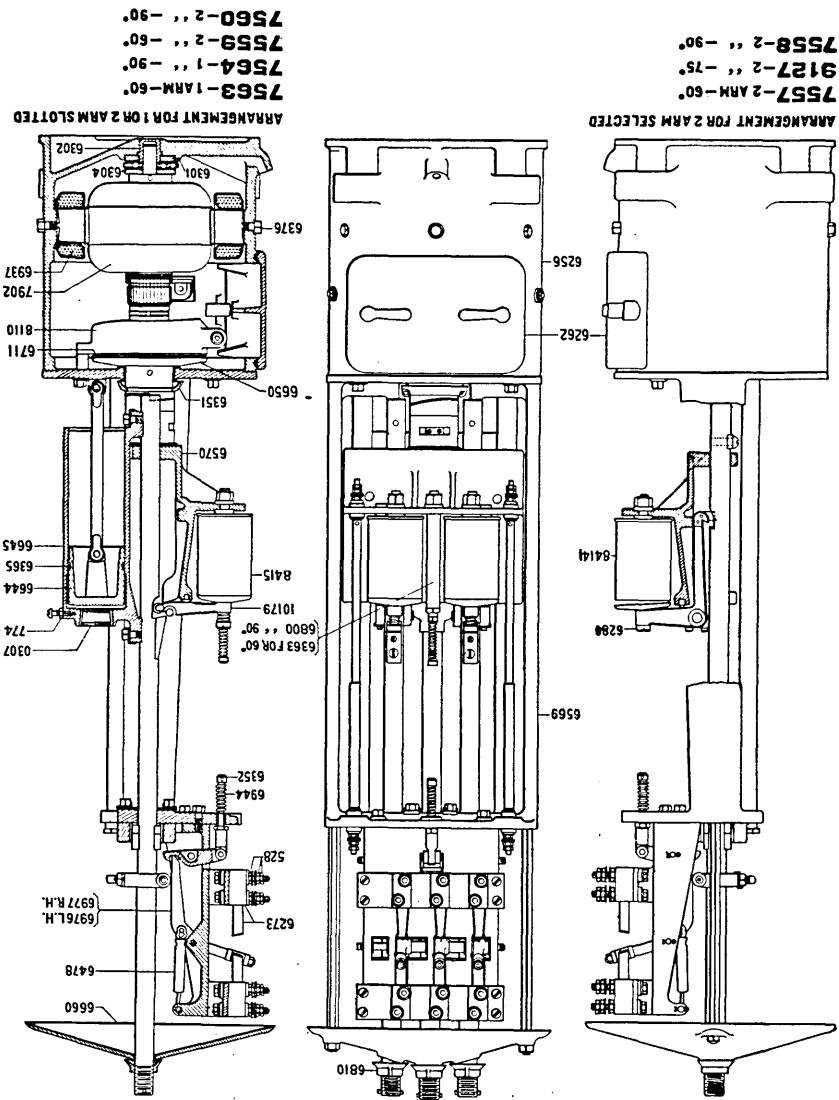


**FIG. 7**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

ENCLOSED SIGNAL MACHINE.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

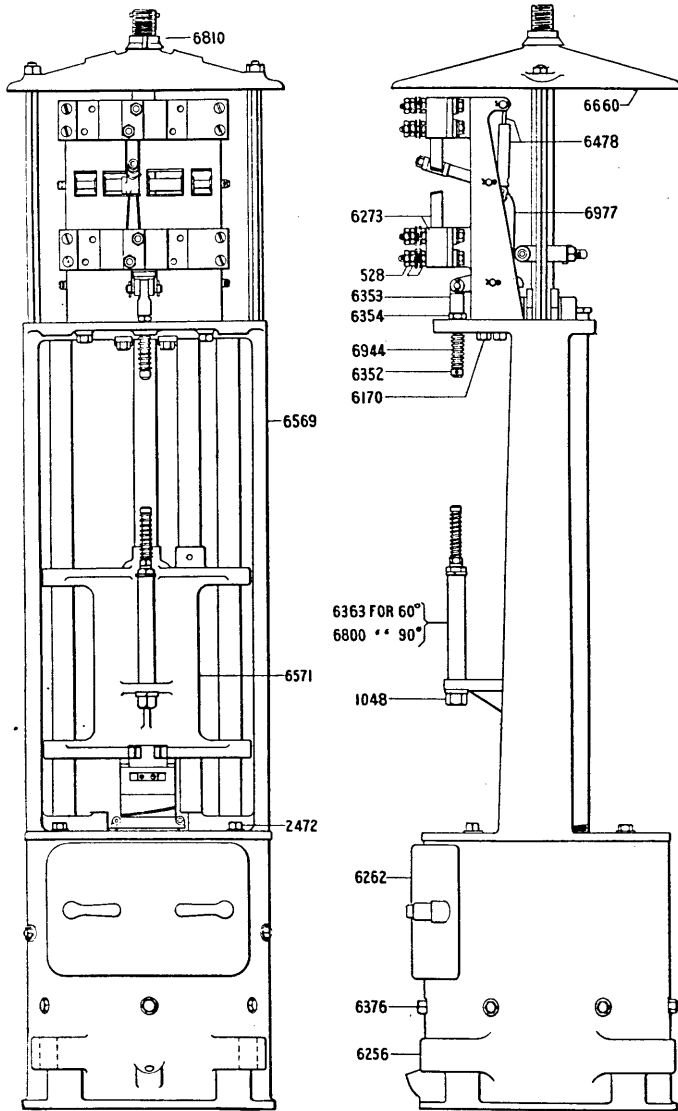
# HIGH SIGNALS.

113

| Order No. | ENCLOSED SIGNAL MACHINE.   | List Price. |
|-----------|--|-------------|
| 0307      | 1½" Socket PLUG.....   | .12         |
| 528       | Brass NUT for ¼" Screw.....  | .02         |
| 774       | Iron NUT, ¼—24.....  | .03         |
| 6256      | CASE only for Motor.....   | 28.00       |
| 6262      | DOOR only for Motor Case.....                                      | 1.00        |
| 6273      | Stationary CONTRACT BLOCK.....                                     | 2.00        |
| 6280      | SPECIAL SCREW for Magnet Armature.....                             | .12         |
| 6301      | LOWER PLATE for Thrust Bearing.....                                | 3.00        |
| 6302      | BUSHING for Thrust Bearing.....                                    | 1.80        |
| 6304      | Upper PLATE for Thrust Bearing.....                                | 3.00        |
| 6351      | OIL SHIELD.....  | .80         |
| 6352      | PLUNGER Operating Circuit Breaker.....                             | .40         |
| 6363      | POST Complete, Operating Circuit Breaker for 60 Deg. Signal.....   | 3.00        |
| 6365      | PLUNGER RING for Dash Pot.....                                     | 2.00        |
| 6376      | CAP SCREW, ¾" x 1½", Hex. Hd., holding Field Cores to Motor Case.. | .05         |
| 6478      | ENCASED SPRING Complete for Circuit Breaker.....                   | 1.00        |
| 6569      | MAIN FRAME for Signal Machine.....                                 | 30.00       |
| 6570      | DOUBLE CROSSHEAD for Two Arm Signal Machine.....                   | 10.00       |
| 6644      | PLUNGER for Dash Pot.....  | 6.50        |
| 6645      | DASH POT for Slotted Signals.....                                  | 13.00       |
| 6650      | BRAKE DISC.....  | 5.00        |
| 6660      | LARGE SHIELD protecting mechanism against water.....               | 2.00        |
| 6711      | BRONZE DISC.....   | 1.00        |
| 6800      | POST Complete, operating Circuit Breaker for 90 Deg. Signal.....   | 3.00        |
| 6810      | SMALL SHIELD protecting mechanism against water.....               | .60         |
| 6937      | Single FIELD COIL.....   | 3.00        |
| 6944      | SPRING for Circuit Breaker Operating Rod.....                      | .10         |
| 6976      | Left Hand CONTACT ARM Complete for Circuit Breaker.....            | 3.00        |
| 6977      | Right Hand CONTACT ARM Complete for Circuit Breaker.....           | 3.00        |
| 7557      | SIGNAL MACHINE Complete for Two Arm 60 Deg. Selected Signal..      | 320.00      |
| 7558      | SIGNAL MACHINE Complete for Two Arm 90 Deg. Selected Signal..      | 320.00      |
| 7559      | SIGNAL MACHINE Complete for Two Arm 60 Deg. Slotted Signal..       | 360.00      |
| 7560      | SIGNAL MACHINE Complete for Two Arm 90 Deg. Slotted Signal..       | 360.00      |
| 7563      | SIGNAL MACHINE Complete for One Arm 60 Deg. Slotted Signal..       | 260.00      |
| 7564      | SIGNAL MACHINE Complete for One Arm 90 Deg. Slotted Signal..       | 260.00      |
| 7902      | ARMATURE Complete for Signal Machine.....                          | 80.00       |
| 8110      | BRAKE COIL Complete.....   | 20.00       |
| 8414      | SELECTOR MAGNET Complete.....                                      | 14.00       |
| 8415      | SLOT MAGNET Complete.....  | 15.00       |
| 9127      | SIGNAL MACHINE Complete for Two Arm 75 Deg. Selected Signal..      | 320.00      |
| 10179     | LATCH Complete for Slotted Signal.....                             | 2.00        |

HIGH SIGNALS.

ENCLOSED SIGNAL MACHINE.



ARRANGEMENT FOR 1 ARM SIGNAL.

- 7561 - 1 ARM - 60°
- 9126 - 1 " - 75°
- 7562 - 1 " - 90°

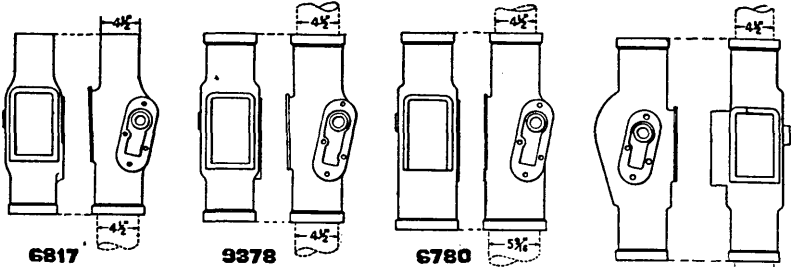
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# HIGH SIGNALS.

| Order No. | ENCLOSED SIGNAL MACHINE.—CONT.  | List Price.  |
|-----------|---|--------------|
| 528       | BRASS NUT for $\frac{1}{4}$ " Screw.....                                  | .02 .....    |
| 1048      | HEX. NUT for $\frac{1}{2}$ " Screw.....                                   | .03 .....    |
| 2472      | CAP SCREW, $\frac{3}{8}$ " x $1\frac{1}{4}$ ", Hex. Hd. ....              | .05 .....    |
| 6170      | CAP SCREW, $\frac{3}{8}$ " x 1", Circuit Breaker Frame to Main Frame..... | .05 .....    |
| 6256      | CASE only for Motor.....  | 28.00 .....  |
| 6262      | DOOR only for Motor Case.....   | 1.00 .....   |
| 6273      | Stationary CONTACT BLOCK.....   | 2.00 .....   |
| 6352      | PLUNGER, operating Circuit Breaker.....                                   | .40 .....    |
| 6353      | EYE, operating Circuit Breaker.....                                       | .60 .....    |
| 6354      | NUT for Plunger 6352.....   | .10 .....    |
| 6363      | POST Complete, operating Circuit Breaker for 60 Deg Signals.....          | 3.00 .....   |
| 6376      | CAP SCREW, $\frac{3}{8}$ " x $1\frac{1}{2}$ ", Hex. Hd.....               | .05 .....    |
| 6478      | ENCASED SPRING Complete for Circuit Breaker .....                         | 1.00 .....   |
| 6569      | MAIN FRAME for Signal Machine.....  | 30.00 .....  |
| 6571      | SINGLE CROSSHEAD for One Arm Signal Machine .....                         | 7.00 .....   |
| 6660      | LARGE SHIELD protecting mechanism against water.....                      | 2.00 .....   |
| 6800      | POST Complete, operating Circuit Breaker for 90 Deg. Signals.....         | 3.00 .....   |
| 6810      | SMALL SHIELD, protecting mechanism against water.....                     | .60 .....    |
| 6944      | SPRING for Circuit Breaker operating Rod. ....                            | .10 .....    |
| 6977      | Right Hand CONTACT ARM Complete for Circuit Breaker.....                  | 3.00 .....   |
| 7561      | SIGNAL MACHINE Complete for One Arm 60 Deg. Signal.....                   | 240.00 ..... |
| 7562      | SIGNAL MACHINE Complete for One Arm 90 Deg. Signal.....                   | 240.00 ..... |
| 9126      | SIGNAL MACHINE Complete for One Arm 75 Deg. Signal.....                   | 240.00 ..... |

Order by NUMBER and NAME Appearing in Large Type.

PARTS FOR ENCLOSED SIGNAL POLES.



6817

9378

6780

9351-4 1/2



**6930**  
FOR SPECTACLE  
9716  
9729  
9733



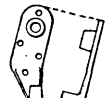
**6931**  
FOR SPECTACLE  
4562  
9700  
9702  
9704  
9708  
9709  
9712  
9713  
9714  
9715  
9725  
9727



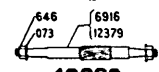
**9446**  
FOR SPECTACLE  
9707



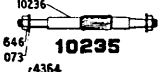
**9397**  
FOR SPECTACLE  
9731



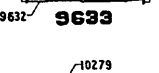
**9447**  
FOR SPECTACLE  
7862



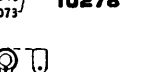
**10090**  
**12380**



**10235**



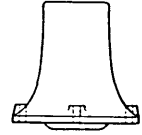
**9633**



**10278**



6929



6914



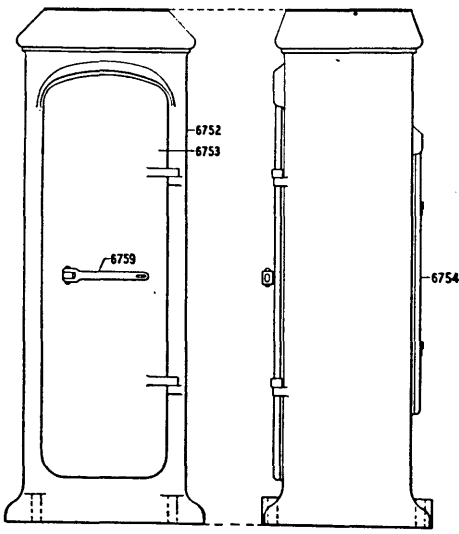
6917



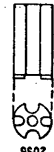
6915



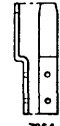
6948



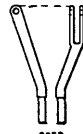
**6997**



9502



7964



9353



6897



6928

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



## HIGH SIGNALS.

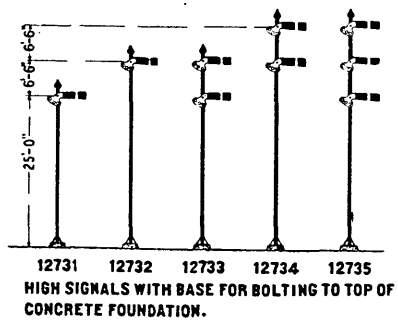
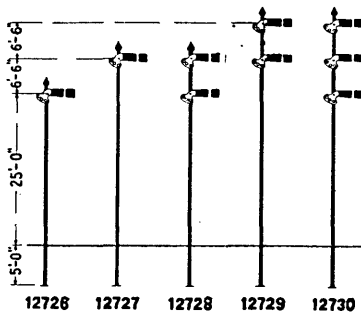
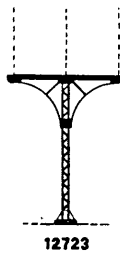
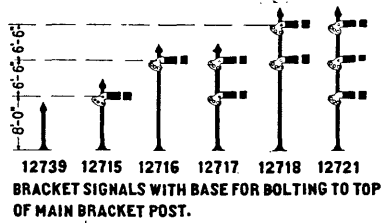
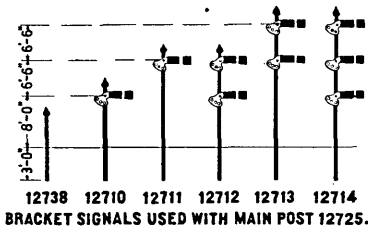
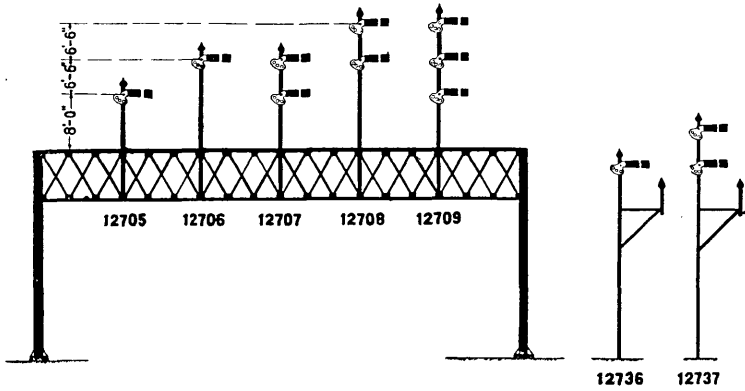
117

When ordering Stop Plates or Shafts, be governed by Table of Front and Back Spectacles as enumerated on page 149.

| Order No. | PARTS FOR ENCLOSED SIGNAL POLES.   | List Price. |
|-----------|--|-------------|
| 073       | IRON WASHER for $\frac{3}{4}$ " Bolt.....  | .02         |
| 646       | HEX. NUT for $\frac{3}{4}$ " Bolt.....   | .05         |
| 4364      | $\frac{3}{4}$ " NUT, Thin.....   | .04         |
| 6752      | CASE, Casting only for 6997.....   | 37.00       |
| 6753      | DOOR for 6997.....   | 5.50        |
| 6754      | BACK DOOR for 6997.....  | 4.00        |
| 6759      | HANDLE for Door for 6997.....  | .80         |
| 6780      | SEMAPHORE BEARING for Enclosed Signal.....   | 6.00        |
| 6817      | SEMAPHORE BEARING for Enclosed Signal.....   | 5.50        |
| 6897      | GUIDE for Up and Down Rod.....   | .40         |
| 6914      | SOCKET for Base to Post, for Enclosed Signals.....   | 7.50        |
| 6915      | JAW for Operating Rod.....   | .80         |
| 6916      | SEMAPHORE SHAFT only for 9633 or 10090.....  | 5.40        |
| 6917      | CRANK for operating Semaphore Shaft.....   | 1.40        |
| 6928      | CONNECTING PLUG for operating Rods.....  | .30         |
| 6929      | COVER for Semaphore Bearing.....   | .40         |
| 6930      | STOP PLATE for Semaphore Bearing.....  | 2.50        |
| 6931      | STOP PLATE for Semaphore Bearing.....  | 2.50        |
| 6948      | PIN connecting Operating Rod to Crank 6917.....  | .12         |
| 6997      | CASE COMPLETE for Enclosed Signal Machine.....   | 60.00       |
| 7964      | LAMP BRACKET. When ordering, specify number of Spectacle Casting and style of Lamp used..... | .50         |
| 9351      | SEMAPHORE Bearing for Enclosed Signal.....   | 5.70        |
| 9352      | SEMAPHORE Bearing for Enclosed Signal.....   | 6.00        |
| 9353      | JAW for Operating Rod.....   | 1.20        |
| 9378      | SEMAPHORE Bearing for Enclosed Signal.....   | 5.70        |
| 9397      | STOP PLATE for Semaphore Bearing.....  | 2.50        |
| 9446      | STOP PLATE for Semaphore Bearing.....  | 2.50        |
| 9447      | STOP PLATE for Semaphore Bearing.....  | 2.50        |
| 9632      | BUSHING for Shaft 9633.....  | .50         |
| 9633      | SEMAPHORE Shaft Complete.....  | 6.00        |
| 9802      | COUNTERWEIGHT for Operating Rod.....   | 2.00        |
| 10090     | SEMAPHORE SHAFT Complete.....  | 5.50        |
| 10235     | SEMAPHORE SHAFT Complete.....  | 5.50        |
| 10236     | SEMAPHORE SHAFT Only, for 10235.....   | 5.40        |
| 10278     | SEMAPHORE SHAFT Complete.....  | 5.50        |
| 10279     | SEMAPHORE SHAFT Only, for 10278.....   | 5.40        |
| 12379     | SEMAPHORE SHAFT Only, for 12380.....   | 5.40        |
| 12380     | SEMAPHORE SHAFT Complete.....  | 5.50        |

Order by NUMBER and NAME Appearing in Large Type.

DIAGRAMS OF VARIOUS STYLES OF SIGNALS. OUTSIDE CONNECTED TYPE.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

**DIRECTIONS FOR ORDERING COMPLETE SIGNALS.**

Lamp, Glass, Roundels, Slots and Foundations are not included with Complete Signal, and should be ordered separately. For Lamps, see page 212, for Glass or Roundels, see page 210, for Slots, see pages 170 to 173 inclusive.

**GROUND SIGNALS.**

In ordering specify as follows:

- (1) Style number (see page opposite.)
- (2) Distance between Arms.
- (3) Home or Distant.
- (4) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (5) Slotted if required.

**BRIDGE SIGNALS.**

In ordering specify as follows:

- (1) Style number (see page opposite.)
- (2) Depth of Bridge Truss.
- (3) Distance from Top Chord of Truss to First Arm.
- (4) Distance between Arms.
- (5) Home or Distant.
- (6) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (7) Slotted if required.

**BRACKET SIGNALS.**

In ordering specify as follows:

- (1) Style of Main Post (see page opposite.)
- (2) Style number of Doll (see page opposite.)
- (3) Distance from Platform to First Arm.
- (4) Distance between Arms.
- (5) Distance between Dolls, center to center.
- (6) Home or Distant.
- (7) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (8) Slotted if required.

NOTE:—Unless otherwise specified, Signal will be furnished in accordance with cuts shown on pages 122 to 127 inclusive.

## HIGH SIGNALS.

NOTE:—When ordering the following signals see directions on page 119 and diagrams on page 118.

| Order No. | DIAGRAMS OF VARIOUS STYLES OF SIGNALS—OUTSIDE CONNECTED TYPE.                         | List Price. |
|-----------|---|-------------|
| 12705     | One ARM BRIDGE SIGNAL Complete.....   | 260.00 .... |
| 12706     | High One ARM BRIDGE SIGNAL Complete.....  | 270.00 .... |
| 12707     | Two ARM BRIDGE SIGNAL Complete.....   | 350.00 .... |
| 12708     | High Two ARM BRIDGE SIGNAL Complete.....  | 370.00 .... |
| 12709     | Three ARM BRIDGE SIGNAL Complete.....   | 480.00 .... |
| 12710     | One ARM BRACKET SIGNAL Complete.....  | 250.00 .... |
| 12711     | High One ARM BRACKET SIGNAL Complete.....   | 260.00 .... |
| 12712     | Two ARM BRACKET SIGNAL Complete.....  | 340.00 .... |
| 12713     | High Two ARM BRACKET SIGNAL Complete.....   | 360.00 .... |
| 12714     | Three ARM BRACKET SIGNAL Complete.....  | 470.00 .... |
| 12715     | One ARM BRACKET SIGNAL Complete with Base.....  | 250.00 .... |
| 12716     | High One ARM BRACKET SIGNAL Complete with Base.....                                   | 260.00 .... |
| 12717     | Two ARM BRACKET SIGNAL Complete with Base.....  | 340.00 .... |
| 12718     | High Two ARM BRACKET SIGNAL Complete with Base.....                                   | 360.00 .... |
| 12721     | Three ARM BRACKET SIGNAL Complete with Base.....                                      | 470.00 .... |
| 12722     | LATTICE BRACKET POST Complete for Two Signals.....                                    | 310.00 .... |
| 12723     | LATTICE BRACKET POST Complete for Three Signals.....                                  | 350.00 .... |
| 12724     | PIPE BRACKET POST Complete for Two Signals having Iron Base..                         | 250.00 .... |
| 12725     | PIPE BRACKET POST Complete for Two Signals 12710, etc.....                            | 170.00 .... |
| 12726     | One ARM SIGNAL Complete.....  | 300.00 .... |
| 12727     | High One ARM SIGNAL Complete.....   | 310.00 .... |
| 12728     | Two ARM SIGNAL Complete.....  | 400.00 .... |
| 12729     | High Two ARM SIGNAL Complete.....   | 420.00 .... |
| 12730     | Three ARM SIGNAL Complete.....  | 540.00 .... |
| 12731     | One ARM SIGNAL Complete with Iron Base for fastening to Concrete Foundation.....      | 300.00 .... |
| 12732     | High One ARM SIGNAL Complete with Iron Base for fastening to Concrete Foundation..... | 310.00 .... |
| 12733     | Two ARM SIGNAL Complete with Iron Base for fastening to Concrete Foundation.....      | 400.00 .... |
| 12734     | High Two ARM SIGNAL Complete with Iron Base for fastening to Concrete Foundation..... | 420.00 .... |
| 12735     | Three ARM SIGNAL Complete with Iron Base for fastening to Concrete Foundation.....    | 540.00 .... |
| 12736     | One ARM OFFSET BRACKET Signal Complete.....   | 330.00 .... |
| 12737     | Two ARM OFFSET BRACKET Signal Complete.....   | 430.00 .... |
| 12738     | BLANK BRACKET DOLL with Pinnacle Complete. Used with Post 12725.....                  | 15.00 ....  |
| 12739     | BLANK BRACKET DOLL with Iron Base for fastening to top of Bracket Post.....           | 20.00 ....  |
|           | NOTE.—For each Slotted Arm on any of the foregoing Signals, add to List Price.....    | 80.00 ....  |

Order by NUMBER and NAME Appearing in Large Type.

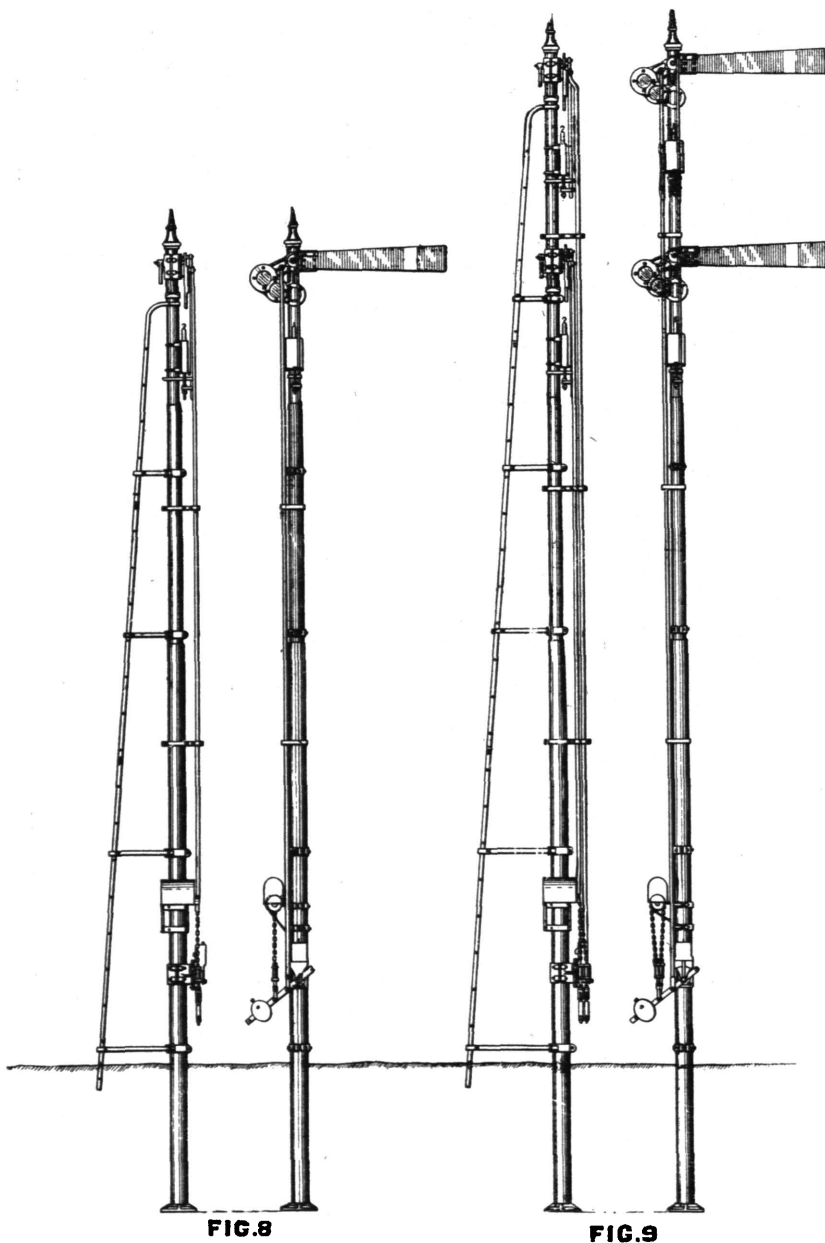
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DIAGRAMS OF VARIOUS STYLES OF SIGNALS. OUTSIDE CONNECTED TYPE.

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|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

## ONE AND TWO ARM OUTSIDE CONNECTED SIGNALS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

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THREE ARM OUTSIDE CONNECTED SIGNAL.

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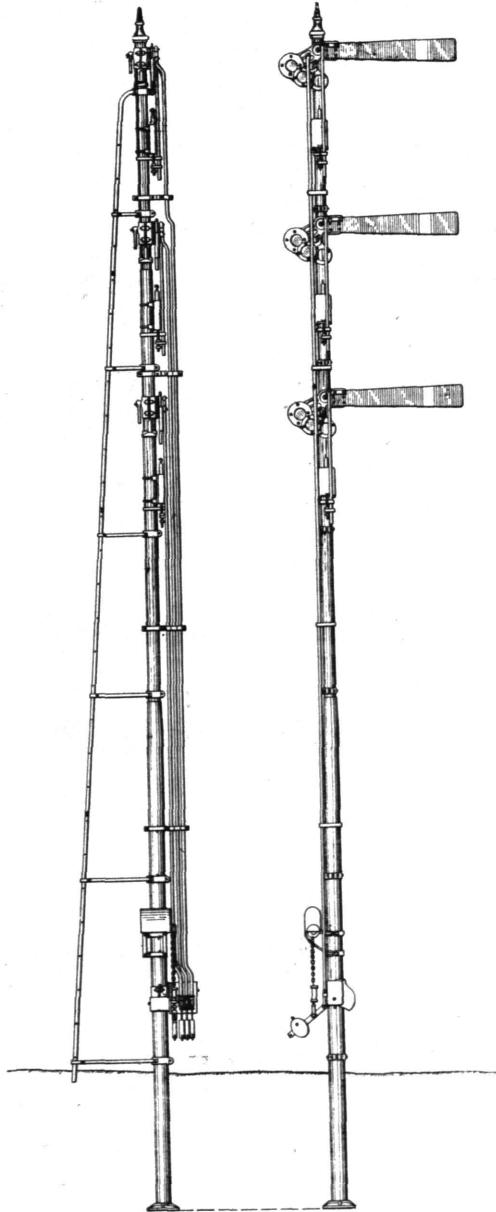


FIG.10

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

ONE, TWO AND THREE ARM BRIDGE OR BRACKET SIGNALS.

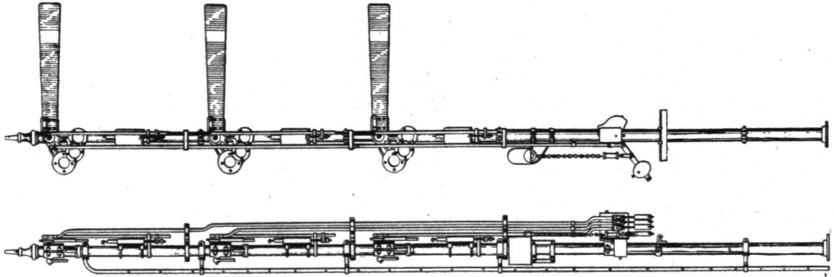


FIG.13

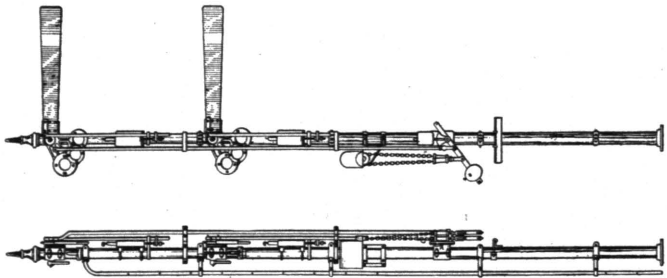


FIG.12

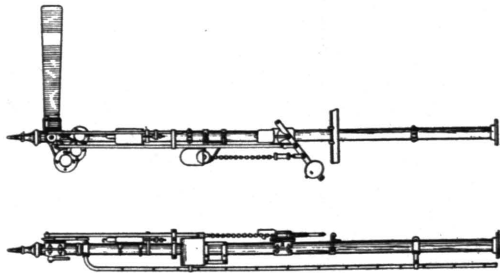


FIG.11

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



BRACKET SIGNAL—PIPE POST WITH CAST BRACKET.

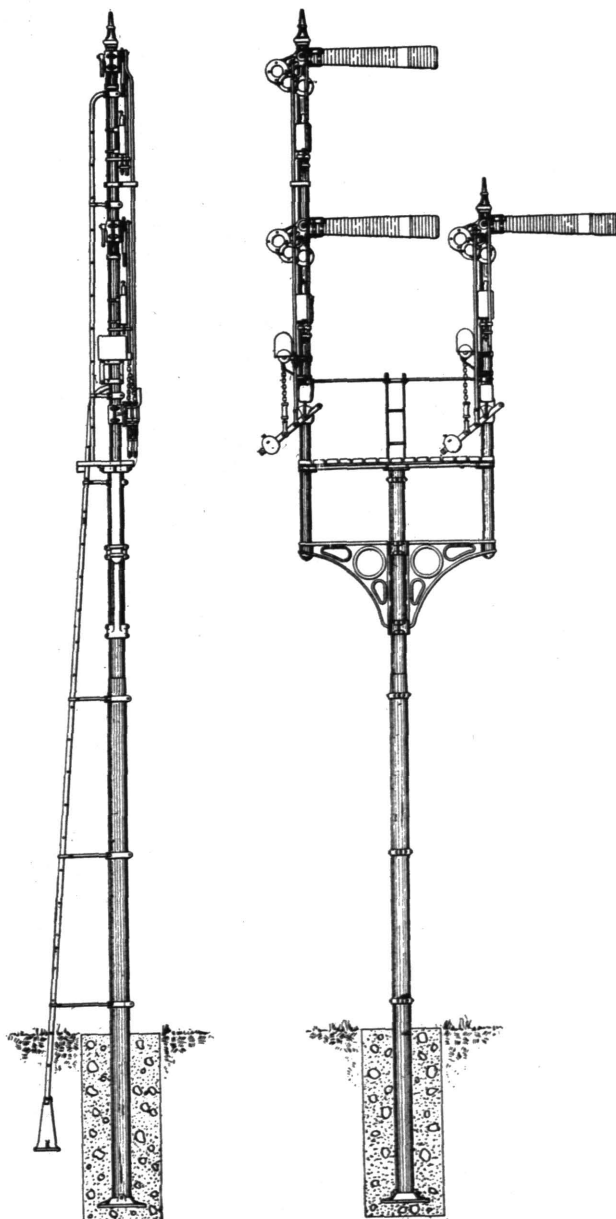


FIG.14

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

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BRACKET SIGNAL—PIPE POST WITH WROUGHT BRACKET.

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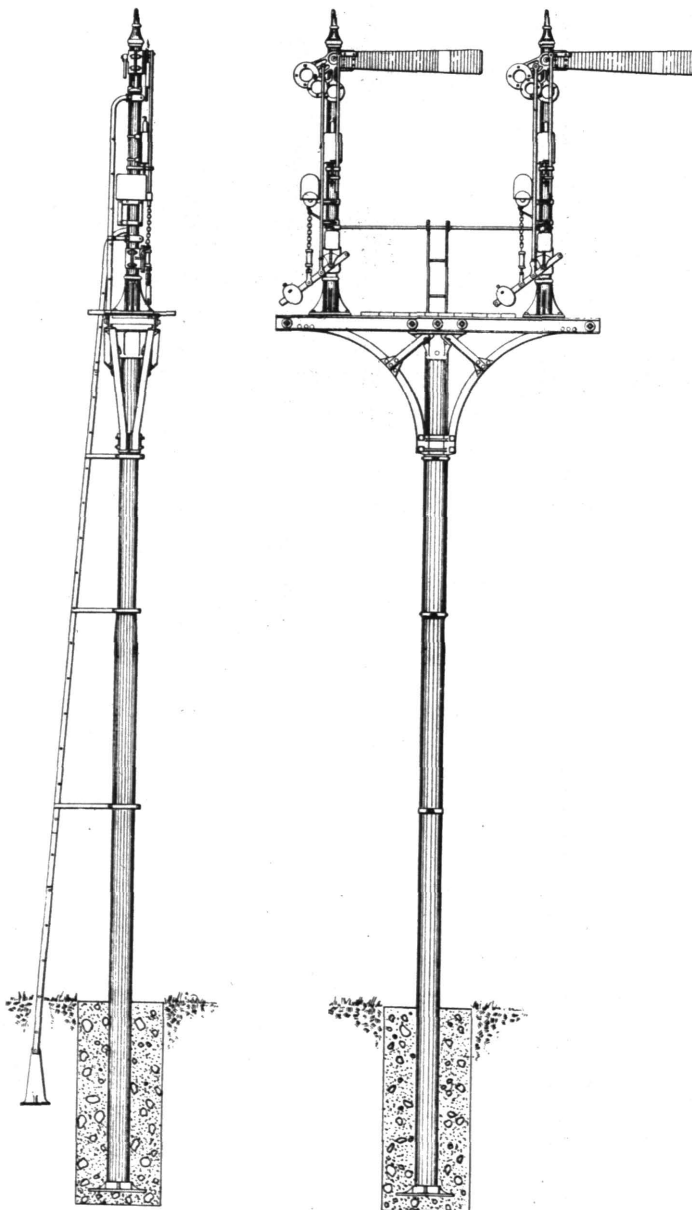


FIG.15

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

OUTSIDE CONNECTED BRACKET SIGNAL—LATTICE POST.

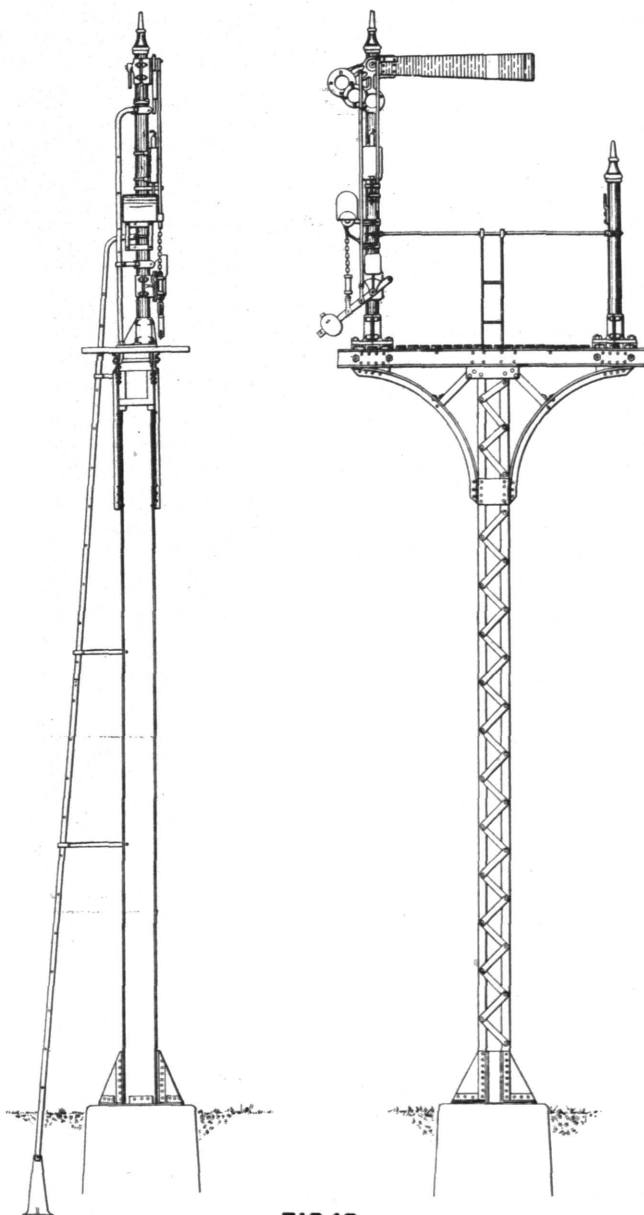
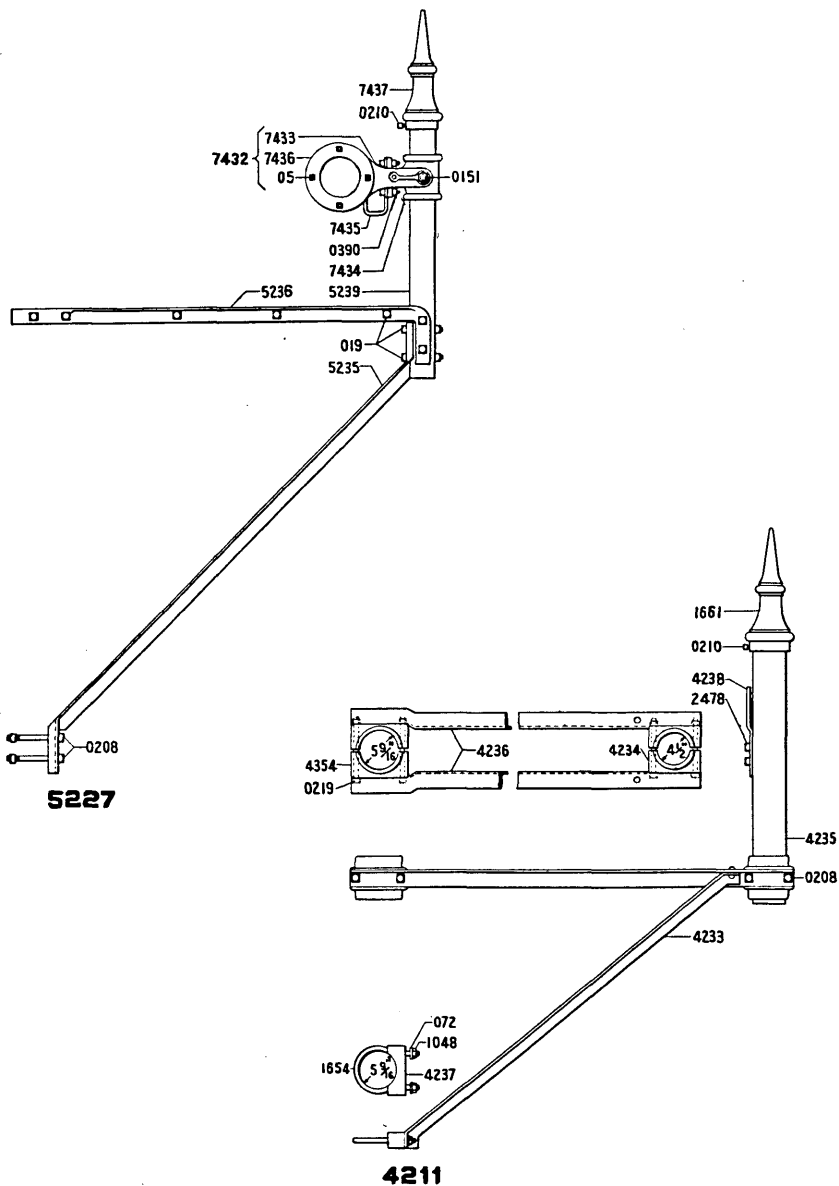


FIG.16

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

OFFSET BRACKET.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# HIGH SIGNALS.

129

| Order No. | OFFSET BRACKETS.  | List Price. |
|-----------|---|-------------|
| 05        | BOLT with Nut $\frac{1}{8}$ " x $1\frac{1}{4}$ " .....          | .02 .....   |
| 019       | BOLT with Nut, $\frac{3}{8}$ " x $4\frac{1}{2}$ " for 5227..... | .09 .....   |
| 072       | Iron WASHER for $\frac{1}{2}$ " Bolt.....                       | .01 .....   |
| 0151      | BOLT with Nut, $\frac{3}{8}$ " x 10" for 5227.....              | .16 .....   |
| 0208      | BOLT with Nut, $\frac{3}{8}$ " x 7" for 4211 or 5227.....       | .12 .....   |
| 0210      | SET SCREW, $\frac{1}{2}$ " x 1" Sq. Hd.....                     | .04 .....   |
| 0219      | BOLT with Nut, $\frac{3}{8}$ " x 8" for 4211.....               | .12 .....   |
| 0390      | BOLT with Nut, $\frac{1}{2}$ " x $1\frac{1}{4}$ ", Sq. Hd.....  | .04 .....   |
| 1048      | Hex. NUT, for $\frac{1}{2}$ " Bolt.....                         | .03 .....   |
| 1654      | U. BOLT for 4211.....   | .40 .....   |
| 1661      | PINNACLE Casting for 4211.....                                  | 1.50 .....  |
| 2478      | CAP SCREW, fastening Lamp Bracket to Doll, for 4211.....        | .05 .....   |
| 4211      | OFFSET BRACKET Complete for Iron Ground Poles.....              | 24.50 ..... |
| 4233      | ANGLE BRACE, Right or Left, for 4211.....                       | .70 .....   |
| 4234      | CLAMP Casting for 4211.....                                     | .70 .....   |
| 4235      | Iron Pipe DOLL, for 4211.....                                   | 3.70 .....  |
| 4236      | HORIZONTAL ARM for 4211. Right or Left, as specified.....       | .36 .....   |
| 4237      | CLAMP Casting for 4211.....                                     | .50 .....   |
| 4238      | LAMP BRACKET for 4211.....                                      | .90 .....   |
| 4354      | CLAMP Casting for 4211.....                                     | .90 .....   |
| 5227      | OFFSET BRACKET Complete for Iron Ground Poles.....              | 25.00 ..... |
| 5235      | ANGLE BRACE for 5227.....                                       | .70 .....   |
| 5236      | HORIZONTAL ARM for 5227.....                                    | .70 .....   |
| 5239      | Iron Pipe DOLL for 5227.....                                    | 3.70 .....  |
| 7432      | SPECTACLE Complete for 5227.....                                | 1.40 .....  |
| 7433      | SPECTACLE Casting only, for 7432.....                           | .90 .....   |
| 7434      | BEARING for Spectacle for 5227.....                             | 1.70 .....  |
| 7435      | LAMP BRACKET for 5227.....                                      | .50 .....   |
| 7436      | BEZEL RING for 7432.....  | .50 .....   |
| 7437      | PINNACLE Casting for 5227.....                                  | 1.20 .....  |



# HIGH SIGNALS.

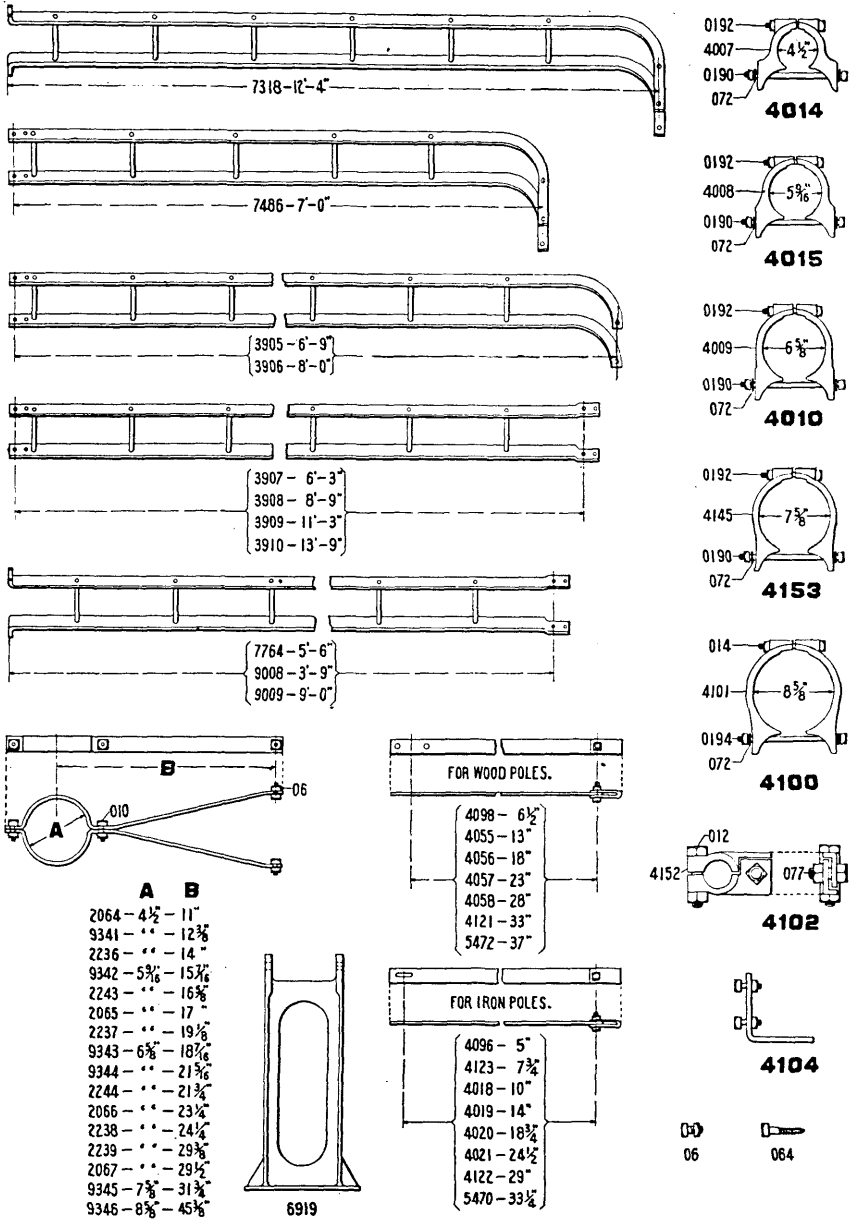
131

| Order No. | PARTS FOR OUTSIDE CONNECTED SIGNAL POLES.   | List Price. |
|-----------|---|-------------|
| 796       | BASE for Ground Poles .....   | 4.00        |
| 983       | U BOLT for Hand Rails 4155, etc.....  | .40         |
| 1048      | ½" HEX. NUT.....  | .03         |
| 1654      | U BOLT for Hand Rails 4151, etc.....  | .40         |
| 1661      | PINNACLE CASTING for 4½" O. D Pole .....  | 1.50        |
| 1768      | BUSHING for Inlet Wires to Iron Poles.....  | .30         |
| 1790      | BASE for Bridge Poles .....   | 3.00        |
| 1948      | HOOK BOLT with Nut, for holding Iron Bridge Poles.....                                | .32         |
| 1949      | CLAMP holding Iron Bridge Poles .....   | .80         |
| 3113      | 1 ARM IRON BRIDGE POLE, 14' 8" } For Bridges with Truss 6' deep                       | 13.00       |
| 3114      | 2 ARM IRON BRIDGE POLE, 21' 2" }  | 30.00       |
| 3115      | 3 ARM IRON BRIDGE POLE, 27' 8" }  | 40.00       |
| 3116      | 1 ARM IRON BRIDGE POLE, 16' 8" } For Bridges with Truss 8' deep                       | 14.50       |
| 3117      | 2 ARM IRON BRIDGE POLE, 23' 2" }  | 34.00       |
| 3118      | 3 ARM IRON BRIDGE POLE, 29' 8" }  | 43.00       |
| 4046      | IRON BRACKET POST, 32' long, made in 2 sections of extra heavy<br>7 and 8" Pipe ..... | 136.00      |
| 4047      | IRON BRACKET POST, 28' long, made in 2 sections of 7 and 8" Pipe .....                | 80.00       |
| 4129      | BASE for Bridge Poles.....  | 3.00        |
| 4130      | BASE for Main Post to Bracket Poles.....  | 10.00       |
| 4134      | CLAMP CASTING for Hand Rails 4155, etc.....   | .90         |
| 4137      | CLAMP CASTING for Hand Rails 4151, etc.....   | .90         |
| 4142      | HAND RAIL for 4151, etc. ....   | 1.20        |
| 4151      | HAND RAIL Complete for Bracket Pole with Two Dolls.....                               | 4.00        |
| 4155      | HAND RAIL Complete for Bracket Pole with Two Dolls.....                               | 4.00        |
| 4157      | HAND RAIL Complete for Bracket Pole with Two Dolls.....                               | 4.00        |
| 4432      | CLAMP holding Iron Bridge Poles.....  | .80         |
| 5776      | HIGH 1 ARM BRIDGE POLE, 21' 2". For Bridges with Truss 6' deep                        | 28.00       |
| 5777      | HIGH 1 ARM BRIDGE POLE, 23' 2". For Bridges with Truss 8' deep                        | 32.00       |
| 5779      | HIGH 2 ARM BRIDGE POLE, 27' 8". For Bridges with Truss 6' deep                        | 38.00       |
| 5780      | HIGH 2 ARM BRIDGE POLE, 29' 8". For Bridges with Truss 8' deep                        | 42.00       |
| 5961      | CLAMP BOLT, Special for Hand Rails for Three Dolls.....                               | .20         |
| 5962      | CLAMP BOLT, Special for Hand Rails for Three Dolls.....                               | .20         |
| 6012      | HAND RAIL Complete for Bracket Pole with Three Dolls. ....                            | 7.50        |
| 6485      | BASE for Ground Poles for fastening to top of Concrete Foundation.                    | 18.00       |
| 6993      | CAST WASHER for Anchor Bolt.....  | .50         |
| 6994      | ANCHOR BOLT only for fastening Ground Poles to top of Concrete<br>Foundation.....     | .90         |
| 7293      | BRACKET CASTING for Bracket Poles .....   | 18.00       |
| 7437      | PINNACLE CASTING for 3½" O. D Pole.....   | 1.20        |
| 8010      | IRON PIPE SOCKET for Anchor Bolts.....  | .40         |
| 9565      | BASE for Bracket Poles for fastening to top of Lattice Post.....                      | 9.00        |
| 12339     | 1 ARM IRON GROUND POLE, 32' 8".....   | 60.00       |
| 12357     | HIGH 1 ARM IRON GROUND POLE, 39' 2".....  | 68.00       |
| 12358     | 2 ARM IRON GROUND POLE, 39' 2".....   | 70.00       |
| 12359     | 3 ARM IRON GROUND POLE, 45' 8".....   | 92.00       |
| 12360     | IRON BRACKET POST 30' long, made in 2 sections of 7 & 8" pipe..                       | 84.00       |
| 12361     | BASE for Bracket Poles for fastening to top of Lattice Post.....                      | 17.00       |

Order by NUMBER and NAME Appearing in Large Type.

HIGH SIGNALS.

LADDERS AND FITTINGS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



# HIGH SIGNALS.

133

| Order No. | LADDERS AND FITTINGS   | List Price. |
|-----------|--|-------------|
| 006       | BOLT with Nut, $\frac{3}{8}$ " x 1"  | .02         |
| 010       | BOLT with Nut, $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "                                   | .04         |
| 012       | BOLT with Nut, $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "                                   | .04         |
| 014       | BOLT with Nut, $\frac{1}{2}$ " x 6 $\frac{1}{2}$ "                                   | .07         |
| 064       | LAG SCREW, $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "                                       | .03         |
| 072       | Iron WASHER for $\frac{1}{2}$ " Bolt   | .01         |
| 077       | BOLT with Nut, $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "                                   | .04         |
| 0190      | BOLT with Nut, $\frac{1}{2}$ " x 9 $\frac{1}{2}$ "                                   | .09         |
| 0192      | BOLT with Nut, $\frac{1}{2}$ " x 5 $\frac{1}{2}$ "                                   | .06         |
| 0194      | BOLT with Nut, $\frac{1}{2}$ " x 10"   | .09         |
| 2064      | LADDER BRACE Complete, 11" Centers, for 4 $\frac{1}{2}$ " O. D. Pole                 | 1.28        |
| 2065      | LADDER BRACE Complete, 17" Centers, for 5 $\frac{9}{16}$ " O. D. Pole                | 1.40        |
| 2066      | LADDER BRACE Complete, 23 $\frac{1}{4}$ " Centers, for 6 $\frac{3}{8}$ " O. D. Pole  | 1.50        |
| 2067      | LADDER BRACE Complete, 29 $\frac{1}{2}$ " Centers, for 6 $\frac{5}{8}$ " O. D. Pole  | 1.56        |
| 2236      | LADDER BRACE Complete, 14" Centers, for 4 $\frac{1}{2}$ " O. D. Pole                 | 1.32        |
| 2237      | LADDER BRACE Complete, 19 $\frac{1}{8}$ " Centers, for 5 $\frac{9}{16}$ " O. D. Pole | 1.40        |
| 2238      | LADDER BRACE Complete, 24 $\frac{1}{4}$ " Centers, for 6 $\frac{5}{8}$ " O. D. Pole  | 1.50        |
| 2239      | LADDER BRACE Complete, 29 $\frac{3}{8}$ " Centers, for 6 $\frac{5}{8}$ " O. D. Pole  | 1.56        |
| 2243      | LADDER BRACE Complete, 16 $\frac{3}{8}$ " Centers, for 5 $\frac{9}{16}$ " O. D. Pole | 1.40        |
| 2244      | LADDER BRACE Complete, 21 $\frac{1}{4}$ " Centers, for 6 $\frac{3}{8}$ " O. D. Pole  | 1.44        |
| 3905      | Top LADDER SECTION 6' 9" long  | 2.60        |
| 3906      | Top LADDER SECTION 8' long   | 3.10        |
| 3907      | Straight LADDER SECTION 6' 3" long   | 2.20        |
| 3908      | Straight LADDER SECTION 8' 9" long   | 3.00        |
| 3909      | Straight LADDER SECTION 11' 3" long  | 4.00        |
| 3910      | Straight LADDER SECTION 13' 9" long  | 4.90        |
| 4007      | CLAMP Casting for 4014   | .28         |
| 4008      | CLAMP Casting for 4015   | .32         |
| 4009      | CLAMP Casting for 4016   | .38         |
| 4014      | CLAMP Complete, Ladder Brace to 4 $\frac{1}{2}$ " O. D. Iron Pole                    | .70         |
| 4015      | CLAMP Complete, Ladder Brace to 5 $\frac{9}{16}$ " O. D. Iron Pole                   | .80         |
| 4016      | CLAMP Complete, Ladder Brace to 6 $\frac{3}{8}$ " O. D. Iron Pole                    | .90         |
| 4018      | LADDER BRACE, 10" Centers, for Iron Poles  | .24         |
| 4019      | LADDER BRACE, 14" Centers, for Iron Poles  | .28         |
| 4020      | LADDER BRACE, 18 $\frac{3}{4}$ " Centers, for Iron Poles                             | .30         |
| 4021      | LADDER BRACE, 24 $\frac{1}{2}$ " Centers for Iron Poles                              | .36         |
| 4023      | LADDER, 26' 9", Complete with Braces, Clamps and Bolts                               | 17.50       |
| 4024      | LADDER, 33' 0", Complete with Braces, Clamps and Bolts                               | 19.50       |
| 4025      | LADDER, 26' 9", Complete with Braces and Bolts                                       | 15.00       |
| 4026      | LADDER, 33' 0", Complete with Braces and Bolts                                       | 17.00       |
| 4055      | LADDER BRACE, 13" Centers, for Wood Poles  | .28         |
| 4056      | LADDER BRACE, 18" Centers, for Wood Poles  | .30         |
| 4057      | LADDER BRACE, 23" Centers, for Wood Poles  | .34         |
| 4058      | LADDER BRACE, 28" Centers, for Wood Poles  | .38         |
| 4068      | LADDER, 38' 0", Complete with Braces and Bolts                                       | 19.50       |
| 4069      | LADDER, 38' 0", Complete with Braces, Clamps and Bolts                               | 22.00       |
| 4070      | LADDER, 13' 0", Complete with Braces, Clamps and Bolts                               | 7.50        |
| 4071      | LADDER, 19' 3", Complete with Braces, Clamps and Bolts                               | 11.00       |
| 4072      | LADDER, 24' 3", Complete with Braces, Clamps and Bolts                               | 14.00       |
| 4073      | LADDER, 13' 0", Complete with Braces and Bolts                                       | 5.90        |
| 4074      | LADDER, 19' 3", Complete with Braces and Bolts                                       | 8.70        |
| 4075      | LADDER, 24' 3", Complete with Braces and Bolts                                       | 11.00       |
| 4076      | LADDER, 14' 3", Complete with Braces, Clamps and Bolts                               | 8.00        |

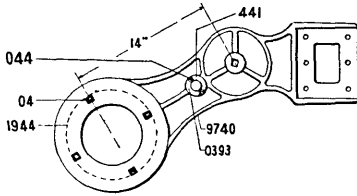
Order by NUMBER and NAME Appearing in Large Type.

| Order No. | LADDERS AND FITTINGS.—CONT.  | List Price. |
|-----------|--|-------------|
| 4077      | LADDER, 20' 6", Complete with Braces, Clamps and Bolts.....  | 11.50       |
| 4078      | LADDER, 28' 9", Complete with Braces, Clamps and Bolts.....  | 14.90       |
| 4079      | LADDER, 14' 3", Complete with Braces and Bolts.....  | 6.50        |
| 4080      | LADDER, 20' 6", Complete with Braces and Bolts.....  | 9.20        |
| 4081      | LADDER, 26' 9", Complete with Braces and Bolts.....  | 12.00       |
| 4082      | LADDER, 6' 9", Complete with Braces, Clamps and Bolts.....   | 4.00        |
| 4083      | LADDER, 13' 0", Complete with Braces, Clamps and Bolts.....  | 7.50        |
| 4084      | LADDER, 19' 3", Complete with Braces, Clamps and Bolts.....  | 11.00       |
| 4085      | LADDER, 6' 9", Complete with Braces and Bolts.....   | 3.10        |
| 4086      | LADDER, 13' 0", Complete with Braces and Bolts.....  | 5.90        |
| 4087      | LADDER, 19' 3", Complete with Braces and Bolts.....  | 8.80        |
| 4088      | LADDER, 26' 9", Complete with Braces and Bolts.....  | 13.00       |
| 4089      | LADDER, 30' 6", Complete with Braces and Bolts.....  | 15.00       |
| 4096      | LADDER BRACE, 5" Centers, for Iron Poles.....  | .18         |
| 4098      | LADDER BRACE, 6½" Centers, for Wood Poles.....   | .20         |
| 4100      | CLAMP Complete, Ladder Brace to 8¾" O. D. Iron Pole.....   | 1.10        |
| 4101      | CLAMP, Casting only, for 4100.....   | .46         |
| 4102      | CLAMP Complete, holding top of ladder to Hand Rail, for Bracket<br>Poles.....  | .30         |
| 4104      | FOOT Complete. Used with Bottom Section of Ladder.....   | .20         |
| 4121      | LADDER BRACE, 33" Centers, for Wood Poles.....   | .42         |
| 4122      | LADDER BRACE, 29" Centers, for Iron Poles.....   | .38         |
| 4123      | LADDER BRACE, 7¾" Centers, for Iron Poles.....   | .22         |
| 4145      | CLAMP Casting, for 4153.....   | .42         |
| 4152      | CLAMP Casting, for 4102.....   | .10         |
| 4153      | CLAMP Complete, for 7¾" O. D. Iron Poles.....  | 1.00        |
| 5470      | LADDER BRACE, 33¼" Centers, for Iron Poles.....  | .42         |
| 5472      | LADDER BRACE, 37" Centers, for Wood Poles.....   | .44         |
| 6919      | ANCHOR for Ground End of Ladders.....  | 3.00        |
| 7196      | LADDER, 28' 0", Complete with Braces, Clamps and Bolts.....  | 16.50       |
| 7318      | LADDER, 12' 4" long.....   | 4.80        |
| 7486      | Top LADDER SECTION, Special, 7' long.....  | 2.80        |
| 7764      | Bottom LADDER SECTION, 5' 6" long.....   | 2.00        |
| 8310      | LADDER, 27' 6", Complete with Braces, Clamps and Bolts.....  | 11.20       |
| 9008      | Bottom LADDER SECTION, 3' 9" long.....   | 1.40        |
| 9009      | Bottom LADDER SECTION, 9' long.....  | 3.30        |
| 9341      | LADDER BRACE Complete, 12¾" Centers, for 4¼" O. D. Pole.....   | 1.30        |
| 9342      | LADDER BRACE Complete, 15 <sup>7</sup> / <sub>16</sub> " Centers, for 5 <sup>9</sup> / <sub>16</sub> " O. D. Pole..... | 1.36        |
| 9343      | LADDER BRACE Complete 18 <sup>7</sup> / <sub>16</sub> " Centers, for 6 <sup>3</sup> / <sub>8</sub> " O. D. Pole.....   | 1.44        |
| 9344      | LADDER BRACE Complete 21 <sup>5</sup> / <sub>16</sub> " Centers, for 6 <sup>3</sup> / <sub>8</sub> " O. D. Pole.....   | 1.50        |
| 9345      | LADDER BRACE Complete, 31 <sup>3</sup> / <sub>8</sub> " Centers, for 7 <sup>3</sup> / <sub>8</sub> " O. D. Pole.....   | 2.10        |
| 9346      | LADDER BRACE Complete, 45 <sup>3</sup> / <sub>8</sub> " Centers, for 8 <sup>3</sup> / <sub>8</sub> " O. D. Pole.....   | 2.40        |

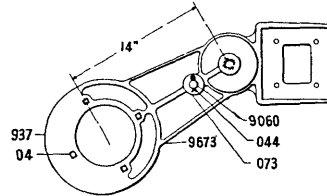
Order by NUMBER and NAME Appearing in Large Type.



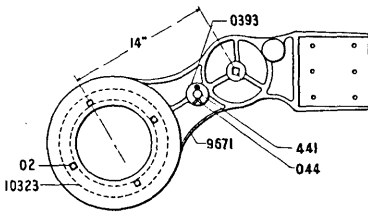
FRONT SPECTACLES.



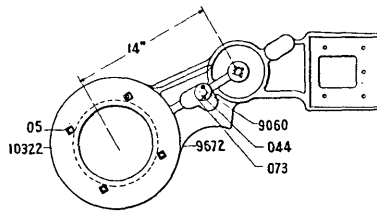
9741-75°



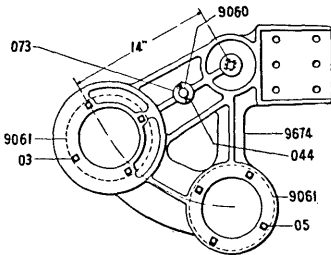
9702-60°



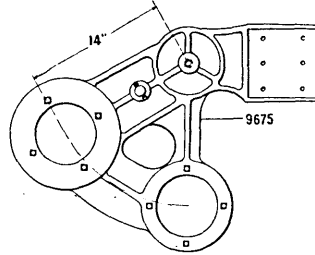
9703-75°



9704-60°



9700-60°



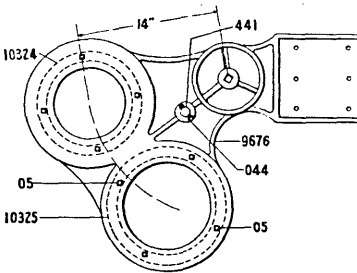
9705-60°



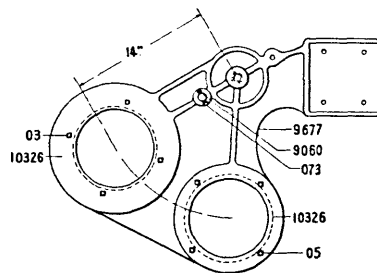
044



073 - FOR 3/8" STUD  
0393 - " 1/8" "



9706-55°



9707-55°

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

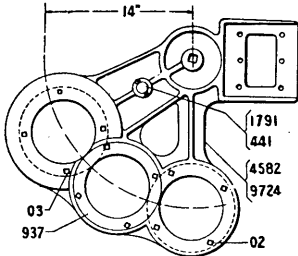
Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Back Spectacle, Bearing, Shaft, Etc., see table, page 149.

| Order No. | FRONT SPECTACLES.  | List Price. |
|-----------|--|-------------|
| 02        | BOLT with Nut, $\frac{1}{4}$ " x 1" .....  | .02 .....   |
| 03        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ " .....  | .02 .....   |
| 04        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{3}{4}$ " .....  | .02 .....   |
| 05        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{4}$ " .....  | .02 .....   |
| 044       | COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100) .....  | .80 .....   |
| 073       | Iron WASHER for $\frac{3}{4}$ " Studs.....   | .02 .....   |
| 0393      | Iron WASHER for $\frac{7}{8}$ " Studs.....   | .02 .....   |
| 441       | STUD, $\frac{7}{8}$ " dia. for various Spectacles .....  | .12 .....   |
| 937       | BEZEL RING for 9702 .....  | .16 .....   |
| 1944      | BEZEL RING for 9741 .....  | .16 .....   |
| 9060      | STUD, $\frac{3}{4}$ " dia, for various Spectacles.....   | .12 .....   |
| 9061      | BEZEL RING for 9700 .....  | .20 .....   |
| 9671      | SPECTACLE, Casting only, for 9703.....   | 4.10 .....  |
| 9672      | SPECTACLE, Casting only, for 9704.....   | 4.10 .....  |
| 9673      | SPECTACLE, Casting only, for 9702.....   | 3.70 .....  |
| 9674      | SPECTACLE, Casting only, for 9700.....   | 4.80 .....  |
| 9675      | SPECTACLE, Casting only, for 9705.....   | 4.80 .....  |
| 9676      | SPECTACLE, Casting only, for 9706.....   | 5.80 .....  |
| 9677      | SPECTACLE, Casting only, for 9707.....   | 5.80 .....  |
| 9700      | 2 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....                        | 5.40 .....  |
| 9702      | 1 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $6\frac{1}{4}$ " Glass).....                        | 4.10 .....  |
| 9703      | 1 Light, 75 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass).....                        | 4.50 .....  |
| 9704      | 1 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass).....                        | 4.50 .....  |
| 9705      | 2 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....                        | 5.40 .....  |
| 9706      | 2 Light, 55 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $8\frac{3}{8}$ " and $9\frac{3}{8}$ " Glasses)..... | 6.50 .....  |
| 9707      | 2 Light, 55 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass).....                        | 6.60 .....  |
| 9740      | SPECTACLE, Casting only, for 9741.....   | 3.70 .....  |
| 9741      | 1 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....                        | 4.10 .....  |
| 10322     | BEZEL RING for Spectacle 9704.....   | .20 .....   |
| 10323     | BEZEL RING for Spectacle 9703.....   | .20 .....   |
| 10324     | BEZEL RING for Spectacle 9706.....   | .20 .....   |
| 10325     | Large BEZEL RING for Spectacle 9706.....   | .20 .....   |
| 10326     | BEZEL RING for Spectacle 9707.....   | .30 .....   |

Order by NUMBER and NAME Appearing in Large Type.

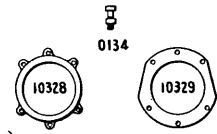
HIGH SIGNALS.

FRONT SPECTACLES.

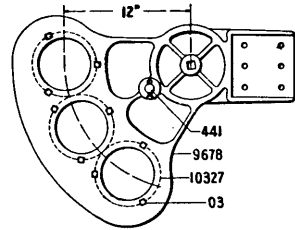


**4562-60°**  
**9725-60°**

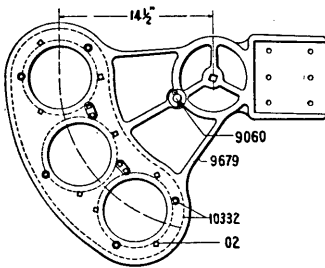
- 044
- 073 - FOR 3/4" STUD
- 0393 - " 7/8" "
- 074 - " 1" "



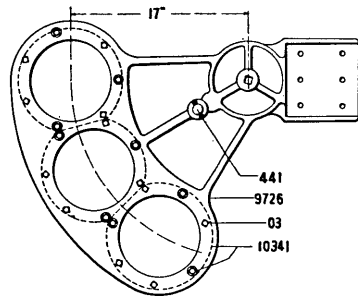
10327



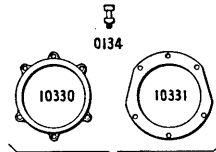
**9708-60°**



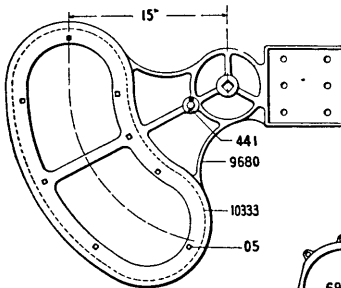
**9709-60°**



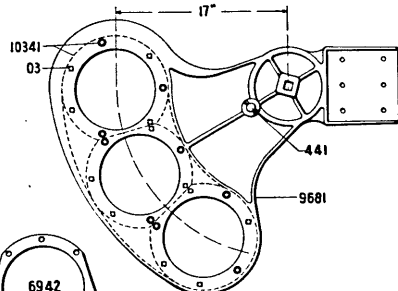
**9727-60°**



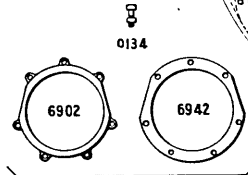
10332



**9710-60°**



**9711-60°**



10341

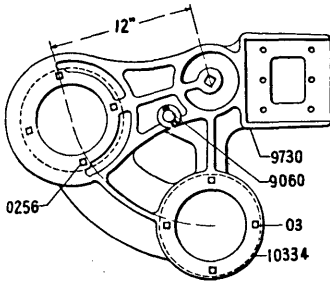
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately if required. For Back Spectacles, Bearing, Shaft, Etc., see table, page 149.

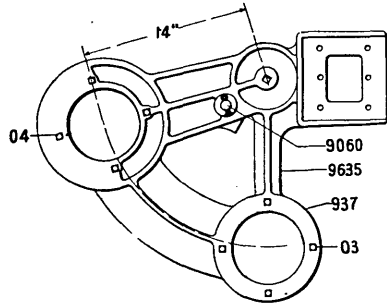
| Order No. | FRONT SPECTACLES.—CONT.   | List Price. |
|-----------|---|-------------|
| 02        | BOLT with Nut, $\frac{3}{8}$ " x 1".....  | .02         |
| 03        | BOLT with Nut, $\frac{1}{2}$ " x 1 $\frac{1}{4}$ ".....   | .02         |
| 05        | BOLT with Nut, $\frac{1}{2}$ " x 1 $\frac{1}{4}$ ".....   | .02         |
| 044       | COTTER Pin, $\frac{3}{16}$ " x 1 $\frac{1}{2}$ " (per 100).....   | .80         |
| 073       | IRON WASHER for $\frac{3}{4}$ " Studs.....  | .02         |
| 0134      | BOLT with Nut, $\frac{1}{2}$ " x $\frac{3}{4}$ ".....   | .02         |
| 0393      | IRON WASHER for $\frac{7}{8}$ " Studs.....  | .02         |
| 441       | STUD, $\frac{7}{8}$ " Dia., for various Spectacles.....   | .12         |
| 937       | BEZEL RING used with Spectacles 4562 or 9725.....   | .16         |
| 1791      | STUD, 1" for Spectacle 4562.....  | .12         |
| 4562      | 3 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete with 1" Stud. (Takes 6 $\frac{1}{2}$ " Glass).....   | 5.40        |
| 4582      | SPECTACLE Casting for 4562.....   | 4.80        |
| 6902      | RING Casting for 10341.....   | .16         |
| 6942      | Sheet Metal BEZEL RING for 10341.....   | .30         |
| 9060      | STUD, $\frac{3}{8}$ ", for 9709.....  | .12         |
| 9678      | SPECTACLE, Casting only, for 9708.....  | 4.40        |
| 9679      | SPECTACLE, Casting only, for 9709.....  | 4.40        |
| 9680      | SPECTACLE, Casting only, for 9710.....  | 6.60        |
| 9681      | SPECTACLE, Casting only, for 9711.....  | 4.20        |
| 9708      | 3 Light, 60 Deg. Throw. 12" Ctrs. SPECTACLE Complete. (Takes 5 $\frac{3}{8}$ " Glass).....                | 6.40        |
| 9709      | 3 Light, 60 Deg. Throw, 14 $\frac{1}{2}$ " Ctrs. SPECTACLE Complete. (Takes 6 $\frac{1}{4}$ " Glass)..... | 6.40        |
| 9710      | Continuous Two Light, 60 Deg. Throw, 15" Ctrs. SPECTACLE Complete. (Takes Special Formed Glass).....      | 7.60        |
| 9711      | 3 Light, 60 Deg. Throw, 17" Ctrs. SPECTACLE Complete. (Takes 8 $\frac{3}{8}$ " Glass).....                | 6.20        |
| 9724      | SPECTACLE, Casting only, for 9725.....  | 4.20        |
| 9725      | 3 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes 6 $\frac{1}{4}$ " Glass).....                | 6.40        |
| 9726      | SPECTACLE, Casting only, for 9727.....  | 4.00        |
| 9727      | 3 Light, 60 Deg. Throw, 17" Ctrs. SPECTACLE Complete. (Takes 8 $\frac{3}{8}$ " Glass).....                | 6.00        |
| 10327     | BEZEL RING Complete for 9708.....   | .60         |
| 10328     | RING Casting for 10327.....   | .16         |
| 10329     | Sheet Metal BEZEL RING for 10327.....   | .30         |
| 10330     | RING Casting for 10332.....   | .16         |
| 10331     | Sheet Metal BEZEL RING for 10332.....   | .30         |
| 10332     | BEZEL RING Complete for 9709.....   | .60         |
| 10333     | BEZEL RING Casting for 9710.....  | 1.00        |
| 10341     | BEZEL RING Complete for 9711 or 9727.....   | .60         |

Order by NUMBER and NAME Appearing in Large Type.

FRONT SPECTACLES.



**9731-75°**



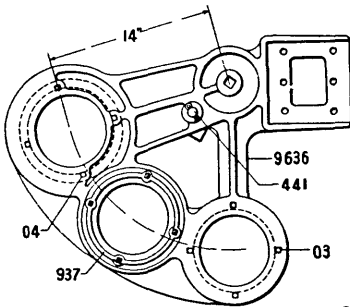
**9713-75°**



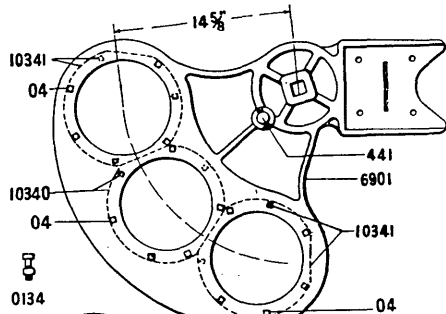
044



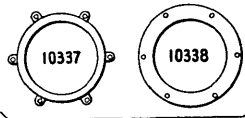
073 - FOR 3/4" STUD  
0393 - " 7/8 " "



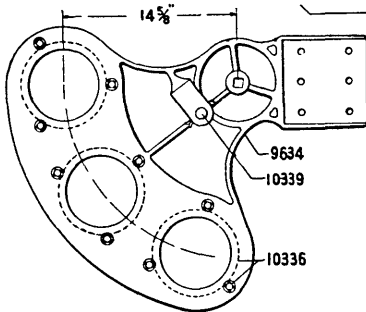
**9714-75°**



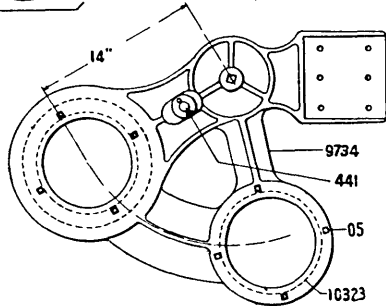
**7862-75°**



10336



**9712-75°**



**9735-75°**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

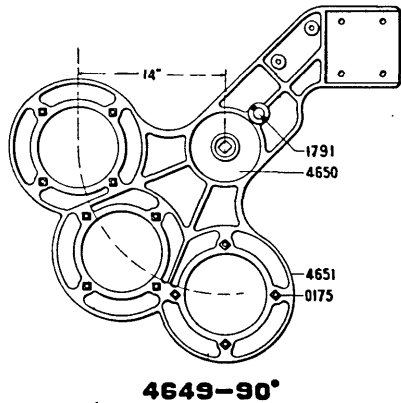
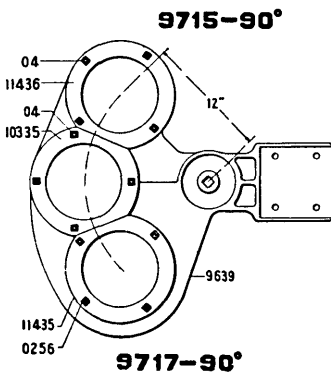
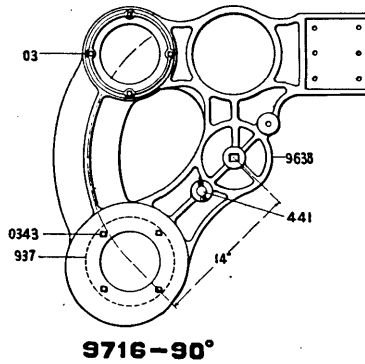
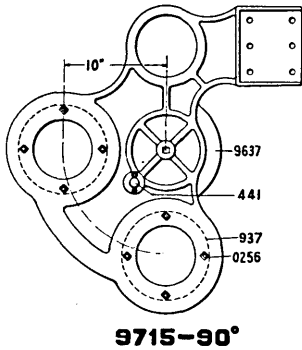
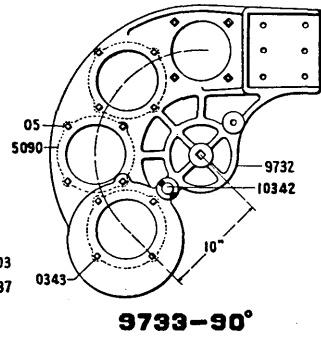
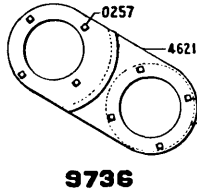
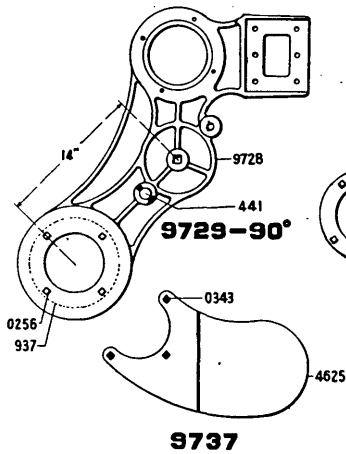


Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Back Spectacle, Bearing, Shaft, Etc., see table, page 149.

| Order No. | FRONT SPECTACLES.—CONT.  | List Price. |
|-----------|--|-------------|
| 03        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ ".....   | .02         |
| 04        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{3}{4}$ ".....   | .02         |
| 05        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{4}$ ".....   | .02         |
| 044       | COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100).....   | .80         |
| 073       | Iron WASHER, for $\frac{3}{4}$ " Studs.....  | .02         |
| 0134      | BOLT with Nut, $\frac{1}{4}$ " x $\frac{3}{4}$ ".....  | .02         |
| 0256      | BOLT with Nut, $\frac{1}{4}$ " x $2$ ".....  | .02         |
| 0393      | Iron WASHER for $\frac{7}{8}$ " Studs.....   | .02         |
| 441       | STUD, $\frac{7}{8}$ " dia., for various Spectacles.....  | .12         |
| 937       | BEZEL RING used on Spectacles 9713 and 9714.....   | .16         |
| 6901      | SPECTACLE, Casting only, for 7862.....   | 4.80        |
| 7862      | 3 Light, 75 Deg. Throw, $14\frac{3}{8}$ " Ctrs., SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass)..... | 6.80        |
| 9060      | STUD, $\frac{3}{4}$ " dia., for various Spectacles.....  | .12         |
| 9634      | SPECTACLE, Casting only, for 9712.....   | 5.00        |
| 9635      | SPECTACLE, Casting only, for 9713.....   | 4.80        |
| 9636      | SPECTACLE, Casting only, for 9714.....   | 4.80        |
| 9712      | 3 Light, 75 Deg. Throw, $14\frac{3}{8}$ " Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass)..... | 8.00        |
| 9713      | 2 Light, 75 Deg. Throw, $14$ " Ctrs, SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....             | 5.40        |
| 9714      | 3 Light, 75 Deg. Throw, $14$ " Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....            | 5.40        |
| 9730      | SPECTACLE, Casting only, for 9731.....   | 4.80        |
| 9731      | 2 Light, 75 Deg. Throw, $12$ " Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....            | 5.40        |
| 9734      | SPECTACLE, Casting only, for 9735.....   | 4.80        |
| 9735      | 2 Light, 75 Deg Throw, $14$ " Ctrs., SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass).....             | 6.00        |
| 10323     | BEZEL RING for 9735.....   | .20         |
| 10334     | BEZEL RING for 9731.....   | .24         |
| 10336     | BEZEL RING Complete for 9712.....  | 1.00        |
| 10337     | RING, Casting, for 10336.....  | .30         |
| 10338     | Rubber GASKET for 10336.....   | .70         |
| 10339     | $\frac{7}{8}$ " Pin for 9712.....  | .14         |
| 10340     | CENTER BEZEL RING Complete for 7862.....   | .80         |
| 10341     | BEZEL RING Complete for 7862.....  | .60         |

Order by NUMBER and NAME Appearing in Large Type.

FRONT SPECTACLES.



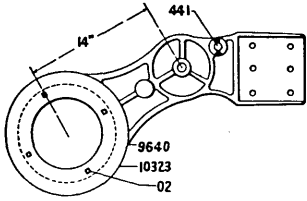
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Back Spectacle, Bearing, Shaft, Etc., see table, page 149.

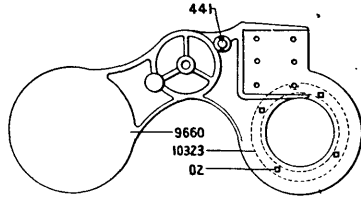
| Order No. | FRONT SPECTACLES.—CONT.   | List Price. |
|-----------|---|-------------|
| 03        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{4}$ "                                     | .02         |
| 04        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{4}$ "                                     | .02         |
| 05        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{4}$ "                                     | .02         |
| 0175      | BOLT with Nut, $\frac{3}{8}$ " x $1\frac{1}{4}$ " for 4649                            | .03         |
| 0256      | BOLT with Nut, $\frac{1}{4}$ " x 2"   | .02         |
| 0257      | BOLT with Nut, $\frac{1}{4}$ " x $2\frac{3}{4}$ " for 9736                            | .02         |
| 0343      | BOLT with Nut, $\frac{1}{4}$ " x $2\frac{1}{4}$ "                                     | .02         |
| 441       | STUD, $\frac{7}{8}$ " dia., for various Spectacles                                    | .12         |
| 937       | BEZEL RING for various Spectacles   | .16         |
| 4621      | FRAME Casting for 9736  | 1.80        |
| 4625      | SHIELD only for 9729  | 1.25        |
| 4649      | 3 Light, 90 Deg. Throw, 14" Ctrs., SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass) | 8.68        |
| 4650      | SPECTACLE, Casting only, for 4649   | 7.50        |
| 4651      | BEZEL RING for 4649   | .30         |
| 5090      | BEZEL RING for 9733   | .12         |
| 9637      | SPECTACLE, Casting only, for 9715   | 8.40        |
| 9638      | SPECTACLE, Casting only, for 9716   | 7.80        |
| 9639      | SPECTACLE, Casting only, for 9717   | 5.60        |
| 9715      | 2 Light, 90 Deg. Throw, 10" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass) | 9.00        |
| 9716      | 2 Light, 90 Deg. Throw, 14" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass) | 8.60        |
| 9717      | 3 Light, 90 Deg. Throw, 12" Ctrs., SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass) | 6.60        |
| 9728      | SPECTACLE, Casting only, for 9729   | 5.60        |
| 9729      | 1 Light, 90 Deg. Throw, 14" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass) | 6.15        |
| 9732      | SPECTACLE, Casting only, for 9733   | 6.60        |
| 9733      | 3 Light, 90 Deg. Throw, 10" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass) | 7.50        |
| 9736      | SPECTACLE Frame Complete, for use with 9729, to make Two Light                        | 2.00        |
| 9737      | SHIELD Complete with Bolts, for use with 9729   | 1.28        |
| 10335     | Center BEZEL RING, for 9717   | .30         |
| 10342     | STUD, $\frac{7}{8}$ ", for 9733   | .16         |
| 11435     | BEZEL RING for 9717   | .30         |
| 11436     | BEZEL RING for 9717   | .30         |

Order by NUMBER and NAME Appearing in Large Type.

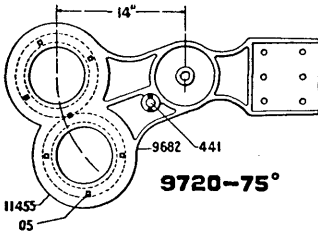
BLOCK STATION SPECTACLES.



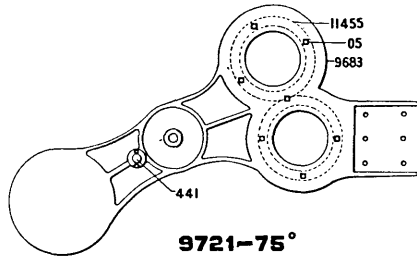
9718-75°



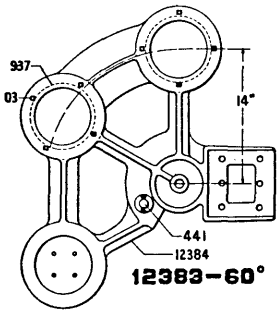
9719-75°



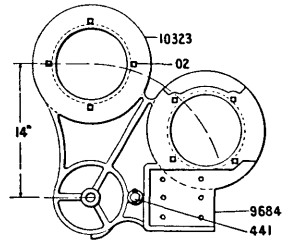
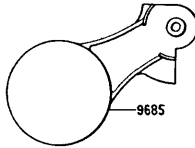
9720-75°



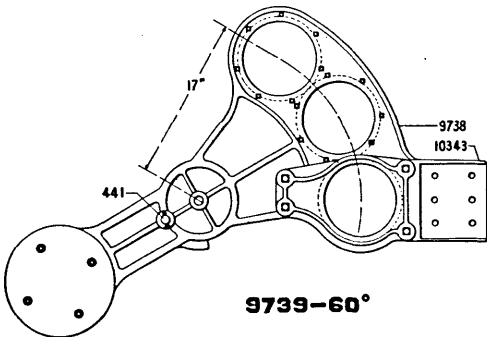
9721-75°



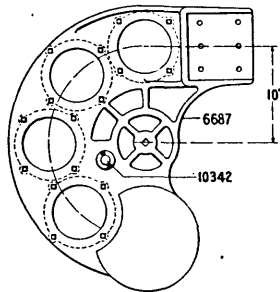
12383-60°



9722-60°



9739-60°



6675-135°

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

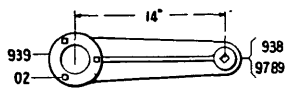
## HIGH SIGNALS.

145

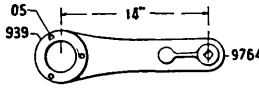
Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Back Spectacle, Bearing, Shaft, Etc., see table, page 149.

| Order No. | BLOCK STATION SPECTACLES.   | List Price. |
|-----------|---|-------------|
| 03        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ " .....   | .02 .....   |
| 441       | $\frac{7}{8}$ " STUD for various Spectacles.....  | .12 .....   |
| 937       | BEZEL RING for 12383 .....  | .16 .....   |
| 6675      | 4 Light, 135 Degree Throw, 10" Centers, SPECTACLE Complete....<br>(Takes $6\frac{1}{2}$ " Glass).....   | 9.00 .....  |
| 6687      | SPECTACLE, Casting only, for 6675 .....   | 8.00 .....  |
| 9640      | SPECTACLE, Casting only, for 9718.....  | 4.80 .....  |
| 9660      | SPECTACLE, Casting only, for 9719.....  | 6.00 .....  |
| 9682      | SPECTACLE, Casting only, for 9720.....  | 4.60 .....  |
| 9683      | SPECTACLE, Casting only, for 9721. ....   | 8.00 .....  |
| 9684      | SPECTACLE, Casting only, for 9722.....  | 4.80 .....  |
| 9685      | SEMAPHORE COUNTER WEIGHT Casting.....   | 5.60 .....  |
| 9718      | Two Position, 1 Light, 75 Degree Throw, 14" Centers, SPECTACLE<br>Complete. (Takes $8\frac{3}{8}$ " Glass).....   | 5.20 .....  |
| 9719      | Two Position, 1 Light, 75 Degree Throw, 14" Centers, SPECTACLE<br>Complete with Counterweight. (Takes $8\frac{3}{8}$ " Glass).....                        | 6.70 .....  |
| 9720      | Three Position, 2 Light, 75 Degree Throw, 14" Centers, SPECTACLE<br>Complete. (Takes $6\frac{7}{8}$ " Glass) .....  | 5.00 .....  |
| 9721      | Three Position, 2 Light, 75 Degree Throw, 14" Centers, SPECTACLE<br>Complete with Counterweight. (Takes $6\frac{1}{2}$ " or $6\frac{7}{8}$ " Glass) ..... | 8.50 .....  |
| 9722      | Three Position, 2 Light, 60 Degree Throw, 14" Centers, SPECTACLE<br>Complete. (Takes $8\frac{3}{8}$ " Glass).....   | 5.40 .....  |
| 9738      | Spectacle Casting with Counterweight for 9739.....  | 10.50 ..... |
| 9739      | Three Light, 60 Degree Throw, 17" Centers, SPECTACLE Complete.<br>Special for Double Arm Signals (Takes $8\frac{3}{8}$ " Glass) .....                     | 14.00 ..... |
| 10342     | $\frac{7}{8}$ " STUD for 6675.....  | .16 .....   |
| 10343     | BLADE HOLDER for Spectacle Casting 9739.....  | 2.00 .....  |
| 12383     | Two Light, 60 Degree Throw, 14" Centers, SPECTACLE Complete.<br>(Takes $6\frac{1}{2}$ " Glass).....   | 6.00 .....  |
| 12384     | SPECTACLE, Casting only, for 12383.....   | 5.40 .....  |

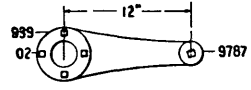
BACK SPECTACLES AND SHAFTS



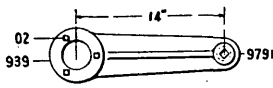
**1941  
9790**



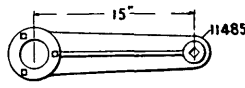
**9765**



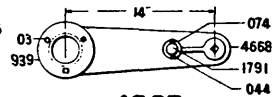
**9788**



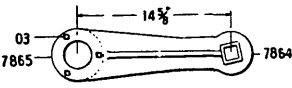
**9792**



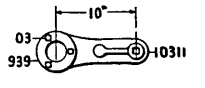
**12719**



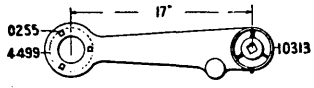
**4667**



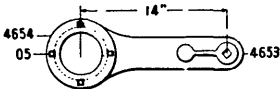
**7863**



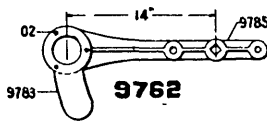
**10312**



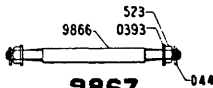
**10314**



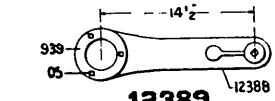
**4652**



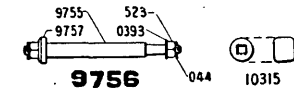
**9762**



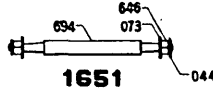
**9867**



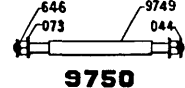
**12389**



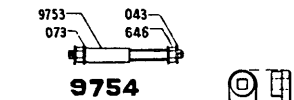
**9756**



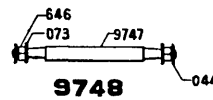
**1651**



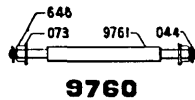
**9750**



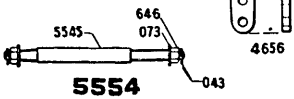
**9754**



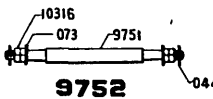
**9748**



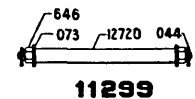
**9760**



**5554**



**9752**



**11299**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## HIGH SIGNALS.

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NOTE:—Complete Back Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Front Spectacles, Bearings, Shaft, Etc., see table, page 149.

NOTE:—When ordering Shafts be governed by Table of Front and Back Spectacles, as given on page 149.

| Order No. | BACK SPECTACLES AND SHAFTS   | List Price. |
|-----------|--|-------------|
| 02        | BOLT with Nut, $\frac{1}{4}$ " x 1", Sq Hd.....  | .02         |
| 03        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ ", Sq Hd.....  | .02         |
| 05        | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{4}$ ", Sq. Hd.....   | .02         |
| 043       | COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (per 100).....   | .80         |
| 044       | COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ ", for various Shafts (per 100).....   | .80         |
| 073       | IRON WASHER for $\frac{3}{8}$ " Bolt.....  | .02         |
| 074       | IRON WASHER for 4667.....  | .02         |
| 0255      | BOLT with Nut, $\frac{1}{4}$ " x $\frac{3}{4}$ ", C. S. Hd.....  | .02         |
| 0393      | IRON WASHER for $\frac{3}{8}$ " Screw.....   | .02         |
| 523       | $\frac{1}{4}$ " Hex NUT.....   | .07         |
| 646       | $\frac{3}{8}$ " Hex. NUT for various Shafts.....   | .05         |
| 694       | SHAFT only for 1651.....   | 1.60        |
| 939       | BEZEL RING for various Back Spectacles.....  | .10         |
| 1651      | SEMAPHORE SHAFT Complete. (See note above).....  | 1.68        |
| 1791      | 1" STUD for 4667.....  | .12         |
| 1941      | BACK SPECTACLE Complete, 14" Ctrs. (Takes 3" Glass.) See note above.....   | 1.16        |
| 4499      | BEZEL RING for 10314.....  | .08         |
| 4652      | BACK SPECTACLE Complete, 14" Ctrs. (Takes $4\frac{1}{2}$ " Glass) See note above.....  | 1.16        |
| 4653      | SPECTACLE Casting for 4652.....  | 1.00        |
| 4654      | BEZEL RING for 4652.....   | .16         |
| 4656      | HALF CRANK. Used for operating Shafts 5554 or 9754.....  | .70         |
| 4667      | Back SPECTACLE Complete with Stud, 14" Ctrs. (Takes 3" Glass.) Used in place of 1941 when Circuit Breaker is operated from Back Spectacle..... | 1.40        |
| 4668      | SPECTACLE Casting for 4667.....  | 1.10        |
| 5545      | SHAFT only for 5554.....   | 1.60        |
| 5554      | SEMAPHORE SHAFT Complete. See note above.....  | 1.68        |
| 7863      | Back SPECTACLE Complete, $14\frac{5}{8}$ " Ctrs. (Takes 3" Glass.) See note above.....   | 1.20        |
| 7864      | SPECTACLE Casting for 7863.....  | 1.10        |
| 7865      | BEZEL RING for 7863.....   | .10         |
| 9747      | SHAFT only for 9748.....   | 1.60        |
| 9748      | SEMAPHORE SHAFT Complete. See note above.....  | 1.68        |
| 9749      | SHAFT only for 9750.....   | 1.60        |
| 9750      | SEMAPHORE SHAFT Complete See note above.....   | 1.68        |
| 9751      | SHAFT only for 9752.....   | 1.60        |
| 9752      | SEMAPHORE SHAFT Complete See note above.....   | 1.70        |
| 9753      | SHAFT only for 9754.....   | 1.30        |
| 9754      | SEMAPHORE SHAFT Complete. See note above.....  | 1.40        |
| 9755      | SHAFT only for 9756.....   | 1.40        |
| 9756      | SEMAPHORE SHAFT Complete See note above.....   | 1.68        |
| 9757      | WASHER for 9756.....   | .20         |
| 9760      | SEMAPHORE SHAFT Complete. See note above.....  | 1.68        |

Order by NUMBER and NAME Appearing in Large Type.

## HIGH SIGNALS.

NOTE:—Complete Back Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Front Spectacles, Bearings, Shaft, Etc., see table, page 149.

NOTE:—When ordering Shafts be governed by Table of Front and Back Spectacles, as given on page 149.

| Order No. | BACK SPECTACLES AND SHAFTS.—CONT.   | List Price. |
|-----------|---|-------------|
| 9761      | SHAFT only for 9760 .....   | 1.60 .....  |
| 9764      | SPECTACLE Casting for 9765.....   | 1.00 .....  |
| 9765      | Back SPECTACLE Complete, 14" Ctrs (Takes 3" Glass.) See note above.....                   | 1.16 .....  |
| 9782      | Back SPECTACLE Complete, 14" Ctrs. (Takes 3" Glass.) See note above.....                  | 1.32 .....  |
| 9783      | SHIELD for 9782.....  | .....       |
| 9784      | BLANK SHIELD used with 9782 when required.....  | .....       |
| 9785      | SPECTACLE Casting for 9782.....   | .....       |
| 9787      | SPECTACLE Casting for 9788.....   | 1.00 .....  |
| 9788      | Back SPECTACLE Complete, 12" Ctrs. (Takes 3" Glass.) See note above.....                  | 1.16 .....  |
| 9789      | SPECTACLE Casting for 9790.....   | 1.00 .....  |
| 9790      | Back SPECTACLE Complete 14" Ctrs. (Takes 3" Glass.) See note above .....                  | 1.16 .....  |
| 9791      | SPECTACLE Casting for 9792.....   | 1.00 .....  |
| 9792      | Back SPECTACLE Complete, with Special Hub, 14" Ctrs. (Takes 3" Glass) See note above..... | 1.16 .....  |
| 9866      | SHAFT only for 9867.....  | 1.60 .....  |
| 9867      | Semaphore SHAFT Complete See note above.....  | 1.68 .....  |
| 10311     | SPECTACLE Casting for 10312.....  | 1.00 .....  |
| 10312     | Back SPECTACLE Complete, 10" Ctrs. (Takes 3" Glass.) See note above.....                  | 1.16 .....  |
| 10313     | SPECTACLE Casting for 10314.....  | 1.30 .....  |
| 10314     | Back SPECTACLE Complete, 17" Ctrs. (Takes 3" Glass.) See note above.....                  | 1.44 .....  |
| 10315     | COLLAR for Semaphore Shafts when Back Spectacle is not required.....                      | .20 .....   |
| 10316     | Hex. NUT for 9752 .....   | .06 .....   |
| 11299     | Semaphore SHAFT Complete. See note above.....   | 1.60 .....  |
| 11485     | SPECTACLE Casting for 12719.....  | 1.00 .....  |
| 12388     | SPECTACLE Casting for 12389.....  | 1.00 .....  |
| 12389     | Back SPECTACLE Complete, 14½" Ctrs. (Takes 3" Glass.) See note above.....                 | 1.16 .....  |
| 12719     | Back SPECTACLE Complete, 15" Ctrs .....   | 1.16 .....  |
| 12720     | SHAFT only for 11299.....   | 1.50 .....  |

Order by NUMBER and NAME Appearing in Large Type.



NOTE:—The following list of Standard Spectacles, Bearings and Shafts for Enclosed and Outside Connected Signals, showing the various combinations of Spectacles and Bearings with Shafts, will be found beneficial when it is desired to order a Spectacle which is used with a certain Bearing, or vice versa.

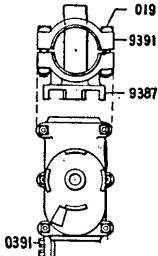
Front Spectacles are shown on pages from 136 to and including page 144; Back Spectacles and Shafts on page 146; Bearings for Wood and Iron Poles on page 150, and Stop Plates and Shafts for Enclosed Signal on page 116.

LIST OF SPECTACLES, SHAFTS AND BEARINGS.

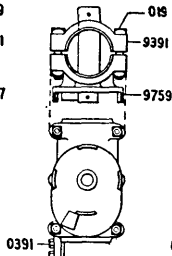
| SPECTACLES. |       | BEARINGS.  |            | Shaft. | ENCLOSED SIGNAL. |        |
|-------------|-------|------------|------------|--------|------------------|--------|
| Front.      | Back. | Iron Pole. | Wood Pole. |        | Stop Plate.      | Shaft. |
| 4562        | 1941  | 9383       | 9766       | 1651   | 6931             | 10090  |
| 4649        | 4652  | 6506       | 5544       | 5554   | 9446             | 10235  |
| 7862        | 7863  | 8330       | 8331       | 8332   | 9447             | 9633   |
| 9700        | 9765  | 9383       | 9766       | 9748   | 6931             | 12380  |
| 9702        | 9765  | 9383       | 9766       | 9748   | 6931             | 12380  |
| 9703        | 9790  | 9758       | 9768       | 9750   | 6931             | 12380  |
| 9704        | 9765  | 9383       | 9767       | 9748   | 6931             | 12380  |
| 9705        | 9790  | ....       | ....       | 9748   | 6931             | 12380  |
| 9706        | 9792  | 9758       | 9768       | 9760   | ....             | ....   |
| 9707        | 9782  | 9382       | 9770       | 9752   | 9446             | 12380  |
| 9708        | ....  | 9383       | ....       | 9748   | 6931             | 12380  |
| 9709        | 12389 | 9383       | 9766       | 9748   | 6931             | 12380  |
| 9710        | 12719 | 9745       | ....       | 9756   | ....             | ....   |
| 9711        | ....  | 9742       | ....       | 9756   | ....             | ....   |
| 9712        | ....  | 9383       | 9766       | 9748   | 6931             | 12380  |
| 9713        | 9765  | 9383       | 9766       | 9748   | 6931             | 12380  |
| 9714        | 9765  | 9383       | 9766       | 9748   | ....             | 12380  |
| 9715        | 10312 | 9383       | 9766       | 9748   | ....             | 12380  |
| 9716        | 9765  | 9384       | 9786       | 9748   | 6930             | 12380  |
| 9717        | ....  | ....       | 9769       | 9754   | ....             | ....   |
| 9718        | ....  | 9758       | 9768       | ....   | ....             | ....   |
| 9719        | ....  | 9758       | 9781       | ....   | ....             | ....   |
| 9720        | ....  | 9758       | 9781       | ....   | ....             | ....   |
| 9721        | ....  | 9758       | 9781       | ....   | ....             | ....   |
| 9722        | ....  | ....       | 11304      | ....   | ....             | ....   |
| 9725        | 9765  | 9383       | 9766       | 9748   | 6931             | 12380  |
| 9727        | 10314 | 9383       | 9766       | 9748   | 6931             | 12380  |
| 9729        | 9765  | 9384       | 9786       | 9748   | 6930             | 12380  |
| 9731        | 9788  | 9383       | 9766       | 9748   | 9397             | 12380  |
| 9733        | 10312 | 9384       | 9786       | 9748   | 6930             | 10278  |
| 9735        | 9790  | 9758       | 9768       | 9750   | 9397             | 12380  |
| 9739        | ....  | ....       | ....       | ....   | ....             | ....   |
| 9741        | 9790  | 9762       | 9470       | 9750   | ....             | 12380  |

HIGH SIGNALS.

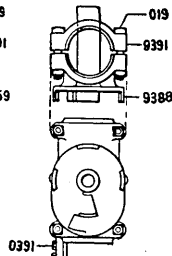
SEMAPHORE BEARINGS.



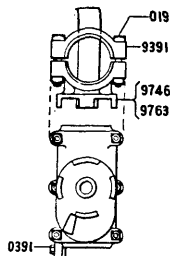
**9383**  
FOR SPECTACLE  
9700  
9702  
9704  
9708  
9709  
9712  
9713  
9714  
9715  
9725  
9727  
9731



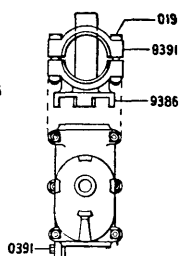
**9758**  
FOR SPECTACLE  
9703  
9706  
9718  
9719  
9720  
9721  
9735



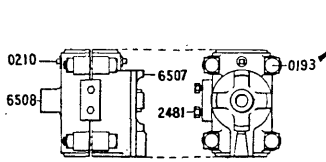
**9384**  
FOR SPECTACLE  
9716  
9729  
9733



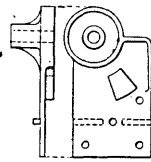
**9745** — 9710  
**9762** — 9741



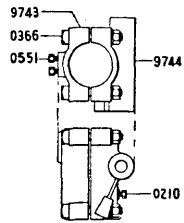
**9382** — 9707



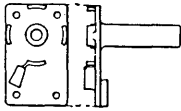
**6506** — 4649



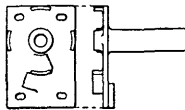
**9769** — 9717



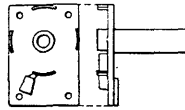
**9742** — 9711



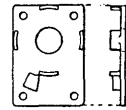
**9766**  
FOR SPECTACLE  
9700  
9702  
9709  
9712  
9713  
9714  
9715  
9725  
9727  
9731



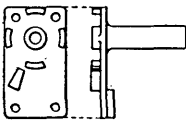
**9786**  
FOR SPECTACLE  
9716  
9729  
9733



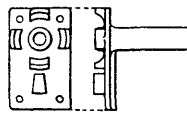
**9768**  
FOR SPECTACLE  
9703  
9706  
9718  
9719  
9720  
9721  
9735



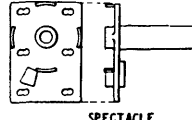
**9781**



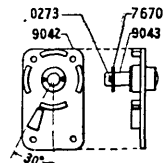
**9767** — 9704



**5544** — 4649  
**9770** — 9707



**9470** — 9741



**9041**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## HIGH SIGNALS.

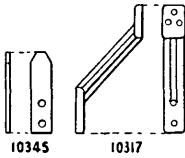
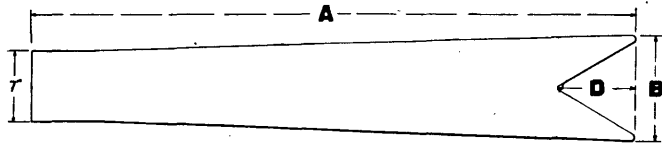
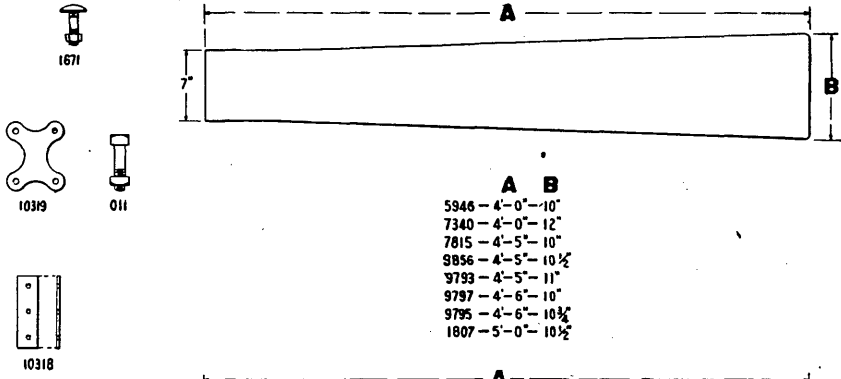
151

| Order No. | SEMAPHORE BEARINGS.   | List Price. |
|-----------|---|-------------|
| 019       | BOLT with Nut, $\frac{5}{8}$ " x $4\frac{1}{2}$ ", for various Semaphore Bearing Clamps...  | .09         |
| 0193      | BOLT with Nut, $\frac{3}{4}$ " x $4\frac{1}{2}$ ", for 6506.....                            | .12         |
| 0210      | SET SCREW, $\frac{1}{2}$ " x 1", Sq. Hd.....  | .04         |
| 0273      | COTTER PIN, $\frac{5}{16}$ " x 2", for 9041 (per 100).....                                  | .80         |
| 0366      | BOLT with Nut, $\frac{3}{8}$ " x 5", for 9742.....  | .10         |
| 0391      | TAP BOLT, $\frac{1}{2}$ " x 1", Hex. Hd., for fastening Lamp Bracket to various Clamps..... | .02         |
| 0551      | TAP BOLT, $\frac{3}{8}$ " x $1\frac{1}{2}$ ", Hex. Hd., Special for 9742.....               | .03         |
| 2481      | CAP SCREW, $\frac{1}{2}$ " x $1\frac{1}{4}$ ", Sq. Hd., for 6506.....                       | .05         |
| 5544      | Wood Pole SEMAPHORE BEARING for Spectacle 4649.....   | 1.60        |
| 6506      | SEMAPHORE BEARING Complete for Spectacle 4649.....  | 4.00        |
| 6507      | BASE, Casting for 6506.....   | 1.80        |
| 6508      | CAP, Casting for 6506.....  | 1.52        |
| 7670      | WASHER for 9041.....  | .02         |
| 9041      | BEARING PLATE, Complete with Side Stop.....   | 1.08        |
| 9042      | BEARING PLATE for 9041.....   | .96         |
| 9043      | PIN for 9041.....   | .12         |
| 9382      | CLAMP BEARING Complete for Spectacle 9707 for $4\frac{1}{2}$ " O. D. Pole...                | 4.00        |
| 9383      | CLAMP BEARING Complete for Spectacles as listed, for $4\frac{1}{2}$ " O. D. Pole            | 4.00        |
| 9384      | CLAMP BEARING Complete for Spectacles as listed, for $4\frac{1}{2}$ " O. D. Pole            | 4.00        |
| 9386      | BEARING Casting for 9382.....   | 2.60        |
| 9387      | BEARING Casting for 9383.....   | 2.60        |
| 9388      | BEARING Casting for 9384.....   | 2.60        |
| 9391      | BEARING Back Half for 9382, etc.....  | 1.00        |
| 9470      | Wood Pole SEMAPHORE BEARING for Spectacle 9741.....   | 1.30        |
| 9742      | CLAMP BEARING Complete for Spectacle 9711 for $4\frac{1}{2}$ " O. D. Pole...                | 4.40        |
| 9743      | CAP Casting for 9742.....   | 1.50        |
| 9744      | BEARING Casting for 9742.....   | 2.40        |
| 9745      | CLAMP BEARING Complete for Spectacle 9710, for $4\frac{1}{2}$ " O. D. Pole..                | 4.00        |
| 9746      | BEARING Casting for 9745.....   | 2.60        |
| 9758      | CLAMP BEARING Complete for Spectacles as listed, for $4\frac{1}{2}$ " O. D. Pole            | 4.00        |
| 9759      | BEARING Casting for 9758.....   | 2.60        |
| 9762      | CLAMP BEARING Complete for Spectacle 9741, for $4\frac{1}{2}$ " O. D. Pole..                | 4.00        |
| 9763      | BEARING Casting for 9762.....   | 2.60        |
| 9766      | Wood Pole SEMAPHORE BEARING for Spectacles as listed.....                                   | 1.20        |
| 9767      | Wood Pole SEMAPHORE BEARING for Spectacle 9704.....   | 1.40        |
| 9768      | Wood Pole SEMAPHORE BEARING for Spectacles as listed.....                                   | 1.20        |
| 9769      | Wood Pole SEMAPHORE BEARING for Spectacle 9717.....   | 3.00        |
| 9770      | Wood Pole SEMAPHORE BEARING for Spectacle 9707 (malleable)..                                | 1.50        |
| 9781      | BEARING PLATE for use with Bearing 9768, when required on Station Signals.....              | .70         |
| 9786      | Wood Pole SEMAPHORE BEARING for Spectacles as listed.....                                   | 1.30        |

Order by NUMBER and NAME Appearing in Large Type.

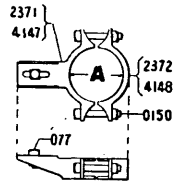
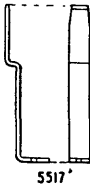
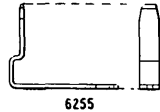
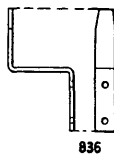
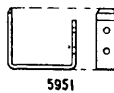
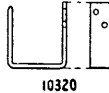
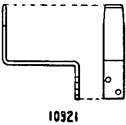
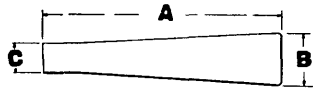
HIGH SIGNALS.

LAMP BRACKETS AND BLADES



**A B D**

|      |                            |
|------|----------------------------|
| 5947 | - 4'-0" - 10" - 12"        |
| 7341 | - 4'-0" - 12" - 8 1/2"     |
| 7816 | - 4'-5" - 10" - 7 3/4"     |
| 9857 | - 4'-5" - 10 1/2" - 7 1/2" |
| 9794 | - 4'-5" - 11" - 9"         |
| 9798 | - 4'-6" - 10" - 9"         |
| 9796 | - 4'-6" - 10 1/2" - 9 1/2" |
| 1808 | - 5'-0" - 10 1/2" - 7 3/4" |



**A**

|      |          |
|------|----------|
| 6412 | - 4 1/2" |
| 6413 | - 5 3/4" |

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## HIGH SIGNALS.

153

| Order No. | LAMP BRACKETS AND BLADES.   | List Price. |
|-----------|---|-------------|
| 011       | BOLT with Nut, $\frac{1}{2}$ " x 2", Sq. Hd.....  | .04         |
| 077       | BOLT with Nut, $\frac{1}{2}$ " x $1\frac{1}{2}$ ", Sq. Hd.....  | .04         |
| 0150      | BOLT with Nut, $\frac{1}{2}$ " x 4", for 6412 or 6413.....  | .06         |
| 0551      | TAP BOLT, $\frac{1}{2}$ " x $1\frac{1}{2}$ ", Hex. Hd.....  | .03         |
| 836       | LAMP BRACKET for Wood Pole.....   | .50         |
| 1671      | Mushroom Head BOLT holding Blade to Spectacle Casting.....  | .05         |
| 1807      | 5' Ash BLADE for Home Signal.....   | 1.76        |
| 1808      | 5' Ash BLADE for Distant Signal.....  | 1.76        |
| 2371      | BASE Casting for 6412.....  | .60         |
| 2372      | CAP Casting for 6412.....   | .24         |
| 2373      | Adjustable LAMP BRACKET Forging, used with 6412 or 6413, for Spectacles with 14" centers, when adjustable Lamp Bracket is required..... | .40         |
| 4147      | BASE Casting for 6413.....  | .60         |
| 4148      | CAP Casting for 6413.....   | .24         |
| 5517      | Adjustable LAMP BRACKET Forging, used with 6412 or 6413, for Spectacles with 10" centers, when adjustable Lamp Bracket is required..... | .60         |
| 5946      | 4' Ash BLADE for Home Signal.....   | 1.76        |
| 5947      | 4' Ash BLADE for Distant Signal.....  | 1.76        |
| 5951      | LAMP BRACKET used with Semaphore Bearing 6506.....  | .50         |
| 6255      | Adjustable LAMP BRACKET Forging, used with 6412 or 6413, for Spectacles with 17" centers, when adjustable Lamp Bracket is required..... | .70         |
| 6412      | Adjustable Lamp Bracket CLAMP Complete for $4\frac{1}{2}$ " O. D. Pole.....   | 1.00        |
| 6413      | Adjustable Lamp Bracket CLAMP Complete for $5\frac{1}{16}$ " O. D. Pole.....  | 1.00        |
| 7340      | 4' Ash BLADE for Home Signal.....   | 1.76        |
| 7341      | 4' Ash BLADE for Distant Signal.....  | 1.76        |
| 7342      | 2' Ash BLADE.....   | 1.00        |
| 7815      | 4' 5" Ash BLADE for Home Signal.....  | 1.76        |
| 7816      | 4' 5" Ash BLADE for Distant Signal.....   | 1.76        |
| 9793      | 4' 5" Ash BLADE for Home Signal.....  | 1.76        |
| 9794      | 4' 5" Ash BLADE for Distant Signal.....   | 1.76        |
| 9795      | 4' 6" Ash BLADE for Home Signal.....  | 1.76        |
| 9796      | 4' 6" Ash BLADE for Distant Signal.....   | 1.76        |
| 9797      | 4' 6" Ash BLADE for Home Signal.....  | 1.76        |
| 9798      | 4' 6" Ash BLADE for Distant Signal.....   | 1.76        |
| 9856      | 4' 5" Ash BLADE for Home Signal.....  | 1.76        |
| 9857      | 4' 5" Ash BLADE for Distant Signal.....   | 1.76        |
| 10317     | BRACKET Casting, supporting Lamp Bracket 10345 to Bearing 9742.....   | 1.00        |
| 10318     | PLATE WASHER for Semaphore Blade.....   | .12         |
| 10319     | PLATE WASHER, used with Semaphore Blades 5946 or 5947.....  | .30         |
| 10320     | LAMP BRACKET, used with Semaphore Bearings 9382, etc. When ordering specify number of Spectacle Casting and Style of Lamp used.....     | .50         |
| 10321     | LAMP BRACKET, used with Semaphore Bearings 9382, etc. When ordering specify number of Spectacle Casting and style of Lamp used.....     | .50         |
| 10344     | 3' Ash BLADE.....   | 1.50        |
| 10345     | LAMP BRACKET Forging, used with Bracket Casting 10317, and with Spectacle Casting 9711.....   | .32         |
| 11341     | 3' Ash BLADE.....   | 1.60        |

Order by NUMBER and NAME Appearing in Large Type.



# HIGH SIGNALS.

155

| Order No. | OPERATING RODS AND GUIDES.  | List Price. |
|-----------|---|-------------|
| 06        | BOLT with Nut, $\frac{3}{8}$ " x 1", for various Guides.....                                    | .02         |
| 010       | BOLT with Nut, $\frac{1}{2}$ " x $1\frac{1}{2}$ ", for various Guides.....                      | .04         |
| 025       | Pipe COUPLING, $\frac{3}{4}$ ", reinforced.....   | .14         |
| 040       | COTTER PIN, $\frac{1}{8}$ " x 1" (per 100).....   | .80         |
| 041       | COTTER PIN, $\frac{1}{8}$ " x $1\frac{1}{4}$ " (per 100).....                                   | .80         |
| 042       | COTTER PIN, $\frac{3}{16}$ " x 1" (per 100).....  | .80         |
| 044       | COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100).....                                  | .80         |
| 054       | $\frac{3}{4}$ " Black PIPE (per foot).....  | .03         |
| 064       | LAG SCREW, $\frac{1}{2}$ " x $2\frac{1}{2}$ ", fastening Guides to Wood Pole.....               | .01         |
| 0114      | RIVET, $\frac{1}{4}$ " x $1\frac{1}{4}$ ", for 1" Pipe Connection.....                          | .01         |
| 0115      | RIVET, $\frac{1}{4}$ " x $1\frac{1}{4}$ ", for $\frac{3}{4}$ " Pipe Connection.....             | .01         |
| 0234      | $\frac{5}{8}$ " Hex. NUT.....   | .02         |
| 0286      | $\frac{1}{2}$ " Hex. NUT.....   | .02         |
| 0293      | $\frac{3}{8}$ " Hex. NUT, for 9276.....   | .02         |
| 0477      | 1" Hex. NUT.....  | .06         |
| 640       | Pipe COUPLING, 1", reinforced.....  | .19         |
| 653       | 1" Black PIPE, (per foot).....  | .50         |
| 660       | 1 $\frac{1}{4}$ " SCREW ROD, for 2697.....  | 1.30        |
| 709       | 1-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $4\frac{1}{2}$ " O. D. Pole.....  | 1.40        |
| 710       | 2-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $5\frac{9}{16}$ " O. D. Pole..... | .07         |
| 730       | PIN, $\frac{7}{8}$ " x $2\frac{3}{8}$ ".....  | .84         |
| 744       | 1 $\frac{1}{4}$ " SOLID JAW for 2699.....   | 1.30        |
| 771       | 1-Way GUIDE, $\frac{3}{4}$ " Pipe, $10\frac{1}{2}$ " long, for $4\frac{1}{2}$ " O. D. Pole..... | 1.40        |
| 775       | 2-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $6\frac{5}{8}$ " O. D. Pole.....  | 1.34        |
| 776       | 1-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $5\frac{9}{16}$ " O. D. Pole..... | .28         |
| 890       | 1-Way GUIDE, $\frac{3}{4}$ " Pipe, for Wood Pole.....   | .33         |
| 891       | 2-Way GUIDE, $\frac{3}{4}$ " Pipe, for Wood Pole.....   | .74         |
| 931       | 1 $\frac{1}{4}$ " SOLID JAW for 4200.....   | .44         |
| 944       | 1 $\frac{1}{4}$ " SCREW ROD for 4203.....   | 1.10        |
| 959       | 1 $\frac{1}{4}$ " WROUGHT SCREW JAW.....  | .60         |
| 1037      | 1" EYE ROD with Stub End, $\frac{7}{8}$ " Eye.....  | .70         |
| 1788      | EYE ROD for 2947.....   | .68         |
| 1789      | 1" SCREW ROD for 2948.....  | .07         |
| 2181      | $\frac{5}{8}$ " PIN for Rods 9285 or 9287.....  | 1.90        |
| 2697      | 1 $\frac{1}{4}$ " Wrought SCREW JAW Complete with Tang End for 1" Pipe.....                     | 1.08        |
| 2699      | 1 $\frac{1}{4}$ " Solid JAW Complete with Tang End, for 1" Pipe.....                            | .09         |
| 2813      | 1 $\frac{1}{2}$ " Thin NUT. Used on various Rods.....   | .38         |
| 2933      | PLUG for 1" Pipe Connection.....  | 1.44        |
| 2938      | 3-Way GUIDE, $\frac{3}{4}$ " Pipe, for Wood Pole.....   | 1.48        |
| 2939      | 3-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $5\frac{9}{16}$ " O. D. Pole..... | 1.40        |
| 2940      | 3-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $6\frac{5}{8}$ " O. D. Pole.....  | .07         |
| 2941      | 2-Way GUIDE, $\frac{3}{4}$ " Pipe, $10\frac{1}{2}$ " long for $4\frac{1}{2}$ " O. D. Pole.....  | .90         |
| 2943      | PLUG for $\frac{3}{4}$ " Pipe Connection.....   | 1.08        |
| 2947      | EYE ROD with Tang End Complete, 1" Eye, for $\frac{3}{4}$ " Pipe.....                           | 1.36        |
| 2948      | 1" Malleable SCREW JAW Complete, with Tang End for $\frac{3}{4}$ " Pipe.....                    | .80         |
| 3966      | 1-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $6\frac{5}{8}$ " O. D. Pole.....  | 1.70        |
| 4200      | 1 $\frac{1}{4}$ " SOLID JAW Complete with Stub End.....   | 1.40        |
| 4203      | 1 $\frac{1}{4}$ " Wrought SCREW JAW Complete with Stub End.....                                 | .04         |
| 4247      | 2-Way GUIDE, $\frac{3}{4}$ " Pipe $10\frac{1}{2}$ " long, for $5\frac{9}{16}$ " O. D. Pole..... | 1.48        |
| 4364      | $\frac{3}{4}$ " Thin NUT.....   | 1.20        |
| 4690      | 1 $\frac{1}{4}$ " SOLID JAW Complete with Tang End for $\frac{3}{4}$ " Pipe.....                | .28         |
| 4691      | 1 $\frac{1}{4}$ " SOLID JAW for 4690.....   | .33         |
| 5923      | 1-Way GUIDE, 1" Pipe for Wood Pole.....   | 1.30        |
| 5924      | 2-Way GUIDE, 1" Pipe, for Wood Pole.....  | 1.30        |
| 5925      | 1-Way GUIDE, 1" Pipe $8\frac{3}{4}$ " long, for $4\frac{1}{2}$ " O. D. Pole.....                | 1.34        |
| 5926      | 1-Way GUIDE, 1" Pipe, $10\frac{1}{2}$ " long, for $4\frac{1}{2}$ " O. D. Pole.....              | .04         |
| 5927      | 1-Way GUIDE, 1" Pipe, $8\frac{3}{4}$ " long, for $5\frac{9}{16}$ " O. D. Pole.....              | .04         |

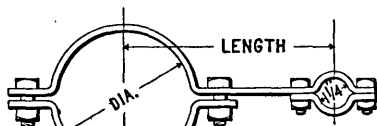
Order by NUMBER and NAME Appearing in Large Type.

| Order No. | OPERATING RODS AND GUIDES — CONT.  | List Price |
|-----------|--|------------|
| 5928      | 2-Way GUIDE, 1" Pipe, 8 $\frac{1}{4}$ " long, for 5 $\frac{9}{16}$ " O. D. Pole..... | 1.40       |
| 6298      | 1-Way GUIDE, 1" Pipe, 8 $\frac{1}{4}$ " long, for 6 $\frac{3}{8}$ " O. D. Pole.....  | 1.36       |
| 6299      | 2-Way GUIDE, 1" Pipe, 8 $\frac{1}{4}$ " long, for 6 $\frac{3}{8}$ " O. D. Pole.....  | 1.40       |
| 6568      | Eye ROD Complete with Tang End. 1" Eye, for 1" Pipe.....                             | 1.20       |
| 6575      | Eye ROD, for 6568.....   | 1.04       |
| 6801      | 3-Way GUIDE, 1" Pipe, 8 $\frac{1}{4}$ " long, for 6 $\frac{3}{8}$ " O. D. Pole.....  | 1.48       |
| 7779      | 1" SOLID JAW for 9271.....   | .60        |
| 8237      | PIN, $\frac{3}{8}$ " x 2 $\frac{3}{4}$ ".....  | .07        |
| 8346      | 1 $\frac{1}{4}$ " Malleable SCREW JAW.....   | .41        |
| 8512      | STUD, Special, for 9276.....   | .40        |
| 8513      | SCREW JAW for 9276.....  | .24        |
| 8631      | $\frac{1}{2}$ " SCREW JAW for 9279 or 9283.....                                      | .22        |
| 9169      | PIN, $\frac{1}{2}$ " x 1 $\frac{3}{16}$ ".....                                       | .07        |
| 9201      | $\frac{5}{8}$ " PIN for 9276.....  | .07        |
| 9250      | Eye ROD for 9261.....  | .70        |
| 9259      | 1" Screw ROD for 9288.....   | .36        |
| 9261      | Eye ROD with Tang End Complete, $\frac{7}{8}$ " Eye.....                             | .90        |
| 9262      | Eye ROD for 9263.....  | .70        |
| 9263      | Eye ROD with Tang End Complete, $\frac{3}{4}$ " Eye.....                             | .90        |
| 9264      | Eye ROD for 9265.....  | 1.04       |
| 9265      | Eye ROD Complete with Tang End, $\frac{7}{8}$ " Eye, for 1" Pipe.....                | 1.20       |
| 9266      | SOLID JAW ROD for 9267.....  | .64        |
| 9267      | SOLID JAW ROD Complete, $\frac{1}{2}$ ", with Stub End.....                          | .72        |
| 9268      | 1" SOLID JAW for 9269.....   | .48        |
| 9269      | 1" SOLID JAW, Complete with Stub End.....  | .55        |
| 9270      | EYE ROD for 9276.....  | .50        |
| 9271      | 1" SOLID JAW Complete with Tang End, for $\frac{3}{4}$ " Pipe.....                   | .77        |
| 9272      | $\frac{3}{4}$ " EYE ROD, Stub End, $\frac{7}{8}$ " Eye.....                          | .60        |
| 9273      | 1" SOLID JAW for 9274.....   | 1.24       |
| 9274      | 1" SOLID JAW Complete with Tang End, for 1" Pipe.....                                | 1.50       |
| 9275      | JAW ROD with Threaded End for 9279.....  | .70        |
| 9276      | Signal Commutator OPERATING ROD Complete.....  | 1.20       |
| 9277      | $\frac{3}{4}$ " Malleable SCREW JAW, for various Rods.....                           | .26        |
| 9278      | 1" Wrought SCREW JAW for 9290.....   | 1.50       |
| 9279      | $\frac{1}{2}$ " ADJUSTABLE CONNECTION COMPLETE, average 24 $\frac{1}{2}$ " centers.. | 1.08       |
| 9280      | $\frac{3}{4}$ " Eye ROD, Stub End, $\frac{3}{4}$ " Eye.....                          | .60        |
| 9281      | 1" Malleable SCREW JAW, for various Rods.....  | .33        |
| 9282      | $\frac{1}{2}$ " Screw ROD for 9283.....  | .16        |
| 9283      | $\frac{1}{2}$ " Malleable SCREW JAW with Stub End.....                               | .42        |
| 9284      | $\frac{3}{4}$ " SCREW ROD for 9285.....  | .16        |
| 9285      | $\frac{3}{4}$ " Malleable SCREW JAW Complete, with Stub End.....                     | .48        |
| 9286      | SCREW ROD for 9287.....  | .64        |
| 9287      | $\frac{3}{4}$ " SCREW JAW Complete with Tang End, for $\frac{3}{4}$ " Pipe.....      | 1.04       |
| 9288      | 1" Malleable SCREW JAW Complete, with Stub End.....                                  | .76        |
| 9289      | 1" SCREW ROD for 9290.....   | 1.04       |
| 9290      | 1" Wrought SCREW JAW Complete, with Tang End for 1" Pipe.....                        | 2.80       |
| 9292      | UP AND DOWN ROD Complete, 6' Centers, $\frac{3}{8}$ " Eye.....                       | 2.40       |
| 9294      | UP AND DOWN ROD Complete, 6' Centers, $\frac{1}{2}$ " Eye.....                       | 2.40       |
| 9300      | UP AND DOWN ROD Complete, 12' 6" Centers, $\frac{3}{8}$ " Eye.....                   | 2.90       |
| 9302      | UP AND DOWN ROD Complete, 12' 6" Centers, $\frac{7}{8}$ " Eye.....                   | 2.90       |
| 9304      | UP AND DOWN ROD Complete, 19' Centers, $\frac{3}{8}$ " Eye.....                      | 3.48       |
| 9306      | UP AND DOWN ROD Complete, 19' Centers, $\frac{7}{8}$ " Eye.....                      | 3.48       |

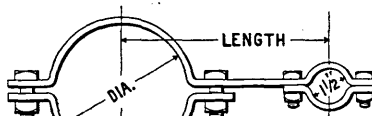
Order by NUMBER and NAME Appearing in Large Type.



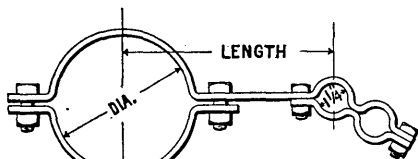
## OPERATING RODS AND GUIDES.—CONT.



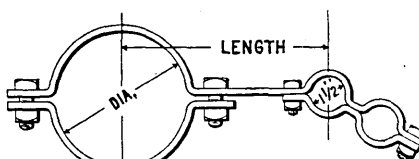
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|------|--------|--------|
| 709  | 4 1/2  | 8 3/4  |
| 771  | 4 1/2  | 10 1/2 |
| 776  | 5 9/16 | 8 3/4  |
| 3968 | 6 5/8  | 8 3/4  |



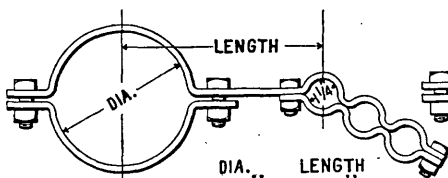
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|------|--------|--------|
| 5925 | 4 1/2  | 8 3/4  |
| 5926 | 4 1/2  | 10 1/2 |
| 5927 | 5 9/16 | 8 3/4  |
| 6298 | 6 5/8  | 8 3/4  |



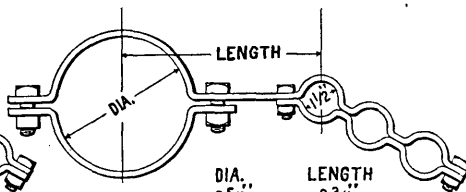
|      | DIA.   | LENGTH |
|------|--------|--------|
| 2941 | 4 1/2  | 10 1/2 |
| 710  | 5 9/16 | 8 3/4  |
| 4247 | 5 9/16 | 10 1/2 |
| 775  | 6 5/8  | 8 3/4  |



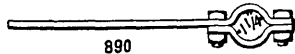
|      | DIA.   | LENGTH |
|------|--------|--------|
| 5928 | 5 9/16 | 8 3/4  |
| 6299 | 6 5/8  | 8 3/4  |



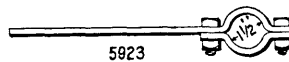
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|------|--------|--------|
| 2939 | 5 9/16 | 8 3/4  |
| 2940 | 6 5/8  | 8 3/4  |



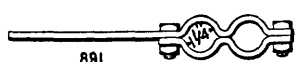
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|------|-------|--------|
| 6801 | 6 5/8 | 8 3/4  |



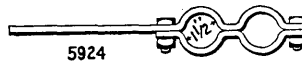
890



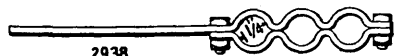
5923



891



5924



2938



064



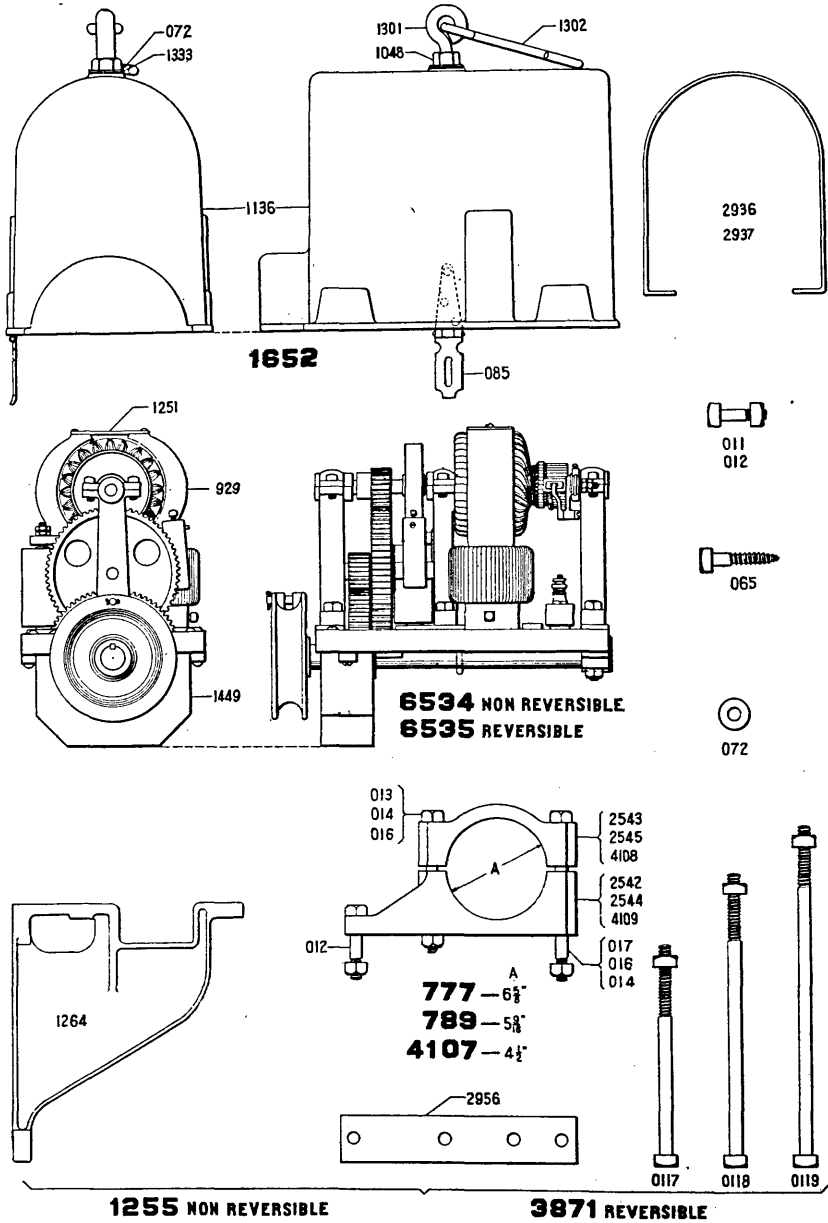
010



06

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SIGNAL MACHINE.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# HIGH SIGNALS.

159

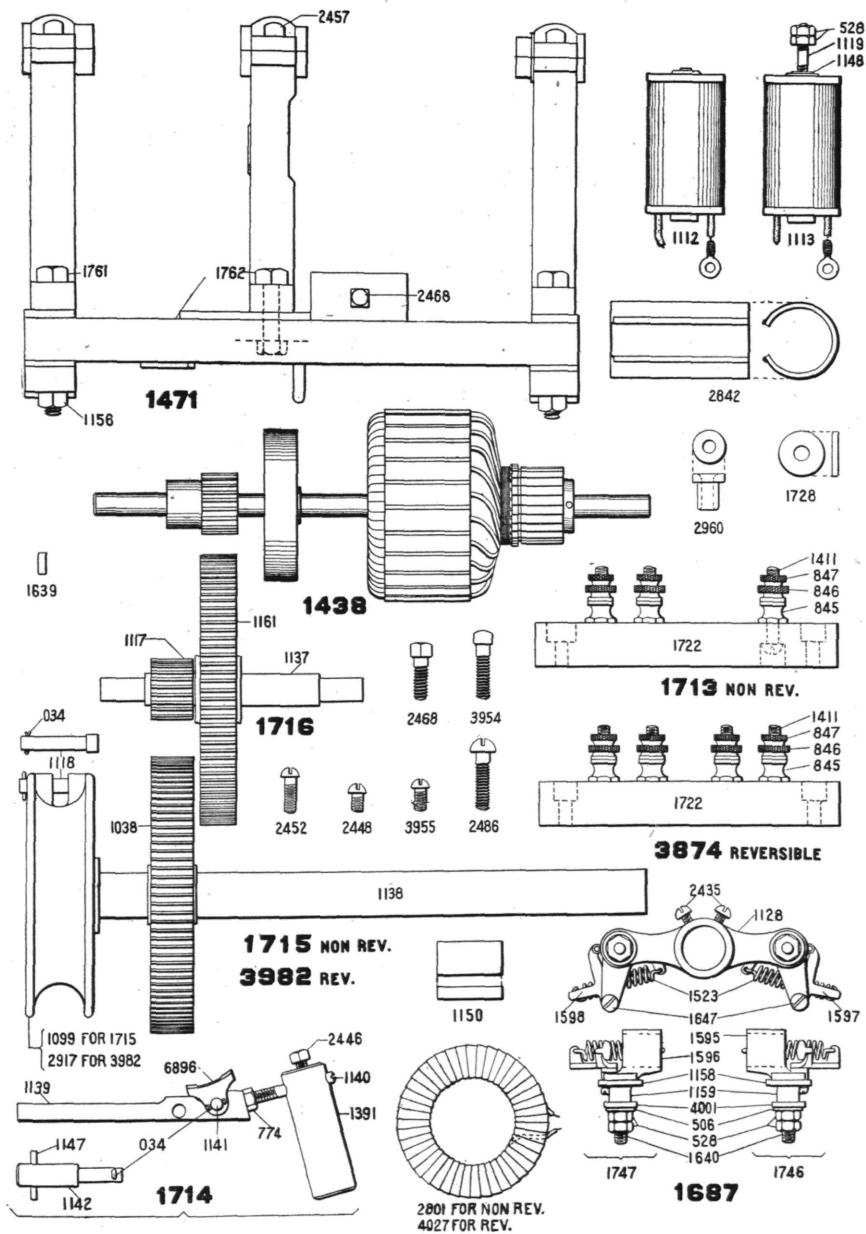
| Order No. | SIGNAL MACHINE.   | List Price. |
|-----------|---|-------------|
| 011       | BOLT with Nut holding 1471 and 2956 to 1264.....  | .04         |
| 012       | BOLT with Nut for 777, 789 or 4107; also holding 1471 to 1264.....  | .04         |
| 013       | BOLT with Nut for 4107.....   | .07         |
| 014       | BOLT with Nut for 789 or 4107.....  | .07         |
| 016       | BOLT with Nut for 777 or 789.....   | .07         |
| 017       | BOLT with Nut for 777.....  | .07         |
| 034       | COTTER PIN for 1714 or 1715 (per hundred).....  | .80         |
| 065       | LAG SCREW holding 2956 to Wood Pole.....  | .03         |
| 072       | WASHER, $\frac{1}{2}$ ", for 1652, 0117 and others.....   | .01         |
| 085       | HASP for 1652.....  | .10         |
| 0117      | BOLT with Nut holding 1264 to 7" Wood Pole.....   | .09         |
| 0118      | BOLT with Nut holding 1264 to 10" Wood Pole.....  | .10         |
| 0119      | BOLT with Nut holding 1264 to 12" Wood Pole.....  | .10         |
| 506       | WASHER for 1687.....  | .01         |
| 528       | Brass NUT for $\frac{1}{4}$ " Screw.....  | .02         |
| 774       | NUT for 1714.....   | .02         |
| 777       | CLAMP holding Signal Machine to Iron Pole, $6\frac{3}{4}$ " O. D.....   | 1.20        |
| 789       | CLAMP holding Signal Machine to Iron Pole, $5\frac{5}{16}$ " O. D.....  | 1.20        |
| 845       | BASE Binding Post, for 1713 or 3874.....  | .08         |
| 846       | THUMB NUT for 1713 or 3874.....   | .06         |
| 847       | LOCK NUT for 1713 or 3874.....  | .05         |
| 929       | MAGNET CORE for 6534 or 6535.....   | 3.00        |
| 1038      | Main GEAR for 1715 or 3982.....   | 3.30        |
| 1048      | NUT for 1652.....   | .03         |
| 1099      | Chain SHEAVE for 1715, non-reversible.....  | 1.00        |
| 1112      | SINGLE BRAKE MAGNET COMPLETE.....   | 8.00        |
| 1113      | SINGLE BRAKE MAGNET COMPLETE.....   | 8.00        |
| 1117      | Small GEAR for 1716.....  | 1.00        |
| 1118      | PIN for Sheave 1699 for 1715.....   | .10         |
| 1119      | STUD for 1113.....  | .12         |
| 1128      | ARM for 1687.....   | 1.00        |
| 1136      | COVER for 1652.....   | 5.00        |
| 1137      | SHAFT, for 1716.....  | 1.00        |
| 1138      | SHAFT for 1715 or 3982.....   | 1.00        |
| 1139      | BRAKE LEVER for 1714.....   | 1.50        |
| 1140      | SCREW for 1714.....   | .10         |
| 1141      | PIN for 1714.....   | .06         |
| 1142      | STUD for 1714 supporting Lever 1139.....  | .12         |
| 1147      | PIN for 1714 holding 1142 to center upright of 1471.....  | .02         |
| 1148      | WASHER for 1113.....  | .02         |
| 1150      | CARBON BRUSH for 6534 or 6535.....  | .30         |
| 1156      | NUT for 1471.....   | .02         |
| 1158      | Insulating WASHER for 1687.....   | .30         |
| 1159      | Insulating BUSHING for 1687.....  | .24         |
| 1161      | Large GEAR for 1716.....  | 3.10        |
| 1251      | PLATE for 6534 or 6535.....   | .36         |
| 1255      | SIGNAL MACHINE COMPLETE, non-reversible, with Cover and Fastenings. In ordering specify voltage, 60 or 110; also style and size of Pole Fastenings..... | 150.00      |
| 1264      | BRACKET supporting 6534 or 6535.....  | 1.00        |
| 1301      | EYE BOLT for 1652.....  | .20         |
| 1302      | HOOK for 1652.....  | .20         |
| 1333      | WASHER, Rubber, for 1652.....   | .06         |
| 1391      | COUNTERWEIGHT for 1714.....   | .36         |
| 1411      | SCREW for 1713 or 3874.....   | .08         |

Order by NUMBER and NAME Appearing in Large Type.

| Order No. | SIGNAL MACHINE.—CONT.   | List Price. |
|-----------|---|-------------|
| 1438      | ARMATURE with Gear and Brake Disc Complete 60 or 110 volts as specified.....  | 40.00       |
| 1449      | Gear COVER, for 6534 or 6535.....   | .80         |
| 1471      | FRAME COMPLETE.....   | 30.00       |
| 1523      | SPRING for 1687.....  | .20         |
| 1595      | BRUSH HOLDER, Right Hand, for 1687.....   | .90         |
| 1596      | BRUSH HOLDER, Left Hand, for 1687.....  | .90         |
| 1597      | ARM, Right Hand, for 1687.....  | .30         |
| 1598      | ARM, Left Hand, for 1687.....   | .30         |
| 1639      | PIN, holding Plate 1251 to Core 929.....  | .02         |
| 1640      | SCREW for 1687.....   | .04         |
| 1647      | STUD for 1687.....  | .10         |
| 1652      | COVER COMPLETE.....   | 6.00        |
| 1687      | BRUSH HOLDER, Mounted, Complete.....  | 6.00        |
| 1713      | BINDING POSTS Complete, with Slate Base for 6534.....   | 1.80        |
| 1714      | BRAKE LEVER Complete for 6534 or 6535.....  | 3.40        |
| 1715      | SHAFT Complete, Main, for 6534.....   | 5.50        |
| 1716      | SHAFT Complete, Intermediate, for 6534 or 6535.....   | 5.20        |
| 1722      | Slate BASE for 1713 or 3874.....  | .90         |
| 1728      | Asbestos WASHER, used under 1713 or 3874.....   | .03         |
| 1746      | BRUSH HOLDER, Right Hand, Complete, for 1687.....   | 2.50        |
| 1747      | BRUSH HOLDER, Left Hand, Complete, for 1687.....  | 2.50        |
| 1761      | CAP SCREW for 1471.....   | .08         |
| 1762      | CAP SCREW for 1471.....   | .05         |
| 2435      | SCREW for 1687.....   | .01         |
| 2446      | SET SCREW for 1714.....   | .02         |
| 2448      | SCREW holding 1251 to 929, for 6534 or 6535.....  | .02         |
| 2452      | SCREW holding Gear Cover 1449 to 1471.....  | .02         |
| 2457      | CAP SCREW for 1471.....   | .04         |
| 2468      | SET SCREW for 1471 holding Field Cores 929.....   | .03         |
| 2486      | SCREW holding 1713 or 3874 to 1471.....   | .04         |
| 2542      | BASE for Clamp 777.....   | .60         |
| 2543      | CAP for Clamp 777.....  | .40         |
| 2544      | BASE for Clamp 789.....   | .60         |
| 2545      | CAP for Clamp 789.....  | .40         |
| 2801      | Single FIELD COIL COMPLETE for 6534.....  | 8.00        |
| 2842      | Brass GUARD protecting Magnet 1113.....   | .50         |
| 2917      | SHEAVE, $\frac{1}{4}$ " Pitch Chain, for 3982.....  | 1.00        |
| 2936      | GUARD, Spacing Cover 1652, for 6534 or 6535. (Gear End).....  | .24         |
| 2937      | GUARD, Spacing Cover 1652, for 6534 or 6535. (Commutator End).....  | .24         |
| 2956      | STRIP holding Signal Machine to Wood Pole.....  | .40         |
| 2960      | Insulated BUSHING for Inlet Wires.....  | .12         |
| 3871      | SIGNAL MACHINE COMPLETE, Reversible, with Cover and Pole Fastenings. (Used for Two-Arm Semaphore). In ordering, specify voltage 60 or 110; also style and size of Pole Fastenings.. | 150.00      |
| 3874      | BINDING POSTS COMPLETE, with Slate Base for 6535.....   | 2.00        |
| 3954      | SCREW holding Brake Magnets 1112 and 1113 to 1471.....  | .04         |
| 3955      | SCREW holding 2936 to 6534 or 6535.....   | .01         |
| 3982      | SHAFT COMPLETE Main for 5535.....   | 5.50        |
| 4001      | Insulating WASHER for 1687.....   | .24         |
| 4027      | Single FIELD COIL COMPLETE for 6535.....  | 8.00        |
| 4107      | CLAMP holding Signal Machine to Iron Pole, $4\frac{1}{2}$ " O. D.....   | 1.20        |
| 4108      | CAP for Clamp 4107.....   | .40         |
| 4109      | BASE for Clamp 4107.....  | .60         |
| 6534      | SIGNAL MACHINE, non-reversible.....   | 140.00      |
| 6535      | SIGNAL MACHINE, reversible.....   | 140.00      |
| 6896      | BRAKE SHOE for 1714.....  | 1.20        |

Order by NUMBER and NAME Appearing in Large Type.

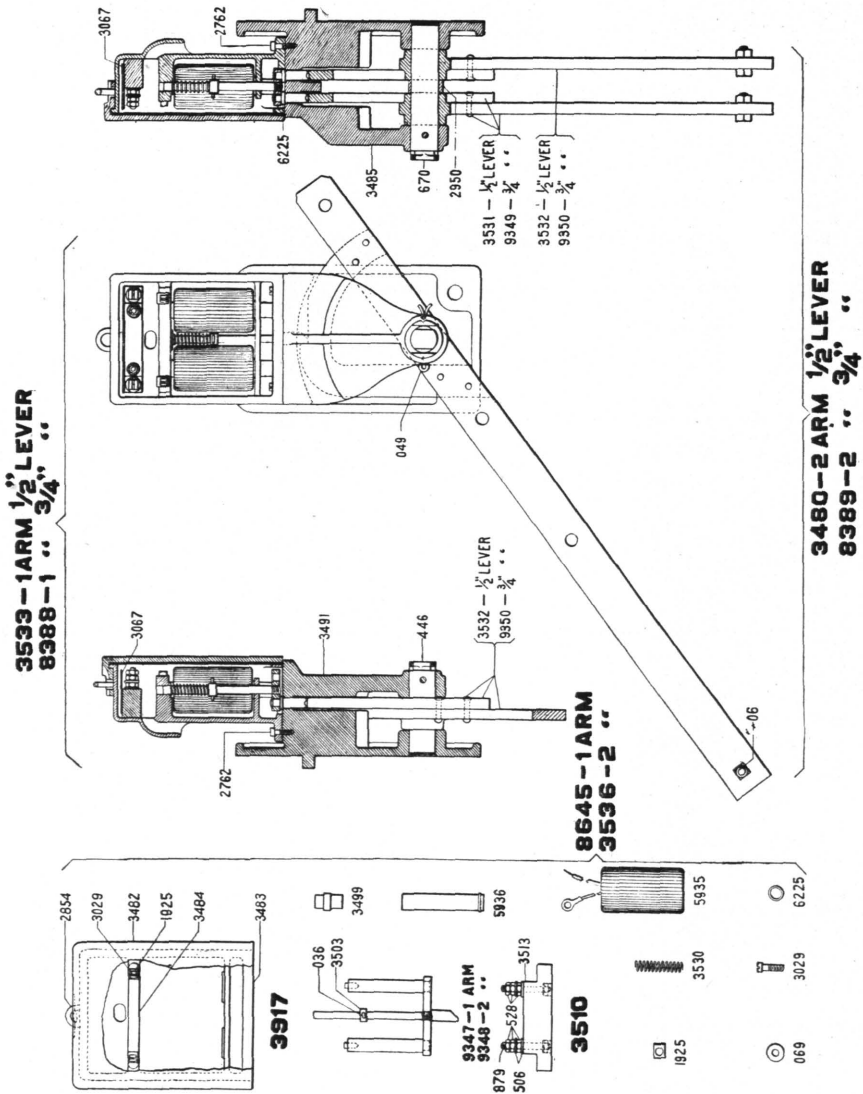
## SIGNAL MACHINE.



11 Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

ONE AND TWO-ARM LOCKS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

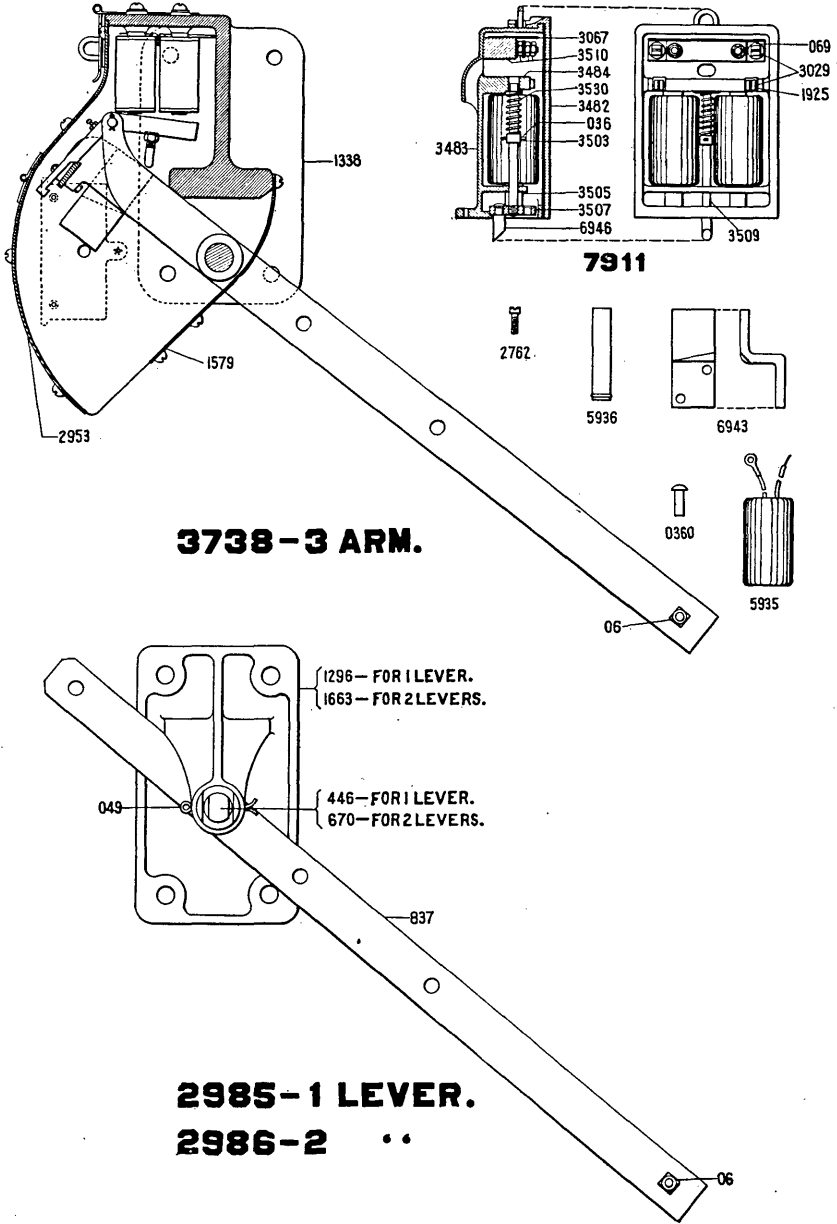
# HIGH SIGNALS.

163

| Order No. | ONE AND TWO-ARM LOCKS.  | List Price. |
|-----------|---|-------------|
| 06        | BOLT with Nut, $\frac{3}{8}$ " x 1".....  | .02         |
| 036       | COTTER PIN, $\frac{3}{8}$ " x $\frac{3}{4}$ " (per 100).....  | .80         |
| 049       | COTTER PIN, $\frac{1}{4}$ " x 3" (per 100).....   | .80         |
| 069       | WASHER for Screw 3029, holding 3510 to 3917.....  | .01         |
| 446       | PIN for 3533 or 8388.....   | .24         |
| 506       | BRASS WASHER for $\frac{1}{4}$ " Screw.....   | .01         |
| 528       | BRASS NUT for $\frac{1}{4}$ " Screw.....  | .02         |
| 670       | PIN for 3480 or 8389.....   | .30         |
| 879       | SCREW for 3510.....   | .08         |
| 1925      | LOCK WASHER for 3917.....   | .01         |
| 2762      | CAP SCREW holding Magnet Case 3536 to Brackets 3485 or 3491....   | .06         |
| 2854      | STAPLE for 3917.....  | .08         |
| 2950      | WASHER between Levers, for 3480 or 8389.....  | .20         |
| 3029      | CAP SCREW holding 3484 and 3510 to 3917.....  | .06         |
| 3067      | INSULATOR for 3480 or 3533.....   | .20         |
| 3480      | LOCK Complete as shown with $\frac{3}{4}$ " Lever for Two-Arm Signal.....   | 45.00       |
|           | The above complete with Weights and Fittings for Iron Pole.....   | 50.00       |
|           | The above complete with Weights and Fittings for Wood Pole.....   | 48.00       |
|           | When ordering, specify size and kind of Pole.   |             |
| 3482      | DOOR for 3917.....  | 1.00        |
| 3483      | CASE for 3917.....  | 5.00        |
| 3484      | CAP for 3917.....   | .90         |
| 3485      | BRACKET, Casting only, for 3480 or 8389.....  | 6.50        |
| 3491      | BRACKET, Casting only, for 3533 or 8388.....  | 5.00        |
| 3499      | TOP CORE for 3536.....  | .50         |
| 3503      | COLLAR for Rod 3509.....  | .10         |
| 3510      | TERMINAL BLOCK Complete for 3536.....   | .50         |
| 3513      | BLOCK for 3510.....   | .20         |
| 3530      | SPRING for 3536.....  | .20         |
| 3531      | COUNTERWEIGHT LEVER Complete for 3480.....  | 5.00        |
| 3532      | COUNTERWEIGHT LEVER Complete for 3480 or 3533.....  | 5.00        |
| 3533      | LOCK Complete as shown with $\frac{1}{4}$ " Lever for One-Arm Signal.....   | 40.00       |
|           | The above complete with Weights and Fittings for Iron Pole.....   | 45.00       |
|           | The above complete with Weights and Fittings for Wood Pole.....   | 42.00       |
|           | When ordering, specify size and kind of Pole.   |             |
| 3536      | CASE WITH MAGNETS Complete, for 3480 or 8389.....   | 30.00       |
| 3917      | CASE Complete as shown, for 3536.....   | 7.00        |
| 5935      | SINGLE COIL for 3536. If a pair of Coils are required, order two<br>Coils, but when required to replace a Spool Wound, order Tube<br>5936 with each Coil..... | 7.50        |
| 5936      | TUBE used with Coil 5935.....   | .50         |
| 6225      | STOP WASHER for 3536 limiting downward movement of Pin 3508<br>on 3480 or 3533.....   | .06         |
| 8388      | LOCK Complete as shown with $\frac{3}{4}$ " Lever for One-Arm Signal.....   | 41.00       |
|           | The above complete with Weights and Fittings for Iron Pole.....   | 46.00       |
|           | The above complete with Weights and Fittings for Wood Pole.....   | 43.00       |
|           | When ordering, specify size and kind of Pole.   |             |
| 8389      | LOCK Complete as shown with $\frac{3}{4}$ " Lever, for Two-Arm Signal.....  | 47.00       |
|           | The above complete with Weights and Fittings for Iron Pole.....   | 52.00       |
|           | The above complete with Weights and Fittings for Wood Pole.....   | 50.00       |
|           | When ordering, specify size and kind of Pole.   |             |
| 8645      | CASE WITH MAGNETS Complete, for 3533 or 8388.....   | 30.00       |
| 9347      | YOKE Complete with Magnet Cores and Stop, for 8645.....   | 4.00        |
| 9348      | YOKE Complete with Magnet Cores and Stop, for 3536.....   | 4.00        |
| 9349      | COUNTERWEIGHT LEVER Complete for 8389.....  | 6.00        |
| 9350      | COUNTERWEIGHT LEVER Complete for 8388 or 8389.....  | 6.00        |

Order by NUMBER and NAME Appearing in Large Type.

HOOK SELECTORS AND COUNTERWEIGHTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



# HIGH SIGNALS.

165

| Order No. | HOOK SELECTORS AND COUNTERWEIGHTS.   | List Price. |
|-----------|--|-------------|
| 06        | BOLT with Nut, $\frac{3}{8}$ " x 1" .....  | .02         |
| 034       | COTTER PIN, $\frac{3}{32}$ " x $\frac{1}{2}$ " (per 100).....  | .80         |
| 036       | COTTER PIN, $\frac{3}{32}$ " x $\frac{3}{4}$ ", for 7911 (per 100).....  | .80         |
| 040       | COTTER PIN, $\frac{1}{8}$ " x 1" (per 100).....  | .80         |
| 049       | COTTER PIN, $\frac{1}{4}$ " x 3" (per 100).....  | .80         |
| 069       | WASHER for $\frac{1}{4}$ " Screw.....  | .01         |
| 070       | WASHER for 7913.....   | .01         |
| 0360      | RIVET, $\frac{3}{8}$ " x 1 $\frac{1}{8}$ ".....  | .01         |
| 446       | PIN for One-Way Lever 2985.....  | .24         |
| 506       | BRASS WASHER for $\frac{1}{4}$ " Screw.....  | .01         |
| 528       | BRASS NUT for $\frac{1}{4}$ " Screw.....   | .02         |
| 670       | PIN for Two-Way Lever 2986.....  | .30         |
| 774       | IRON NUT for $\frac{1}{4}$ " Screw 1702.....   | .02         |
| 837       | LEVER for 2985 or 2986.....  | 1.70        |
| 1155      | $\frac{5}{16}$ " NUT for 2597.....   | .02         |
| 1156      | $\frac{3}{8}$ " NUT for 2 597.....   | .02         |
| 1296      | BRACKET for One-Way Lever 2985 .....   | 1.52        |
| 1338      | BRACKET for Selector 3738 .....  | 18.00       |
| 1352      | SHAFT for Selector 3738 .....  | 1.60        |
| 1368      | COUNTERWEIGHT LEVER for Hook Selectors .....   | 4.00        |
| 1369      | LONG OPERATING LEVER for 3738.....   | 4.00        |
| 1370      | SHORT OPERATING LEVER for 3738.....  | 3.00        |
| 1371      | LATCH for 2597.....  | 3.00        |
| 1374      | LATCH BAR for 3738.....  | .80         |
| 1381      | BUSHING for 3738.....  | .20         |
| 1382      | SET SCREW for 3738.....  | .16         |
| 1387      | PIN for 2597.....  | .12         |
| 1410      | SCREW holding 1576 to Bracket, for 3738 .....  | .02         |
| 1411      | SCREW for 1576.....  | .08         |
| 1576      | TERMINAL BLOCK Complete for 3738.....  | .90         |
| 1579      | BOTTOM COVER for 3738.....   | .80         |
| 1584      | SCREW for 7913.....  | .08         |
| 1663      | DOUBLE BRACKET for 2986.....   | 1.65        |
| 1702      | SCREW holding Latch Bars, for 3738.....  | .20         |
| 1893      | WIRE TERMINAL for 7913.....  | .05         |
| 1925      | LOCK WASHER for 7911.....  | .01         |
| 1953      | KEY for 1369 or 1370.....  | .06         |
| 2144      | SPECIAL SCREW for 2597 .....   | .12         |
| 2145      | NUT LOCK for 2597 .....  | .01         |
| 2163      | INSULATING BLOCK for 1576.....   | .40         |
| 2181      | PIN for 3079.....  | .07         |
| 2187      | SINGLE MAGNET COIL with Iron Core for 7913.....  | 5.50        |
| 2434      | SCREW for Hook Selector Cover.....   | .01         |
| 2460      | SCREW for 2597.....  | .03         |
| 2597      | LATCH Complete for 3738.....   | 3.30        |
| 2762      | CAP SCREW, $\frac{1}{4}$ " x $\frac{1}{4}$ ", Sq. Hd.....  | .06         |
| 2953      | HINGE Complete for 3738.....   | .00         |
| 2985      | COUNTERWEIGHT, Single Lever, without Weight. Specify Weight<br>separately if required. For Weights see page 168..... | 3.60        |
| 2986      | COUNTERWEIGHT, Double Lever, without Weight. Specify Weight<br>separately if required. For Weights see page 168..... | 5.10        |
| 3029      | CAP SCREW for 7911.....  | .06         |
| 3067      | INSULATOR for 7911.....  | .20         |
| 3072      | WROUGHT SHACKLE for 3079.....  | .30         |
| 3079      | WROUGHT SHACKLE with $\frac{3}{8}$ " Pin Complete.....   | .40         |
| 3482      | DOOR for 7911.....   | 1.00        |
| 3483      | CASE for 7911.....   | 5.00        |
| 3484      | CAP for 7911.....  | .90         |
| 3503      | COLLAR for 7911.....   | .10         |

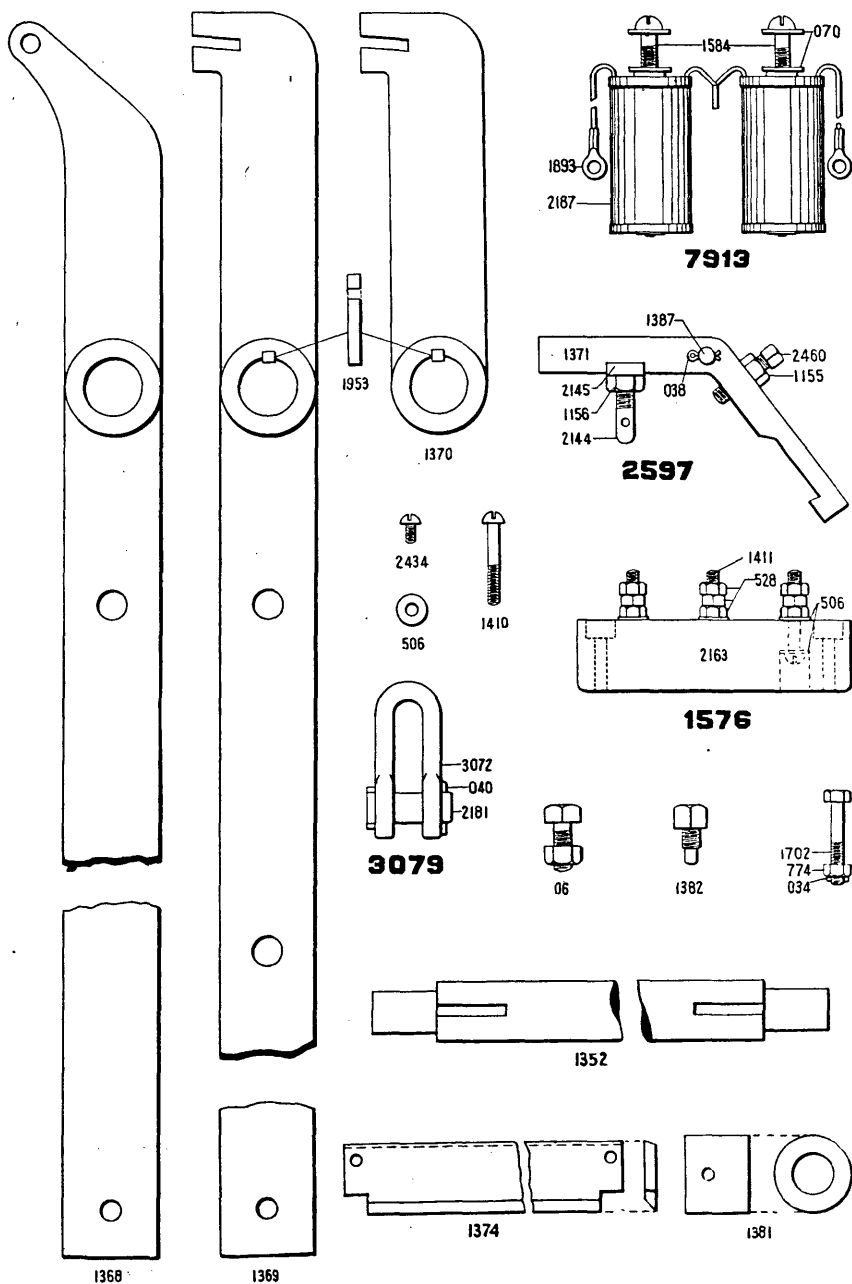
Order by NUMBER and NAME Appearing in Large Type.

## HIGH SIGNALS.

| Order No. | HOOK SELECTORS AND COUNTERWEIGHTS.—CONT.  | List Price.  |
|-----------|---|--------------|
| 3505      | BOTTOM CORE for 7911.....   | 1.60 .....   |
| 3507      | YOKE for 7911.....  | 1.00 .....   |
| 3509      | ROD for 7911.....   | .20 .....    |
| 3510      | TERMINAL BLOCK Complete for 7911.....   | .50 .....    |
| 3530      | SPRING for 7911.....  | .20 .....    |
| 3738      | HOOK SELECTOR as shown, for Three-Arm Signal. Specify Weight<br>separately if required. For Weights see page 168.....   | 130.00 ..... |
| 5935      | SINGLE COIL for 7911. If a pair of Coils are required, order two<br>Coils, but when required to replace a Spool Wound, order Tube<br>5936 with each Coil..... | 7.50 .....   |
| 5936      | TUBE used with Coil 5935.....   | .50 .....    |
| 6943      | WROUGHT BRACKET for long Operating Lever, for 3738.....   | .20 .....    |
| 6946      | PIN for 7911.....   | .20 .....    |
| 7911      | CASE WITH MAGNETS Complete for 3738.....  | 30.00 .....  |
| 7913      | PAIR OF MAGNETS Complete, for 3738.....   | 11.00 .....  |

Order by NUMBER and NAME Appearing in Large Type.

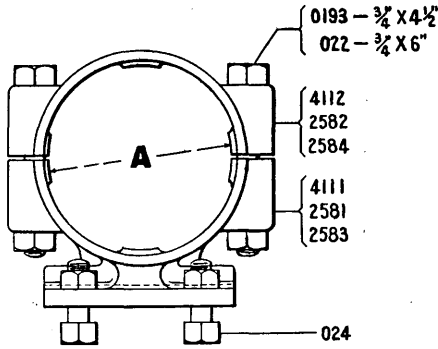
HOOK SELECTORS AND COUNTERWEIGHTS.



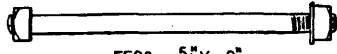
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

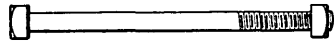
WEIGHTS AND FITTINGS FOR LOCKS, SLOTS, ETC.



- 4110 - A**  
 4 1/2"  
**798 - 5 5/16"**  
**797 - 6 5/8"**



- 5583 - 5/8" X 9"  
 5598 - 5/8" X 12"  
 5599 - 5/8" X 14"



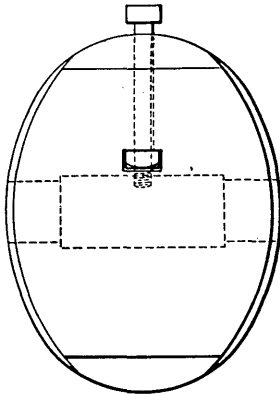
- 0135 - 5/8" X 9"  
 086 - 5/8" X 12"  
 0130 - 5/8" X 14 1/2"



087



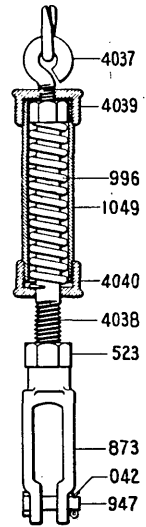
067



- WEIGHT LEVER  
**9130 - 10 LBS. 3/4" X 2"**  
**9129 - 17 " 1/2" X 2"**  
**4937 - 50 " 1/2" X 2"**  
**9379 - 50 " 3/4" X 2"**  
**6665 - 65 " 1/2" X 2"**



- 1668 - 20 INCHES  
 9393 - 4 FEET  
 0183 - 1/4" PITCH  
 0549 - 1/4" PROOF



**3978**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

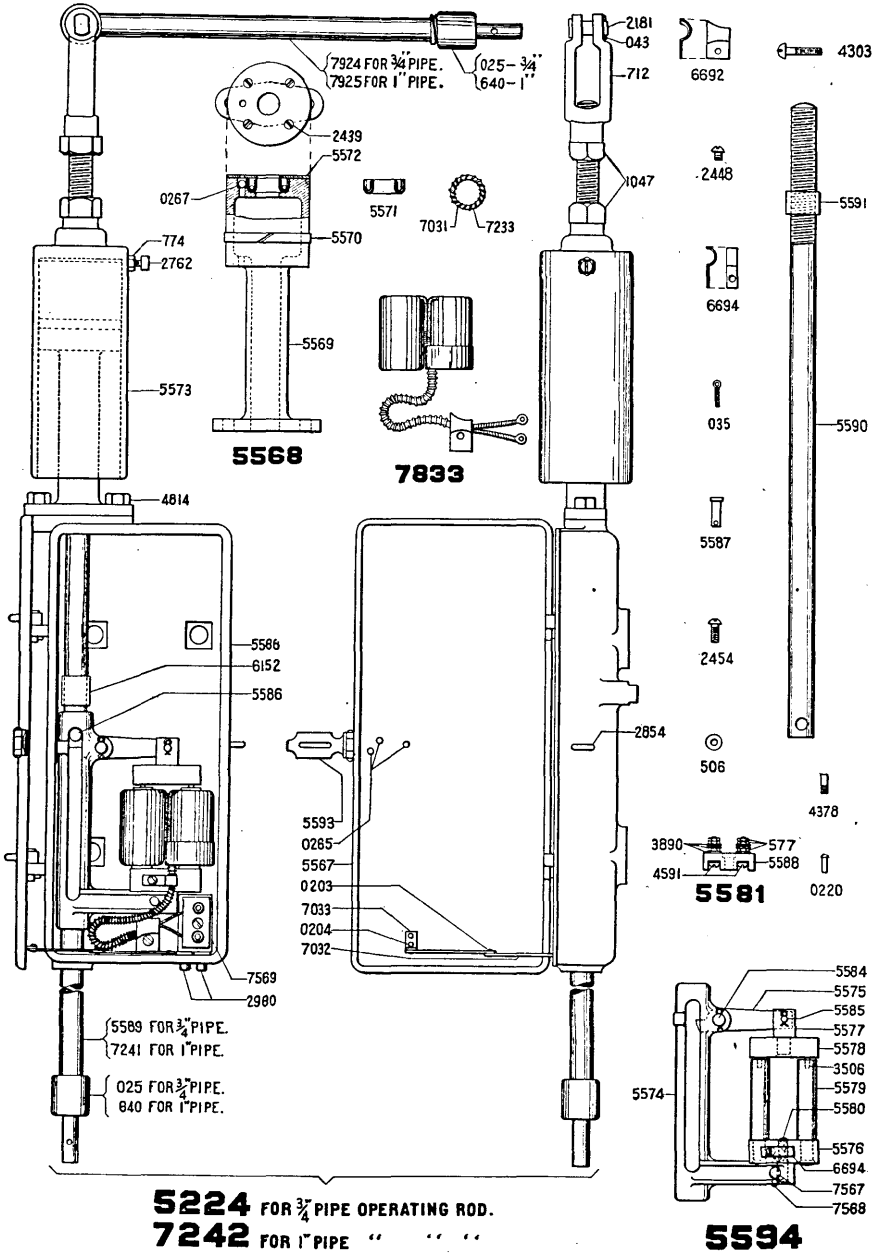
# HIGH SIGNALS.

169

| Order No. | WEIGHTS AND FITTINGS FOR LOCKS, SLOTS, ETC.  | List Price. |
|-----------|--|-------------|
| 022       | BOLT with Nut, $\frac{3}{4}$ " x 6"  | .14         |
| 024       | BOLT with Nut, $\frac{3}{4}$ " x 2 $\frac{1}{4}$ ", for 797, etc.                                | .08         |
| 042       | COTTER PIN, $\frac{3}{16}$ " x 1", for 3978 (per 100)  | .80         |
| 067       | LAG SCREW, $\frac{3}{4}$ " x 4"  | .07         |
| 086       | BOLT with Nut, $\frac{5}{8}$ " x 12"   | .14         |
| 087       | IRON WASHER for $\frac{5}{8}$ " Bolt   | .01         |
| 0130      | BOLT with Nut, $\frac{5}{8}$ " x 14 $\frac{1}{2}$ "  | .16         |
| 0135      | BOLT with Nut, $\frac{5}{8}$ " x 9"  | .12         |
| 0183      | $\frac{1}{4}$ " PITCH CHAIN (per foot)   | .80         |
| 0193      | BOLT with Nut, $\frac{3}{4}$ " x 4 $\frac{1}{2}$ "   | .12         |
| 0549      | $\frac{1}{4}$ " PROOF CHAIN (per foot)   | .17         |
| 523       | NUT for 3978.  | .07         |
| 797       | CLAMP Complete, holding Selectors, Locks or Slots to 6 $\frac{3}{8}$ " O. D. Iron Pole.          | 3.70        |
| 798       | CLAMP Complete, holding Selectors, Locks or Slots to 5 $\frac{9}{16}$ " O. D. Iron Pole.         | 3.70        |
| 873       | MALLEABLE SCREW JAW for 3978.  | .33         |
| 947       | PIN for 3978.  | .12         |
| 996       | SPRING for 3978.   | .40         |
| 1049      | CASE for 3978.   | 1.00        |
| 1668      | CHAIN, 20' long, used for connecting Regular Signal Machine to 3978 for One and Three-Arm Poles. | .30         |
| 2581      | BASE for 798.  | 2.00        |
| 2582      | CAP for 798.   | .80         |
| 2583      | BASE for 797.  | 2.50        |
| 2584      | CAP for 797.   | 1.10        |
| 3978      | CASE AND SPRING Complete, connecting Signal Machine with Selectors, Counterweight or Locks.      | 4.00        |
| 4037      | EYE BOLT for 3978.   | .20         |
| 4038      | ROD for 3978.  | .50         |
| 4039      | TOP CAP for 3978.  | .50         |
| 4040      | BOTTOM CAP for 3978.   | .50         |
| 4110      | CLAMP Complete, holding Selectors, Locks or Slots to 4 $\frac{1}{2}$ " O. D. Iron Pole.          | 3.50        |
| 4111      | BASE for 4110.   | 2.00        |
| 4112      | CAP for 4110.  | .70         |
| 4337      | 50 LB. WEIGHT Complete, with Bolt for $\frac{1}{2}$ " x 2" Lever.                                | 3.30        |
| 5583      | BOLT with Nuts and Washer, $\frac{5}{8}$ " x 9", for fastening Slots to Wood Pole.               | .18         |
| 5598      | BOLT with Nuts and Washer, $\frac{5}{8}$ " x 12", for fastening Slots to Wood Pole.              | .20         |
| 5599      | BOLT with Nuts and Washer, $\frac{5}{8}$ " x 14", for fastening Slots to Wood Pole.              | .22         |
| 6665      | 65 LB. WEIGHT Complete with Bolt, for $\frac{1}{2}$ " x 2" Lever.                                | 4.10        |
| 9129      | 17 LB. WEIGHT Complete with Bolt, for $\frac{1}{2}$ " x 2" Lever.                                | 1.24        |
| 9130      | 10 LB. WEIGHT Complete with Bolt, for $\frac{3}{4}$ " x 2" Lever.                                | .80         |
| 9379      | 50 LB. WEIGHT Complete with Bolt, for $\frac{3}{4}$ " x 2" Lever.                                | 3.30        |
| 9393      | PITCH CHAIN, 4' long, connecting Reversible Signal Machine to 3978. Used on Two-Arm Pole.        | 3.20        |

Order by NUMBER and NAME Appearing in Large Type.

SLOTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# HIGH SIGNALS.

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| Order No. | SLOTS.  | List Price. |
|-----------|---|-------------|
| 025       | ¾" REINFORCED PIPE COUPLING.....  | .14         |
| 035       | COTTER PIN for 5594 (per 100).....  | .80         |
| 043       | COTTER PIN, ⅜" x 1¼" (per 100).....   | .80         |
| 073       | WASHER for ¾" Bolt.....   | .02         |
| 0203      | RIVET holding 7032 to 7033.....   | .01         |
| 0204      | RIVET holding 7033 to Cover 5567.....   | .01         |
| 0220      | RIVET holding 7032 to Case 5566.....  | .01         |
| 0265      | RIVET holding Hasp 5593 to 5567.....  | .01         |
| 0267      | BALL for 5568.....  | .01         |
| 0407      | THUMB SCREW, ¼" x ¾".....   | .10         |
| 0410      | SCREW, ½" x ¾", Fillister Head.....   | .02         |
| 0411      | CAP SCREW, ¼" x 1¼", Hex. Head.....   | .03         |
| 506       | WASHER between 7032 and Case 5566.....  | .01         |
| 577       | NUT for 5581.....   | .02         |
| 640       | 1" REINFORCED PIPE COUPLING.....  | .19         |
| 712       | JAW for 5224 or 7242.....   | .40         |
| 774       | NUT for Screw 2762 on 5224 or 7242.....   | .02         |
| 1047      | NUT for 5224 or 7242.....   | .09         |
| 2181      | PIN for Jaw 712, for 5224 or 7242.....  | .07         |
| 2439      | SCREW for 5568.....   | .01         |
| 2448      | SCREW holding 6694 for 5594.....  | .02         |
| 2454      | SCREW holding 5581 to Case 5566.....  | .03         |
| 2762      | SCREW for Cylinder 5573.....  | .06         |
| 2854      | STAPLE for Case 5566.....   | .08         |
| 2960      | RUBBER BUSHING for 5224 or 7242.....  | .12         |
| 3506      | BRASS PIN in Core 5579 for 5594.....  | .02         |
| 3890      | WASHER for 5581.....  | .01         |
| 4303      | BRASS SCREW, ½" x 1½", Round Head.....  | .04         |
| 4364      | ¾" HEX. NUT (thin).....   | .04         |
| 4378      | SCREW, Guide for Stop 7032.....   | .02         |
| 4591      | SCREW for 5581.....   | .03         |
| 4814      | SCREW holding 5568 to Case 5566.....  | .08         |
| 5224      | SEMI. AUTOMATIC SLOT Complete, Style B, for connecting to ¾"<br>Pipe Operating Rod. Pole Fastenings to be specified separately.<br>For Fastenings see page 168..... | 70.00       |
| 5566      | CASE for 5224 or 7242.....  | 8.00        |
| 5567      | COVER for 5224 or 7242.....   | 3.00        |
| 5568      | PLUNGER Complete for 5224 or 7242.....  | 15.00       |
| 5569      | PLUNGER, Casting only for 5568.....   | 10.00       |
| 5570      | RING, Plunger for 5568.....   | 2.00        |
| 5571      | RING, Leather Packing for 5568.....   | 2.00        |
| 5572      | PLATE RING, Retaining, 5571 for 5568.....   | .50         |
| 5573      | CYLINDER for 5224 or 7242.....  | 12.00       |
| 5574      | SLIDING FRAME, Casting only, for 5594.....  | 4.00        |
| 5575      | LATCH for 5594.....   | 2.00        |
| 5576      | MAGNET YOKE for 5594.....   | 1.20        |
| 5577      | JAW for 5594.....   | 2.00        |
| 5578      | ARMATURE for 5594.....  | 1.00        |
| 5579      | MAGNET CORE for 5594.....   | .80         |
| 5580      | SCREW holding 5576 to 5574, for 5594.....   | .20         |
| 5581      | TERMINAL BLOCK Complete, for 5224 or 7242. (Specify whether<br>Block is to be of Wood or Slate).....  | .50         |
| 5581      | LATCH PIN for 5594.....   | .20         |
| 5585      | PIN for Armature Jaw, for 5594.....   | .20         |
| 5586      | PIN for Rod 5590, for moving 5594.....  | .20         |
| 5587      | HINGE PIN holding 5566 to 5567.....   | .20         |
| 5588      | BLOCK for 5581.....   | .30         |
| 5589      | ROD with ¾" Pipe Tang End, for 5224.....  | 1.20        |
| 5590      | OPERATING ROD for 5224 or 7242.....   | 1.50        |

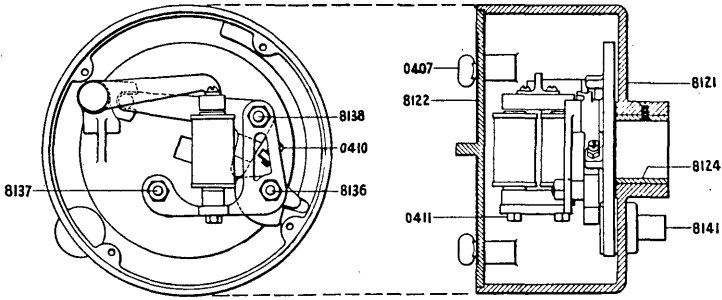
Order by NUMBER and NAME Appearing in Large Type.

| Order No. | SLOTS.—CONT.  | List Price. |
|-----------|---|-------------|
| 5591      | COLLAR for Rod 5590.....  | .40         |
| 5593      | HASP for 5224 or 7242.....  | .30         |
| 5594      | SLIDING FRAME Complete, for 5224 or 7242 .....  | 12.00       |
| 6152      | COLLAR limiting the upward movement of Frame 5594.....  | .20         |
| 6692      | CLIP fastening Terminal End of Magnet Coil Leads for 7833.....  | .50         |
| 6694      | CLIP fastening Coils to 5594.....   | .20         |
| 7031      | SPRING for Ring 7233.....   | .20         |
| 7032      | STOP for Cover for 5224 or 7242.....  | .....       |
| 7033      | BRACKET fastening 7032 to 5567.....   | .....       |
| 7233      | RING for Leather Packing 5571, for 5568.....  | .20         |
| 7241      | ROD with 1" Pipe Tang End for 7242.....   | 1.50        |
| 7242      | SEMI. AUTOMATIC SLOT Complete, Style B, for connecting to 1"<br>Pipe Operating Rod. Pole Fastenings to be specified separately.<br>For Fastenings see page 168..... | 70.00       |
| 7567      | PIN for 5594.....   | .....       |
| 7568      | PIN for 5594.....   | .....       |
| 7569      | INSULATOR for insulating 5581, for 5224 or 7242.....  | .....       |
| 7833      | MAGNETS Complete, One Set Magnets with Clip and Spring protect-<br>ing Lead, for 5224 or 7242.....  | 14.00       |
| 7924      | ROD for 3/4" Pipe Connection.....   | 1.20        |
| 7925      | ROD for 1" Pipe Connection, for 7242.....   | 1.50        |
| 8120      | SPINDLE SLOT Complete as shown. When ordering specify number<br>of Spectacle for which same is to be used.....  | 50.00       |
| 8121      | CASE, Casting only, for 8120.....   | .....       |
| 8122      | COVER for 8120.....   | .....       |
| 8124      | BUSHING for 8120.....   | .....       |
| 8125      | BUSHING for Base Plates.....  | .....       |
| 8127      | JAW for Spindle Slot.....   | .....       |
| 8128      | DOG for Spindle Slot.....   | .....       |
| 8131      | ARMATURE LEVER for Spindle Slot.....  | .....       |
| 8132      | BRACKET for Spindle Slot.....   | .....       |
| 8135      | YOKE for Spindle Slot.....  | .....       |
| 8136      | STUD for 8120.....  | .....       |
| 8137      | STUD for 8120.....  | .....       |
| 8138      | STUD for 8120.....  | .....       |
| 8139      | WASHER for Spindle 12407, etc.....  | .....       |
| 8141      | PIN for 8120.....   | .....       |
| 8142      | ARMATURE for Spindle Slot.....  | .....       |
| 8143      | STRAIGHT SPINDLE only, for 12408.....   | .....       |
| 8144      | TAPER SPINDLE only, for 12407.....  | .....       |
| 8145      | SINGLE COIL for 8120 (When ordering specify resistance).....  | .....       |
| 8479      | BASE for Spindle Slot. (When ordering specify Spectacle for which<br>same is to be used.....  | .....       |
| 9830      | DASH POT Complete.....  | 6.00        |
| 10122     | BRACKET supporting Dash Pot 9830. (Special for Iron Pole).....  | 1.50        |
| 10126     | BRACKET supporting Dash Pot 9830 to Standard Semaphore Bearing<br>for Iron Pole.....  | 1.50        |
| 12348     | BRACKET supporting Dash Pot 9830 to Wood Poles.....   | 1.50        |
| 12400     | SPINDLE SLOT Complete with Spindle as specified. (When ordering<br>specify Spectacle for which same is required.....  | 57.50       |
| 12407     | TAPER SPINDLE Complete. Special for Spectacle 4562 .....  | 7.50        |
| 12408     | STRAIGHT SPINDLE Complete.....  | 7.50        |
| 12502     | TAPER SPINDLE only for 12503.....   | .....       |
| 12503     | TAPER SPINDLE Complete for Standard Spectacles.....   | 7.50        |
| 12504     | LOCK LEVER Complete for Spindle Slot.....   | .....       |
| 12506     | BASE for Spindle Slot. } When ordering specify Spectacle for which  |             |
| 12507     | BASE for Spindle Slot. } same is to be used.  |             |
| 12508     | BASE for Spindle Slot. }  |             |

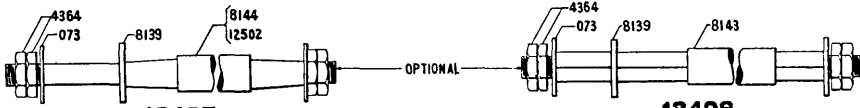
Order by NUMBER and NAME Appearing in Large Type.



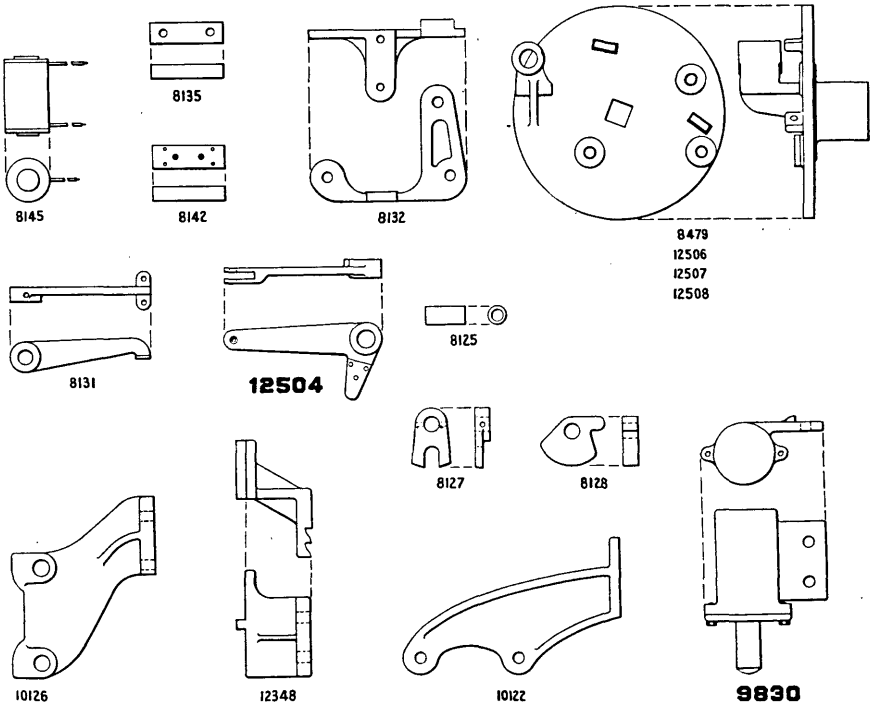
SPINDLE SLOTS.



8120

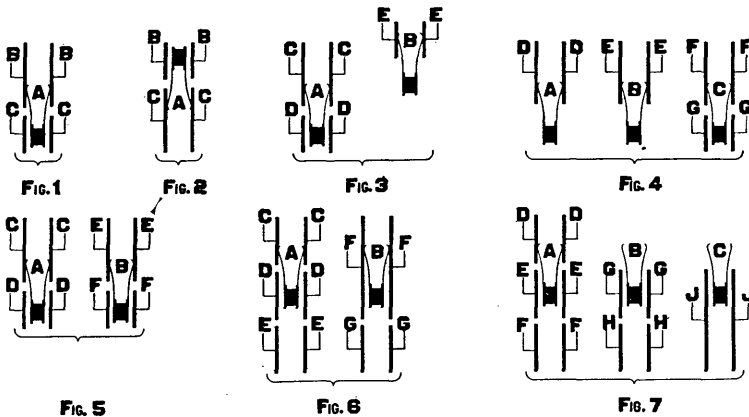


12400



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

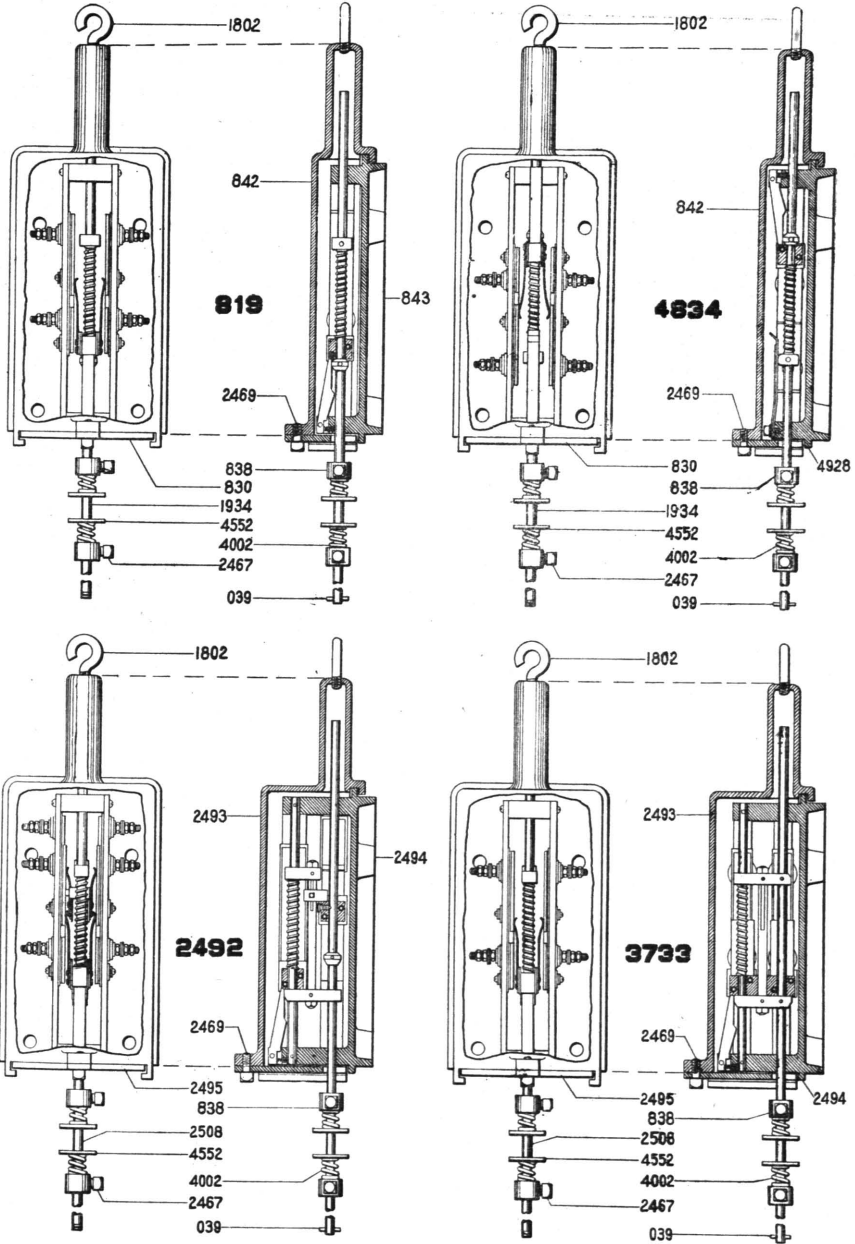
## DIAGRAM OF CIRCUITS.



- FIG. 1** SHOWS THE CONTACTS FOR 2 POSITION CIRCUIT BREAKER No. 819.  
 CIRCUIT **B B** REMAINS CLOSED UNTIL SIGNAL IS CLEAR.  
 CIRCUIT **C C** REMAINS CLOSED UNTIL SIGNAL IS AT DANGER.  
 CONTACT **A** SNAPS FROM DANGER TO CLEAR BUT, NOT FROM CLEAR TO DANGER.
- FIG. 2** SHOWS THE CONTACTS FOR 2 POSITION INVERTED CIRCUIT BREAKER No. 4834.  
 CIRCUIT **C C** REMAINS CLOSED UNTIL SIGNAL IS CLEAR.  
 CIRCUIT **B B** REMAINS CLOSED UNTIL SIGNAL IS AT DANGER.  
 CONTACT **A** SNAPS IN BOTH DIRECTIONS.
- FIG. 3** SHOWS THE CONTACTS FOR 2 POSITION CIRCUIT BREAKER No. 2492.  
 CIRCUIT **C C** REMAINS CLOSED UNTIL SIGNAL IS CLEAR.  
 CIRCUIT **D D** REMAINS CLOSED UNTIL SIGNAL IS AT DANGER.  
 CIRCUIT **E E** OPENS AS SOON AS SIGNAL STARTS TO CLEAR.  
 CONTACT **A** SNAPS FROM CLEAR TO DANGER, BUT NOT FROM DANGER TO CLEAR.  
 CONTACT **B** DOES NOT SNAP
- FIG. 4** SHOWS THE CONTACTS FOR 2 POSITION CIRCUIT BREAKER No. 9355.  
 CIRCUITS **D D, E E, AND F F** REMAIN CLOSED UNTIL SIGNAL IS CLEAR.  
 CIRCUIT **G G** REMAINS CLOSED UNTIL SIGNAL IS AT DANGER.  
 CONTACTS **A, B, AND C** MOVE TOGETHER AND SNAP FROM CLEAR TO DANGER, BUT NOT FROM DANGER TO CLEAR.
- FIG. 5** SHOWS THE CONTACTS FOR 2 POSITION CIRCUIT BREAKER No. 3733.  
 CIRCUITS **C C, AND E E** REMAIN CLOSED UNTIL SIGNAL IS CLEAR.  
 CIRCUITS **D D, AND F F** REMAIN CLOSED UNTIL SIGNAL IS AT DANGER.  
 CONTACTS **A AND B** MOVE TOGETHER AND SNAP FROM CLEAR TO DANGER, BUT NOT FROM DANGER TO CLEAR.
- FIG. 6** SHOWS THE CONTACTS FOR 3 POSITION CIRCUIT BREAKER No. 4742.  
 CIRCUIT **C C** REMAINS CLOSED UNTIL SIGNAL HAS REACHED THE CAUTION POSITION.  
 CIRCUIT **D D** REMAINS CLOSED UNTIL SIGNAL HAS REACHED THE CLEAR POSITION.  
 CIRCUIT **E E** REMAINS CLOSED UNTIL THE SIGNAL HAS RETURNED TO CAUTION.  
 CIRCUIT **D D** REMAINS CLOSED UNTIL THE SIGNAL HAS RETURNED TO DANGER.  
 CIRCUIT **F F** REMAINS CLOSED UNTIL SIGNAL IS CLEAR.  
 CIRCUIT **G G** REMAINS CLOSED UNTIL SIGNAL IS AT CAUTION.  
 CONTACTS **A, AND B** MOVE TOGETHER AND SNAP FROM DANGER TO CAUTION, FROM CAUTION TO CLEAR, FROM CLEAR TO CAUTION, AND CAUTION TO DANGER.
- FIG. 7** SHOWS THE CONTACTS FOR 3 POSITION CIRCUIT BREAKER No. 6547.  
 CIRCUIT **D D** REMAINS CLOSED UNTIL SIGNAL HAS REACHED THE CAUTION POSITION.  
 CIRCUITS **E E AND G G** REMAIN CLOSED UNTIL SIGNAL HAS REACHED THE CLEAR POSITION.  
 CIRCUIT **J J** REMAINS CLOSED FROM CAUTION TO CLEAR AND FROM CLEAR TO CAUTION.  
 CIRCUITS **F F AND H H** REMAIN CLOSED UNTIL SIGNAL HAS RETURNED TO CAUTION.  
 CIRCUITS **E E, G G, AND J J** REMAIN CLOSED UNTIL SIGNAL HAS RETURNED TO DANGER.  
 CONTACTS **A, B, AND C** MOVE TOGETHER AND SNAP FROM DANGER TO CAUTION, FROM CAUTION TO CLEAR, FROM CLEAR TO CAUTION, AND CAUTION TO DANGER.

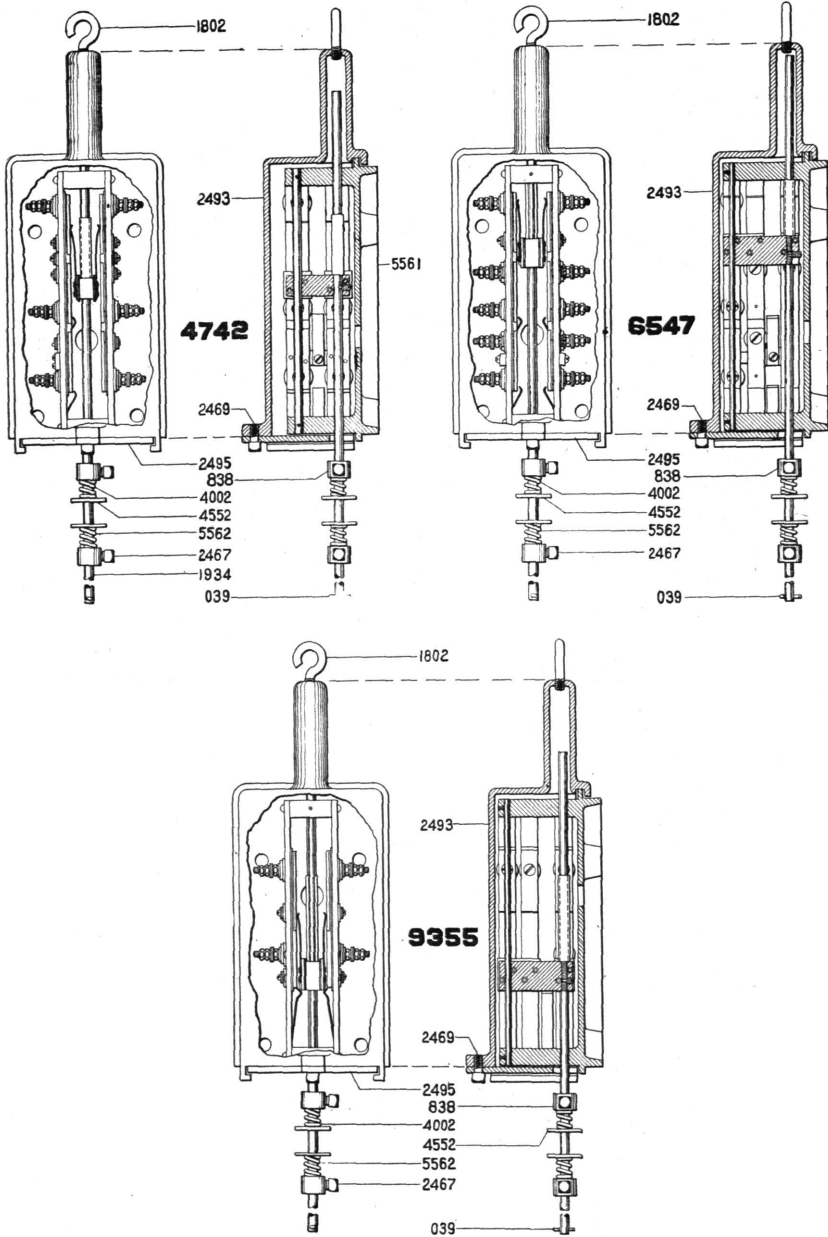
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT BREAKERS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT BREAKERS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## HIGH SIGNALS.

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NOTE:—In selecting Circuit Breakers, see Diagram of Circuits, page 174.

When ordering Circuit Breakers Complete with Fittings and Operating Parts, the following information is necessary:

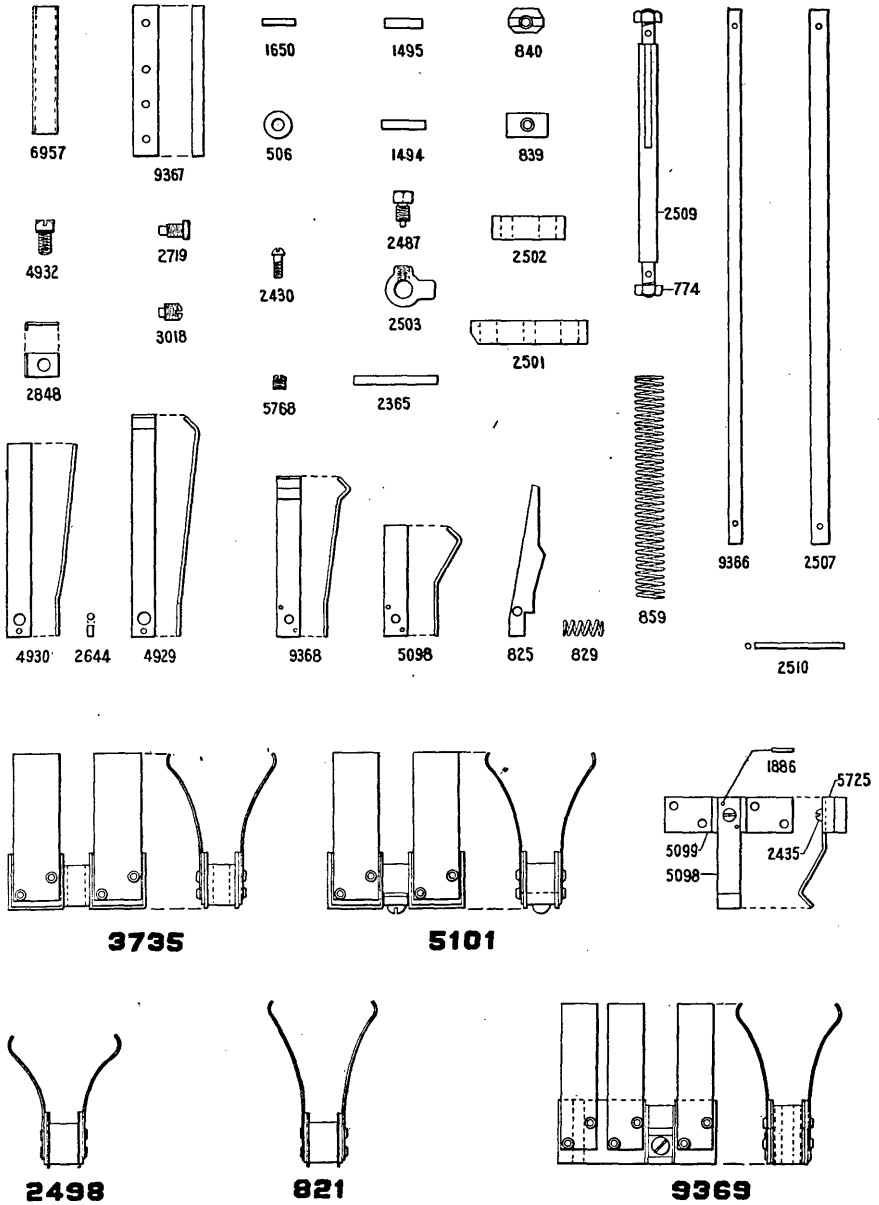
(1) Pole (Wood or Iron) and size of same where Circuit Breaker is to be fastened.

(2) Whether Circuit Breaker is to be operated from Semaphore Operating Rod or direct from Blade Grip.

| Order No. | CIRCUIT BREAKERS.  | List Price. |
|-----------|--|-------------|
| 039       | COTTER PIN, $\frac{1}{8}$ " x $\frac{3}{8}$ " (per 100).....   | .80 .....   |
| 819       | Single Deck <b>CIRCUIT BREAKER</b> Complete as shown .....   | 25.00 ..... |
|           | The above Circuit Breaker Complete with necessary Pole Fittings and<br>Operating Parts for Wood or Iron Pole .....   | 30.00 ..... |
| 830       | <b>BOTTOM CAP</b> for Single Deck Circuit Breakers .....   | .30 .....   |
| 838       | <b>COLLAR</b> for Circuit Breaker Operating Rods.....  | .20 .....   |
| 842       | <b>COVER</b> for Single Deck Circuit Breakers .....  | 4.00 .....  |
| 843       | <b>FRAME</b> Casting for 819 .....   | 4.50 .....  |
| 1802      | <b>HOOK</b> for top of Circuit Breakers .....  | .16 .....   |
| 1934      | <b>ROD</b> for 819 or 4834 .....   | .50 .....   |
| 2467      | <b>SET SCREW</b> , $\frac{3}{8}$ " x $\frac{1}{2}$ ", for various Circuit Breakers.....  | .03 .....   |
| 2469      | <b>CAP SCREW</b> , $\frac{3}{8}$ " x $\frac{3}{4}$ ", for various Circuit Breakers.....  | .04 .....   |
| 2492      | Double Deck <b>CIRCUIT BREAKER</b> Complete, as shown.....   | 35.00 ..... |
|           | The above Circuit Breaker Complete with necessary Pole Fittings and<br>Operating Parts for Wood or Iron Pole.....  | 40.00 ..... |
| 2493      | <b>COVER</b> for 2 or 3-Deck Circuit Breakers .....  | 4.50 .....  |
| 2494      | <b>FRAME</b> Casting for 2492 or 3733 .....  | 5.00 .....  |
| 2495      | <b>BOTTOM PLATE</b> for 2 or 3-Deck Circuit Breakers. ....   | .40 .....   |
| 2508      | <b>ROD</b> for 2492 or 3733.....   | .50 .....   |
| 3733      | Double Deck <b>CIRCUIT BREAKER</b> Complete, as shown.....   | 35.00 ..... |
|           | The above Circuit Breaker Complete with necessary Pole Fittings and<br>Operating Parts for Wood or Iron Pole.....  | 40.00 ..... |
| 4002      | <b>SPRING</b> used for various Circuit Breakers .....  | .20 .....   |
| 4552      | <b>WASHER</b> , Special, for various Circuit Breakers .....  | .02 .....   |
| 4742      | Double Deck, Three Position <b>CIRCUIT BREAKER</b> Complete, as shown<br>The above Circuit Breaker Complete with necessary Pole Fittings and<br>Operating Parts for Wood or Iron Pole..... | 35.00 ..... |
|           |  | 40.00 ..... |
| 4834      | Single Deck Inverted <b>CIRCUIT BREAKER</b> Complete, as shown .....   | 25.00 ..... |
|           | The above Circuit Breaker Complete with necessary Pole Fittings and<br>Operating Parts for Wood or Iron Pole.....  | 30.00 ..... |
| 4928      | <b>FRAME</b> Casting for 4834 .....  | 4.50 .....  |
| 5561      | <b>FRAME</b> Casting for 4742 .....  | 5.00 .....  |
| 5562      | <b>SPRING</b> for Circuit Breakers 4742, etc .....   | .20 .....   |
| 6547      | 3-Deck, 3-Position <b>CIRCUIT BREAKER</b> Complete, as shown .....   | 45.00 ..... |
|           | The above Circuit Breaker Complete with necessary Pole Fittings and<br>Operating Parts for Wood or Iron Pole.....  | 50.00 ..... |
| 9355      | 3-Deck, 2-Position <b>CIRCUIT BREAKER</b> Complete, as shown .....   | 45.00 ..... |
|           | The above Circuit Breaker Complete with necessary Pole Fittings and<br>Operating Parts for Wood or Iron Pole.....  | 50.00 ..... |

# HIGH SIGNALS.

## CIRCUIT BREAKER PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# HIGH SIGNALS.

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| Order No. | CIRCUIT BREAKER PARTS.  | List Price |
|-----------|---|------------|
| 498       | INSULATED WASHER for 9220.....  | .04        |
| 506       | BRASS WASHER for ¼" Screw.....  | .01        |
| 528       | BRASS NUT for ¼" Screw .....  | .02        |
| 648       | FIBRE WASHER for various Circuit Breakers .....                                   | .02        |
| 774       | STEEL NUT for Rod 2509 .....  | .02        |
| 821       | CONTACT SPRING Complete for Circuit Breakers 819 and 2492.....                    | 2.00       |
| 825       | DOG for Circuit Breakers 3733, etc.....   | .50        |
| 829       | DOG SPRING for Circuit Breakers 3733, etc.....                                    | .16        |
| 839       | COLLAR for Circuit Breaker 819.....   | .20        |
| 840       | COLLAR for various Circuit Breakers .....   | .30        |
| 848       | SCREW for 9220 .....  | .14        |
| 859       | OPERATING SPRING for various Circuit Breakers.....                                | .30        |
| 975       | BRASS WASHER for various Circuit Breakers.....                                    | .01        |
| 1494      | PIN, ⅜" dia., fastening Spring Retaining Collar to various Circuit Breakers ..... | .02        |
| 1495      | PIN, ⅜" dia., fastening Dog Trip Collar to various Circuit Breakers ..            | .02        |
| 1650      | ⅜" PIN for various Circuit Breakers.....  | .02        |
| 1833      | MICANITE WASHER for 9220 .....  | .30        |
| 1834      | MICANITE WASHER, ⅜" O. D., for various Circuit Breakers.....                      | .24        |
| 1835      | MICANITE BUSHING for 9220 .....   | .24        |
| 1836      | MICANITE BUSHING, ½" O. D., for various Circuit Breakers .....                    | .20        |
| 1886      | DOWEL PIN fastening 5098 to 5725 .....  | .02        |
| 2365      | HINGE PIN for Trip Dog, for various Circuit Breakers.....                         | .02        |
| 2430      | SCREW for fastening Side Plates to Circuit Breakers.....                          | .01        |
| 2435      | SCREW fastening 5098 to 5099.....   | .01        |
| 2487      | ¼" SET SCREW. Special .....   | .12        |
| 2498      | CONTACT SPRING Complete for Circuit Breaker 2492.....                             | 2.00       |
| 2501      | DOG TRIP BLOCK for various Circuit Breakers .....                                 | .60        |
| 2502      | BLOCK for Circuit Breaker 2492.....   | .40        |
| 2503      | DOG, Special, for Circuit Breaker 2492 .....                                      | .70        |
| 2507      | ⅜" GUIDE ROD for Double-Deck Circuit Breakers .....                               | .20        |
| 2509      | OPERATING ROD for Double-Deck Type 3733, etc.....                                 | .60        |
| 2510      | PIN holding Rod 2507 to Frame .....   | .02        |
| 2573      | SIDE PLATE Complete, 1" wide, for Circuit Breakers 3733, etc.....                 | 4.50       |
| 2574      | SIDE PLATE Complete for Circuit Breaker 2492.....                                 | 2.50       |
| 2644      | DOWEL PIN for fastening Springs 4929, 4930 to 4834.....                           | .02        |
| 2719      | SET SCREW for Lower Spring Block on Circuit Breaker 2492 .....                    | .20        |
| 2848      | LOCK WASHER for ¼" Sq. Hd. Screw .....  | .01        |
| 3018      | SET SCREW, Special for Circuit Breaker 4742 .....                                 | .10        |
| 3735      | CONTACT SPRING Complete for Circuit Breaker 3733.....                             | 3.00       |
| 4900      | SIDE PLATE Complete, 1" wide, for Circuit Breaker 4742 .....                      | 5.80       |
| 4929      | SPECIAL SPRING for Circuit Breaker 4834.....                                      | .60        |
| 4930      | SPECIAL SPRING for Circuit Breaker 4834 .....                                     | .40        |
| 4932      | CAP SCREW, ¼" x ½", Sq. Hd. Special, for Circuit Breaker 4834.....                | .06        |
| 5098      | SNAP SPRING for Circuit Breakers 4742 and 6547.....                               | .40        |
| 5099      | PLATE supporting Spring 5098, for Circuit Breaker 4742 .....                      | .40        |
| 5101      | CONTACT SPRING Complete for Circuit Breaker 4742.....                             | 3.00       |
| 5717      | BRASS SCREW, No 8 x ⅜", R. H., for various Circuit Breakers.....                  | .02        |
| 5725      | WASHER supporting Spring for Circuit Breaker 4742.....                            | .20        |
| 5768      | SET SCREW, ¼" x ⅜", Headless.....   | .03        |
| 6161      | SIDE PLATE Complete, 1" wide, for Circuit Breaker 4742 .....                      | 5.00       |
| 6957      | STOP TUBE for Circuit Breakers 4742 or 6547.....                                  | .20        |
| 9220      | BINDING POST Complete, for Side Plates on various Circuit Breakers ..             | .80        |
| 9361      | SIDE PLATE Complete, ¾" wide, for Circuit Breaker 6547.....                       | 5.00       |

Order by NUMBER and NAME Appearing in Large Type.

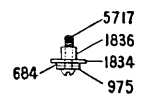
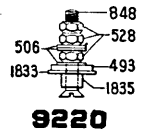
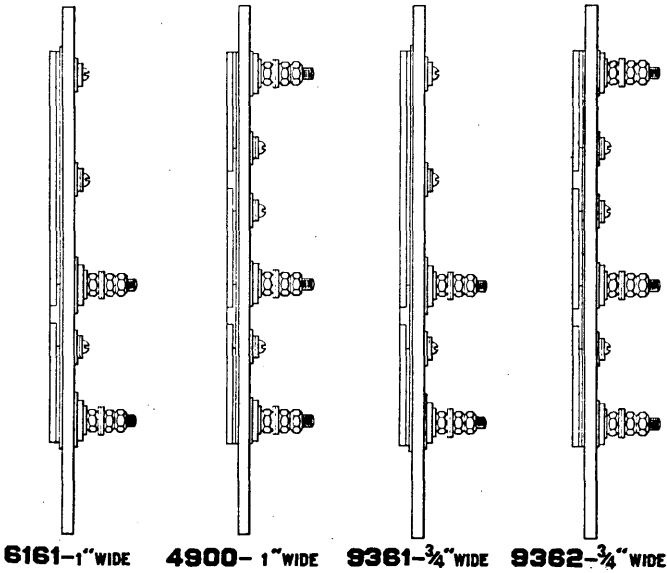
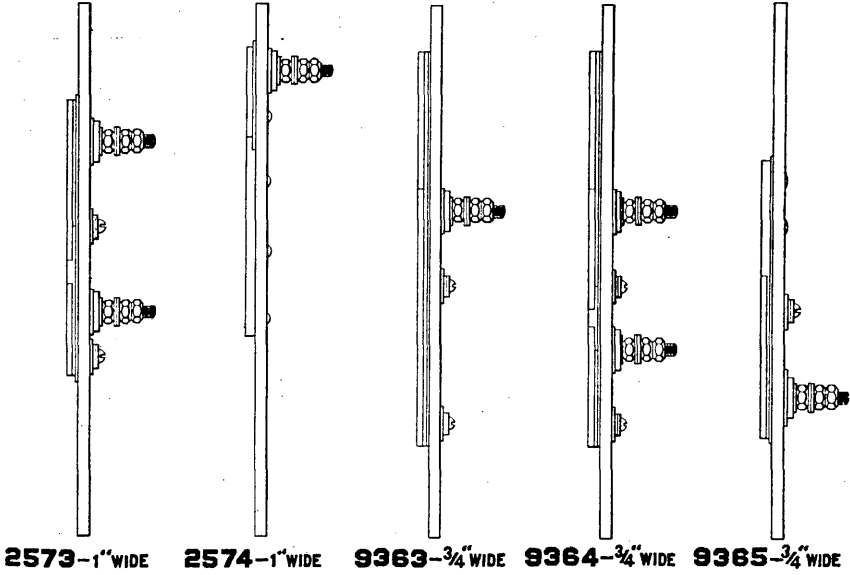
## HIGH SIGNALS:

| Order No. | CIRCUIT BREAKER PARTS —CONT.   | List Price. |
|-----------|--|-------------|
| 9362      | SIDE PLATE Complete, $\frac{3}{4}$ " wide, for Circuit Breaker 6547..... | 5.80.....   |
| 9363      | SIDE PLATE Complete, $\frac{3}{4}$ " wide, for Circuit Breaker 6547..... | 3.50.....   |
| 9364      | SIDE PLATE Complete, $\frac{3}{4}$ " wide, for Circuit Breaker 9355..... | 5.00.....   |
| 9365      | SIDE PLATE Complete, $\frac{3}{4}$ " wide, for Circuit Breaker 9355..... | 3.00.....   |
| 9366      | GUIDE ROD, $\frac{1}{4}$ " dia, for Three-Deck Circuit Breakers.....     | .20.....    |
| 9367      | PLATE supporting Springs for Three-Deck Circuit Breakers.....            | .50.....    |
| 9368      | SNAP SPRING for Circuit Breaker 9355.....                                | .50.....    |
| 9369      | CONTACT SPRING Complete for Three-Deck Circuit Breakers.....             | 4.00.....   |

Order by NUMBER and NAME Appearing in Large Type.

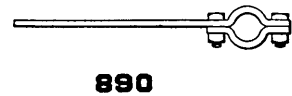
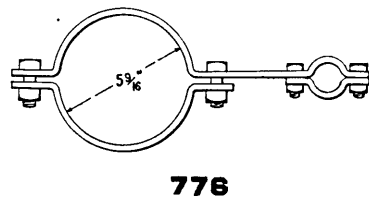
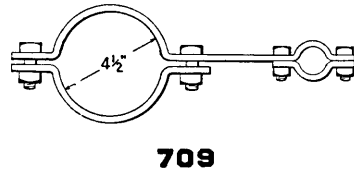
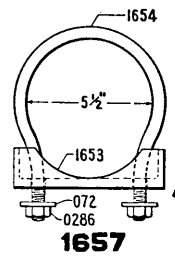
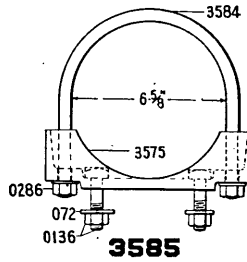
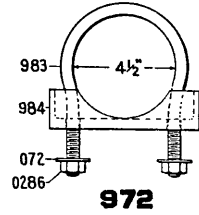
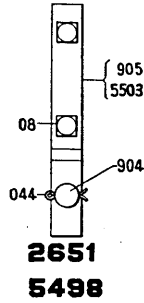
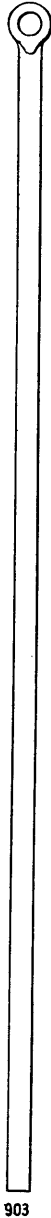
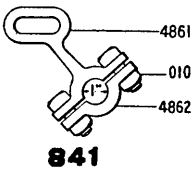
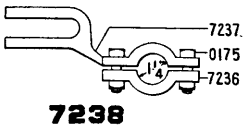
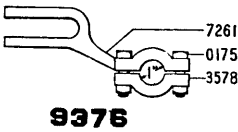
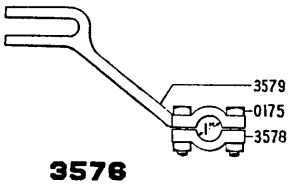
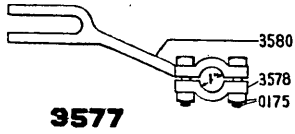


CIRCUIT BREAKER PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT BREAKER OPERATING RODS AND GUIDES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# HIGH SIGNALS.

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Order  
No.

## CIRCUIT BREAKER OPERATING RODS AND GUIDES.

List Price.

|  |      |  |
|--|------|--|
| 08 BOLT with Nut, $\frac{3}{8}$ " x 2"   | .03  |  |
| 010 BOLT with Nut, $\frac{1}{2}$ " x $1\frac{1}{2}$ ", for 841   | .04  |  |
| 044 COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)  | .80  |  |
| 072 IRON WASHER for $\frac{1}{2}$ " Bolt   | .01  |  |
| 0136 BOLT with Nut, $\frac{1}{2}$ " x $2\frac{1}{2}$ ", for 3585   | .04  |  |
| 0175 BOLT with Nut, $\frac{3}{8}$ " x $1\frac{1}{2}$ "   | .03  |  |
| 0286 NUT for Clamps, 972, etc.   | .02  |  |
| 709 GUIDE Complete, for operating Rod 903, for $4\frac{1}{2}$ " O. D. Pole   | 1.30 |  |
| 776 GUIDE Complete, for Operating Rod 903, for $5\frac{1}{2}$ " O. D. Pole   | 1.34 |  |
| 841 CLAMP Complete. Used for connecting Rod 903 to operate Circuit Breakers.   | .70  |  |
| 890 GUIDE Complete, for Operating Rod 903, for Wood Pole   | .28  |  |
| 903 Circuit Breaker Operating ROD, with 1" Eye   | 2.50 |  |
| 904 STUD for 2651  | .12  |  |
| 905 BRACKET for 2651   | .60  |  |
| 972 CLAMP Complete for holding Circuit Breaker to $4\frac{1}{2}$ " O. D. Pole  | .90  |  |
| 983 U BOLT for 972   | .40  |  |
| 984 CLAMP for 972  | .40  |  |
| 1653 CLAMP for 1657  | .40  |  |
| 1654 U BOLT for 1657   | .40  |  |
| 1657 CLAMP Complete for holding Circuit Breaker to $5\frac{1}{2}$ " O. D. Pole   | .90  |  |
| 2651 BRACKET Complete. Used for fastening to Signal Arm for operating Circuit Breaker  | .80  |  |
| 3575 CLAMP for 3585  | .60  |  |
| 3576 CLAMP Complete, for operating Circuit Breaker from outside Semaphore Operating Rod on Two-Arm Pole                        | .80  |  |
| 3577 CLAMP Complete, for Operating Circuit Breaker from Semaphore Operating Rod on One-Arm Pole, or inside rod on Two-Arm Pole | .80  |  |
| 3578 CAP, for Clamp 3576, 3577 or 9376   | .20  |  |
| 3579 FORK Casting for Clamp 3576   | .50  |  |
| 3580 FORK Casting for Clamp 3577   | .50  |  |
| 3584 U BOLT for 3585   | .40  |  |
| 3585 CLAMP Complete, for holding Circuit Breaker to $6\frac{1}{8}$ " O. D. Pole  | 1.20 |  |
| 4861 CLAMP for 841   | .50  |  |
| 4862 CAP for 841   | .20  |  |
| 7204 BRACKET for 7213  | .70  |  |
| 7213 BRACKET Complete, Special. Used for fastening to Signal Arm, for operating Circuit Breaker                                | .90  |  |
| 7214 STUD for 7213   | .12  |  |
| 7236 CAP for 7238  | .20  |  |
| 7237 FORK Casting for 7238   | .50  |  |
| 7238 CLAMP Complete, Special, for operating Circuit Breaker from 1" Pipe Operating Rod   | .80  |  |
| 7261 FORK Casting for 9376   | .50  |  |
| 9376 CLAMP Complete, for operating Circuit Breaker from inside Operating Rod. Special  | .80  |  |

Order by NUMBER and NAME Appearing in Large Type.

HIGH SIGNALS.

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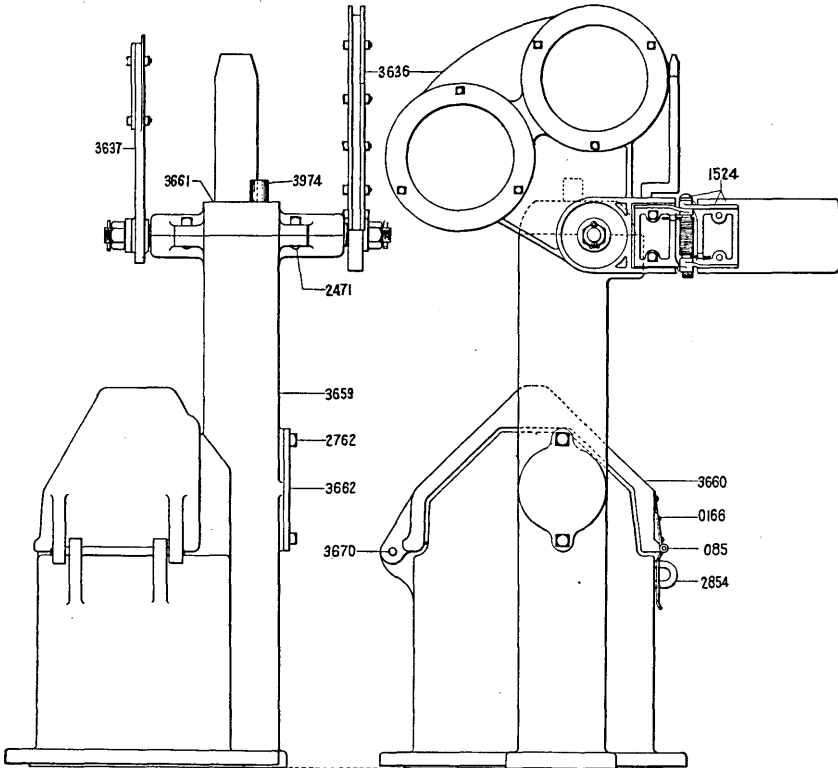
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DWARF SIGNALS.

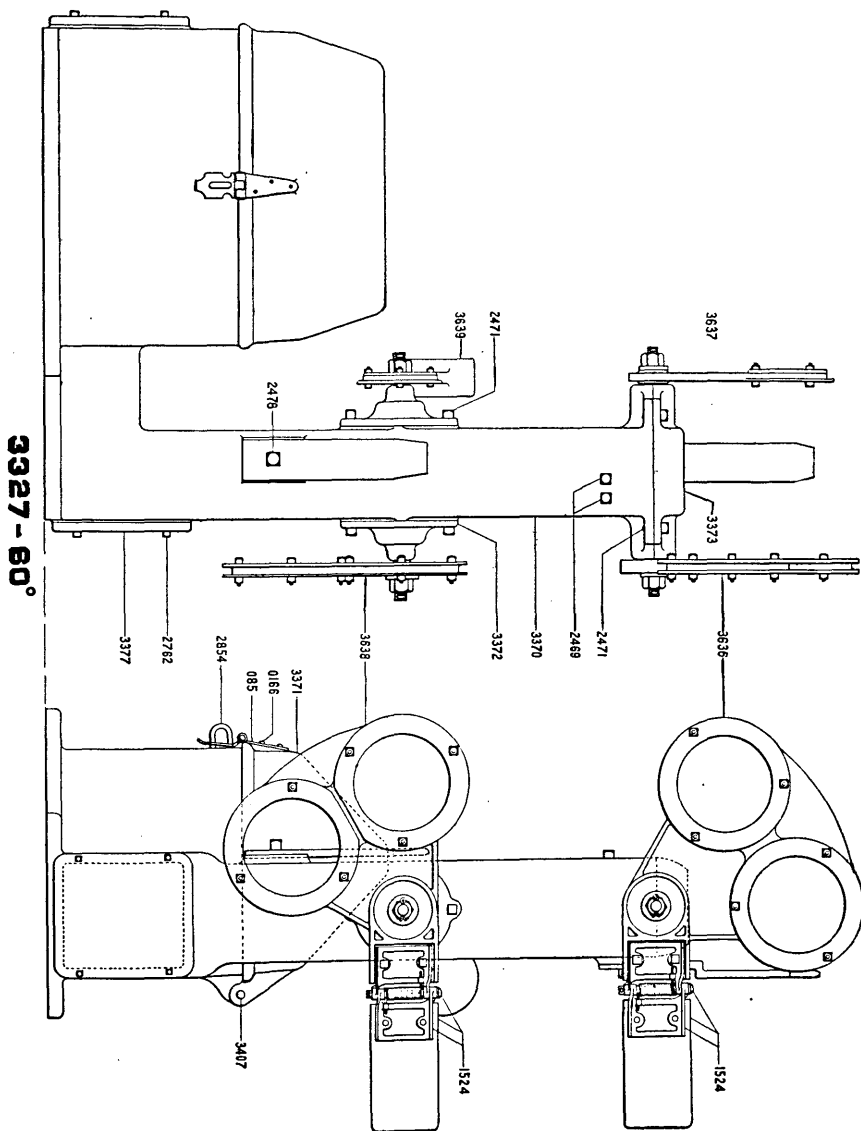
MODEL 2, SINGLE AND DOUBLE ARM 60 AND 90 DEGREE DWARF SIGNALS.



- 3658-60°**
- 3673-90°**
- 6459-90°** WITH WATER TIGHT BASE.
- 6545-60°** " " " " " "

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

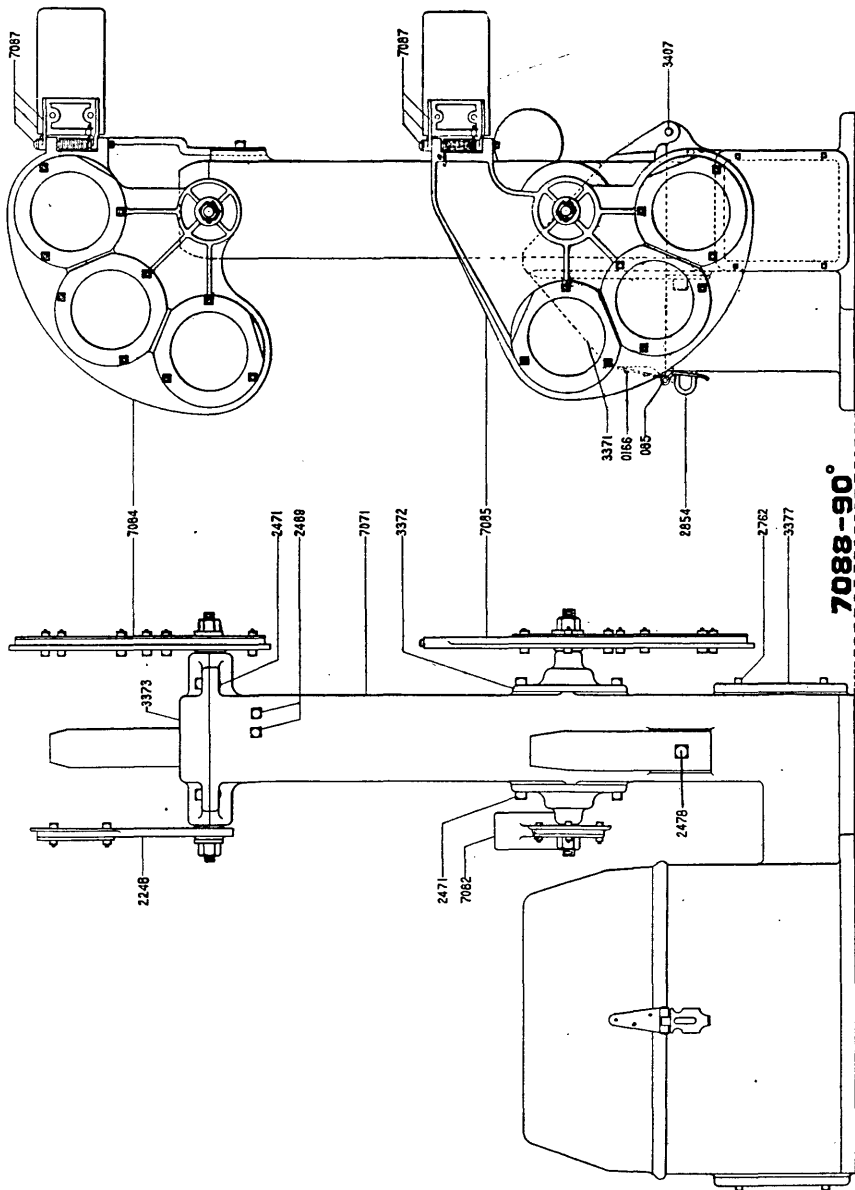
MODEL 2, SINGLE AND DOUBLE ARM 60 AND 90 DEGREE DWARF SIGNALS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## DWARF SIGNALS.

MODEL 2, SINGLE AND DOUBLE ARM 60 AND 90 DEGREE DWARF SIGNALS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



## DWARF SIGNALS.

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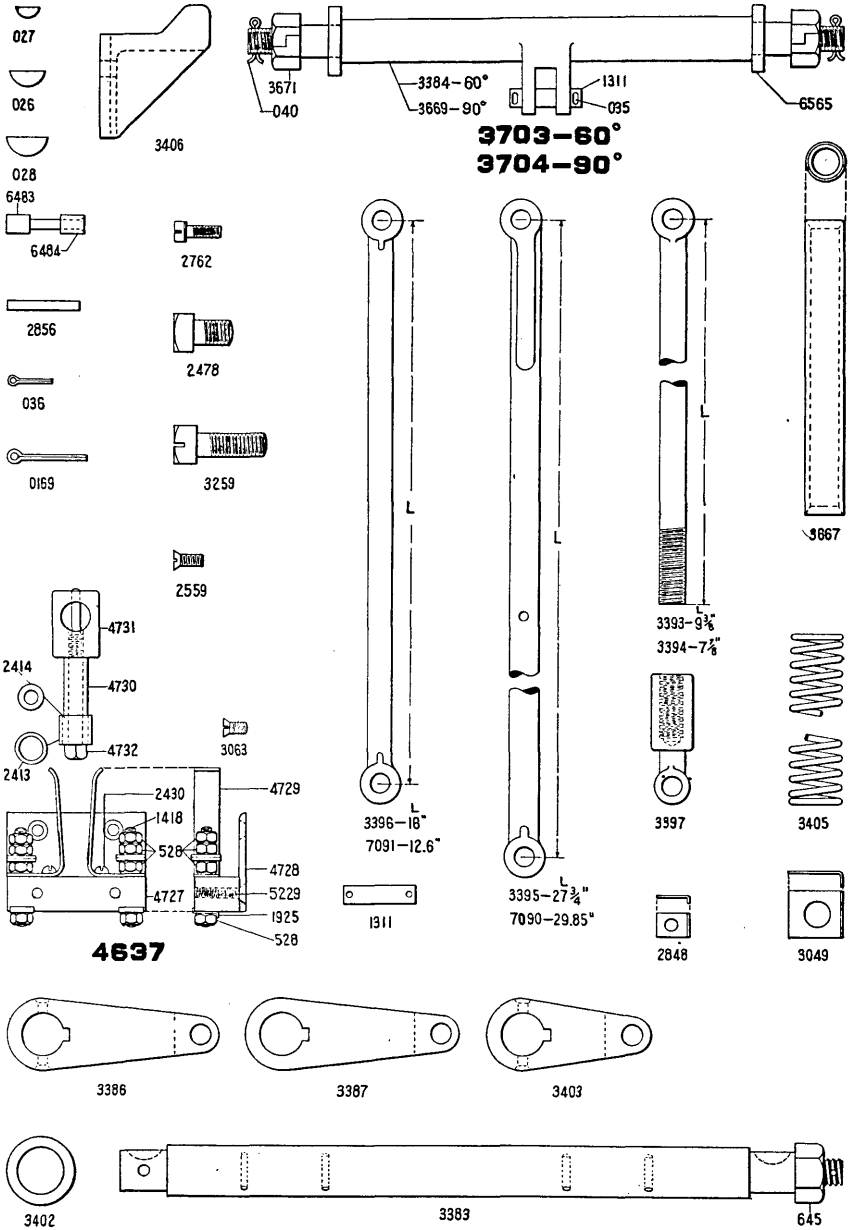
NOTE:—Lamps, Glass, Roundels and Lenses are not included with Complete Signal, and should be ordered separately if desired. For Lamps, see page 212; for Glass, Roundels or Lenses, see page 210. Spectacles furnished with Signals as specified, see pages 200 to 205.

| Order No. | MODEL 2, SINGLE AND DOUBLE ARM DWARF SIGNALS.   | List Price. |
|-----------|---|-------------|
| 085       | HASP for Single and Double Arm Dwarf Signals.....   | .10         |
| 0166      | RIVET for fastening Hasp to Cover.....  | .01         |
| 1524      | BLADE, Wood, with Hinge Complete.....   | 1.50        |
| 2248      | SPECTACLE, Back Light Complete, 7 $\frac{1}{4}$ " Centers (2 $\frac{3}{8}$ " Glass). For 90 Degree Dwarf Signals.....                                   | .64         |
| 2469      | CAP SCREW, $\frac{3}{8}$ " x $\frac{3}{4}$ ", holding Bracket 3406 to Post.....   | .04         |
| 2471      | CAP SCREW, $\frac{3}{8}$ " x 1", holding Cap to Post.....   | .04         |
| 2478      | CAP SCREW, $\frac{1}{2}$ x $\frac{3}{4}$ ", holding Lamp Bracket to Post.....   | .05         |
| 2762      | CAP SCREW, $\frac{1}{4}$ " x $\frac{3}{4}$ ", holding Hand Hole Caps to Post.....   | .06         |
| 2854      | STAPLE used in connection with Hasp 085.....  | .08         |
| 3327      | DWARF SIGNAL Complete, Two-Arm, 60 Degree Throw.....  | 280.00      |
| 3370      | POST for 60 Degree, Two-Arm Signal 3327.....  | 54.00       |
| 3371      | COVER for Two-Arm Signal 3327 or 7088. If Hasp 085 is required, order separately.....   | 5.00        |
| 3372      | BEARING, Lower Spectacle for 3327 or 7088.....  | 2.00        |
| 3373      | CAP for 3327 or 7088.....   | 1.50        |
| 3377      | CAP, Hand Hole, for 3327 or 7088.....   | 1.20        |
| 3407      | PIN, Cover to Post for 3327 or 7088.....  | .20         |
| 3636      | SPECTACLE Complete, Front, Two-Light, 7 $\frac{1}{8}$ " Centers, 60 Degree Throw (5 $\frac{3}{8}$ " Glass). For Back Light see 3637.....                | 2.00        |
| 3637      | SPECTACLE Complete, Back, 7 $\frac{1}{8}$ " Centers, (2 $\frac{7}{8}$ " Glass). For Front Light see 3636.....   | .64         |
| 3638      | SPECTACLE Complete, Lower Front, Two-Light, 6 $\frac{1}{2}$ " Centers, 60 Degree Throw, for 3327 (5 $\frac{3}{8}$ " Glass). For Back Light see 3639..   | 2.00        |
| 3639      | SPECTACLE Complete, Lower Back, 6 $\frac{1}{2}$ " Centers (2 $\frac{7}{8}$ " Glass), for 3327. For Front Light see 3638.....                            | 1.00        |
| 3658      | DWARF SIGNAL Complete, One-Arm, 60 Degree Throw.....  | 150.00      |
| 3659      | POST, Casting only, for 3658, etc.....  | 40.00       |
| 3660      | COVER for Post 3659, etc. If Hasp 085 is required, order separately   | 4.00        |
| 3661      | CAP for Post 3659.....  | 1.50        |
| 3662      | CAP, Hand Hole, for Post 3659, for 3658, etc.....   | .80         |
| 3670      | PIN, Cover to Post, for 3658, etc.....  | .20         |
| 3673      | DWARF SIGNAL Complete, One-Arm, 90 Degree Throw.....  | 160.00      |
| 3974      | INSULATED PLUG, for Lighting Wires to Lamp, for 3658, etc.....  | .40         |
| 6459      | DWARF SIGNAL Complete with Water Tight Base, One-Arm, 90 Degree Throw.....  | 170.00      |
| 6545      | DWARF SIGNAL Complete with Water Tight Base, One-Arm, 60 Degree Throw.....  | 160.00      |
| 7071      | POST, Casting only, for 7088.....   | 58.00       |
| 7082      | SPECTACLE Complete, Lower Back, 6 $\frac{1}{2}$ " Centers, for 7088 (2 $\frac{7}{8}$ " Glass). For Front Light see 7085.....                            | 1.00        |
| 7084      | SPECTACLE Complete, Front, Three-Light, 7 $\frac{1}{8}$ " Centers, 90 Degree Throw, for 7088 (4 $\frac{1}{2}$ " Glass). For Back Light see 2248.....    | 3.00        |
| 7085      | SPECTACLE Complete, Lower Front, Three-Light, 6 $\frac{1}{2}$ " Centers, 90 Degree Throw, for 7088 (4 $\frac{1}{2}$ " Glass). For Back Light see 7082.. | 3.00        |
| 7087      | BLADE, Wood, with Hinge Complete. Used in connection with Spectacles 7084 and 7085.....   | 1.10        |
| 7088      | DWARF SIGNAL Complete, Two-Arm, 90 Degree Throw.....  | 320.00      |

Order by NUMBER and NAME Appearing in Large Type.

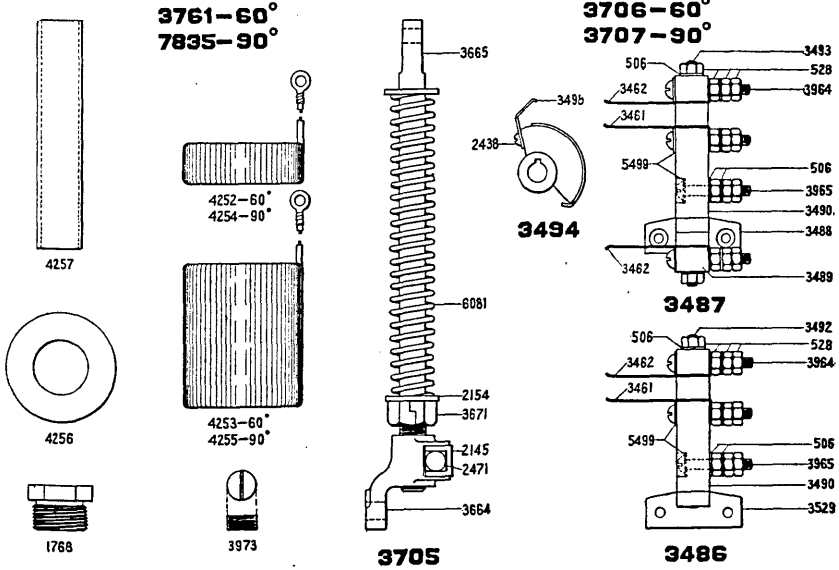
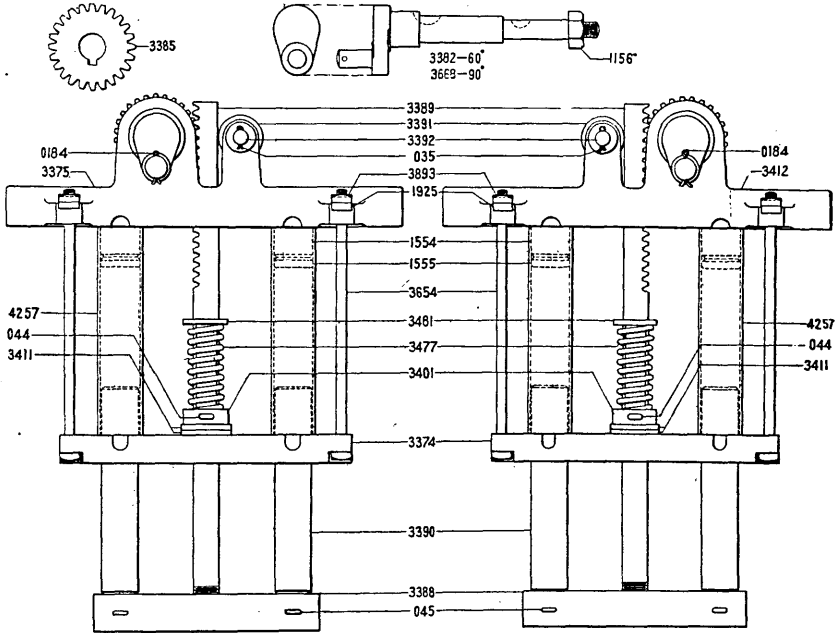
# DWARF SIGNALS.

## MODEL 2, SINGLE AND DOUBLE ARM DETAIL PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

MODEL 2, SINGLE AND DOUBLE ARM DETAIL PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

| Order No. | MODEL 2, SINGLE AND DOUBLE ARM DETAIL PARTS.                                   | List Price. |
|-----------|--|-------------|
| 026       | KEY, Circular, for Gear to Crank Shaft.....                                    | .07         |
| 027       | KEY, Circular, for holding Commutator 3494 to Crank.....                       | .06         |
| 028       | KEY, Circular, for holding Cranks 3386, etc., to Shaft 3383.....               | .08         |
| 035       | COTTER PIN, $\frac{3}{32}$ " x $\frac{3}{8}$ ", for 3706, etc. (per 100).....  | .80         |
| 036       | COTTER PIN, $\frac{3}{32}$ " x $\frac{3}{8}$ " (per 100).....                  | .80         |
| 040       | COTTER PIN, $\frac{1}{4}$ " x 1" (per 100).....                                | .80         |
| 044       | COTTER PIN, $\frac{3}{16}$ " x 1 $\frac{1}{2}$ " (per 100).....                | .80         |
| 045       | COTTER PIN, $\frac{3}{16}$ " x 1 $\frac{1}{2}$ " (per 100).....                | .80         |
| 0169      | COTTER PIN, $\frac{1}{8}$ " x 1 $\frac{1}{2}$ " (per 100).....                 | .80         |
| 0184      | COTTER PIN, $\frac{3}{32}$ " x $\frac{1}{2}$ " (per 100).....                  | .80         |
| 506       | WASHER for $\frac{1}{4}$ " Brass Screw.....                                    | .01         |
| 528       | NUT, $\frac{1}{4}$ "-24, Brass.....  | .02         |
| 645       | NUT for Shaft 3383.....  | .04         |
| 1156      | NUT for Cranks 3382 and 3668.....  | .02         |
| 1311      | PIN for Crank Shafts and Cranks 3703, etc.....                                 | .10         |
| 1418      | STUD for 4637.....   | .08         |
| 1554      | CORE, Upper, for 3706, etc.....  | .80         |
| 1555      | CAP, Copper, for Core 1554.....  | .10         |
| 1768      | BUSHING, Fibre, for Inlet Wires on Water-Tight Dwarf Signals.....              | .30         |
| 1925      | WASHER, Lock, $\frac{1}{4}$ ", for 3706, etc.....                              | .01         |
| 2145      | WASHER, Lock, for 3705.....  | .01         |
| 2154      | WASHER for 3705.....   | .02         |
| 2413      | BRASS CONTACT, for 4637.....   | .30         |
| 2414      | INSULATED BUSHING, for 4637.....   | .50         |
| 2430      | SCREW, No. 8 x $\frac{1}{2}$ ", for 4637.....                                  | .01         |
| 2438      | SCREW, No. 10 x $\frac{1}{2}$ ", for 3494 Commutator.....                      | .02         |
| 2471      | SCREW, $\frac{3}{8}$ " x 1", for 3705.....                                     | .04         |
| 2478      | SCREW, Cap, $\frac{1}{2}$ " x $\frac{3}{4}$ ".....                             | .05         |
| 2559      | SCREW for fastening 3487 to Yoke 3706, etc.....                                | .02         |
| 2762      | SCREW, $\frac{1}{4}$ " x $\frac{3}{4}$ ", for fastening 3486 to 3706, etc..... | .06         |
| 2848      | WASHER, Lock, for Screw 2762 and fastening 3486 to Yokes.....                  | .01         |
| 2856      | PIN, fastening Cranks 3386 or 3403 to Shaft 3383.....                          | .04         |
| 3049      | WASHER, Lock, for Screw 3259, fastening Yoke to Post.....                      | .02         |
| 3063      | SCREW, $\frac{1}{4}$ " x $\frac{1}{2}$ ", for fastening 4637 to 3706, etc..... | .01         |
| 3259      | SCREW, $\frac{1}{2}$ " x 2", fastening Yokes 3706, etc., to Post.....          | .06         |
| 3374      | CAP, Bottom, for 3706, etc.....  | 6.00        |
| 3375      | YOKE, Upper, for 3761 or 7835.....   | 8.00        |
| 3382      | CRANK, Shaft, 60 Degree, for 3706 or 3761.....                                 | 10.00       |
| 3383      | SHAFT, Rocker, for Two-Arm Dwarf Signals.....                                  | 2.00        |
| 3384      | CRANK, Shaft, 60 Degree, for 3703.....   | 9.00        |
| 3385      | GEAR for 3706, etc.....  | 1.50        |
| 3386      | CRANK, Rocker Shaft, for 60 Degree Two-Arm Dwarf Signals.....                  | 4.00        |
| 3387      | CRANK on operating end of Rocker Shaft for 60 Degree Two-Arm Dwarf Signal..... | 4.00        |
| 3388      | YOKE, Bottom, for 3706, etc.....   | 3.00        |
| 3389      | GEAR RACK, for 3706, etc.....  | 5.00        |
| 3390      | CORE, Bottom, for 3706, etc.....   | 2.00        |
| 3391      | ROLLER for 3706, etc.....  | .24         |
| 3392      | SHAFT for 3706, etc.....   | .10         |
| 3393      | ROD, connecting to Lower Arm Rocker Shaft for Two-Arm Dwarf Signal.....        | 1.80        |
| 3394      | ROD, connecting to Upper Arm Rocker Shaft for Two-Arm Dwarf Signal.....        | 2.60        |
| 3395      | ROD for operating Upper Arm on 60 Degree Two-Arm Dwarf Signal.....             | 3.20        |
| 3396      | ROD for operating Lower Arm on 60 Degree Two-Arm Dwarf Signal.....             | 3.20        |

Order by NUMBER and NAME Appearing in Large Type.

## DWARF SIGNALS.

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| Order No. | MODEL 2, SINGLE AND DOUBLE ARM DETAIL PARTS.—CONT.   | List Price. |
|-----------|--|-------------|
| 3397      | EYE, Adjusting, for Rods 3393 or 3394. ....  | 1.30        |
| 3401      | COLLAR for 3706, etc. ....   | .40         |
| 3402      | WASHER for Rocker Shaft 3383. ....   | .02         |
| 3403      | CRANK, Rocker Shaft, for 90 Degree, Two-Arm Dwarf Signal. ....   | 4.00        |
| 3405      | SPRING, Arm Returning, for operating Rod 3395. ....  | .40         |
| 3406      | BRACKET, Stop, for operating Rod Springs on Two-Arm Dwarf Signals. ....                                | .50         |
| 3411      | WASHER, Leather, for 3706, etc. ....   | .06         |
| 3412      | YOKE, Upper, for 3706 and 3707. ....   | 8.00        |
| 3461      | SPRING Contact, for 3486 or 3487. ....   | .30         |
| 3462      | SPRING Contact, for 3486 or 3487. ....   | .30         |
| 3477      | SPRING for 3706, etc. ....   | .20         |
| 3481      | WASHER for 3706, etc. ....   | .10         |
| 3486      | BLOCK, Terminal, Complete, for Single and Double Arm Dwarf Signals. ....                               | 5.00        |
| 3487      | BLOCK, Terminal, Complete. (Used only when reversed contact is required)....                           | 6.00        |
| 3488      | BRACKET for 3487. ....   | 1.50        |
| 3489      | BLOCK, Lower, for 3487. ....   | .40         |
| 3490      | BLOCK, Terminal, for 3486 or 3487. ....  | .80         |
| 3492      | STUD for 3486. ....  | .20         |
| 3493      | STUD for 3487. ....  | .20         |
| 3494      | COMMUTATOR Complete, for Single and Double Arm Dwarf Signals. ....                                     | 6.00        |
| 3498      | CONTACT, Indication, for 3494. ....  | .50         |
| 3529      | BRACKET for 3486. ....   | 1.50        |
| 3654      | BOLT for 3706, etc. ....   | .10         |
| 3664      | EYE, Adjusting, for 3705. ....   | 2.80        |
| 3665      | ROD, Operating, for 3705. ....   | 1.20        |
| 3667      | PIPE, Guide or Lighting Wires for Single Arm Dwarf Signals. ....                                       | .80         |
| 3668      | CRANK SHAFT, 90 Degree, for 3707 or 7835. ....   | 10.00       |
| 3669      | CRANK SHAFT, 90 Degree, for 3704. ....   | 9.00        |
| 3671      | NUT, Elastic, for 3703, etc. ....  | .04         |
| 3703      | CRANK SHAFT Complete, 60 Degree, for Single or Double Arm Dwarf Signals. ....                          | 9.00        |
| 3704      | CRANK SHAFT Complete, 90 Degree, for Single or Double Arm Dwarf Signals. ....                          | 9.00        |
| 3705      | ROD, Operating, Complete, for Single Arm Dwarf Signals. ....   | 5.00        |
| 3706      | FRAME, Solenoid, Complete, 60 Degree, for Single Arm Dwarf and Lower Arm of Two-Arm Dwarf Signal. .... | 44.00       |
| 3707      | FRAME, Solenoid, Complete, 90 Degree, for Single Arm Dwarf and Lower Arm of Two-Arm Dwarf Signal. .... | 44.00       |
| 3761      | FRAME, Solenoid, Complete, for Upper Arm of 60 Degree Two-Arm Dwarf Signal. ....                       | 44.00       |
| 3893      | NUT for Bolt 3654. ....  | .06         |
| 3964      | SCREW, $\frac{1}{4}$ " x 2", Brass (Special) for 3486 or 3487. ....                                    | .10         |
| 3965      | SCREW, $\frac{1}{4}$ " x $1\frac{1}{4}$ ", Brass, (Special) for 3486 or 3487. ....                     | .12         |
| 3973      | PLUG for Single Arm Dwarf Signal Cap when no Lighting Wires are required. ....                         | .40         |
| 4252      | RETAINING COIL (Single Coil), for 60 Degree Dwarf Signals. ....  | 4.00        |
| 4253      | OPERATING COIL (Single Coil), for 60 Degree Dwarf Signals. ....  | 9.00        |
| 4254      | RETAINING COIL (Single Coil), for 90 Degree Dwarf Signals. ....  | 6.00        |
| 4255      | OPERATING COIL (Single Coil), for 90 Degree Dwarf Signals. ....  | 12.00       |
| 4256      | WASHER, Felt, for protecting Coils 4252, etc. ....   | .04         |
| 4257      | TUBE, Spacing, for 3706, etc. ....   | .30         |
| 4637      | CIRCUIT BREAKER Complete (Special). Used on Single Arm Dwarf Signals. ....                             | 14.00       |
| 4727      | BLOCK for 4637. ....   | 2.50        |

## DWARF SIGNALS.

| Order No. | MODEL 2, SINGLE AND DOUBLE ARM DETAIL PARTS.—CONT.                             | List Price. |
|-----------|--|-------------|
| 4728      | PLATE for 4637.....  | 2.00 .....  |
| 4729      | SPRING for 4637 .....  | 3.00 .....  |
| 4730      | SLEEVE for 4637.....   | 1.00 .....  |
| 4731      | COLLAR for 4637 .....  | 1.50 .....  |
| 4732      | SCREW for 4637 .....   | 2.00 .....  |
| 5229      | SCREW, $\frac{1}{4}$ " x $1\frac{1}{4}$ ", for 4637.....                       | .06 .....   |
| 5499      | WASHER for 3486 or 3487 .....  | .02 .....   |
| 6081      | SPRING for 3705.....   | .80 .....   |
| 6483      | PIN for Retaining Spring on Operating Rod.....                                 | .12 .....   |
| 6484      | COLLAR for Pin 6483.....   | .10 .....   |
| 6565      | WASHER for 3703 or 3704.....   | .08 .....   |
| 7090      | ROD for operating upper arm on 90 Degree Two-Arm Dwarf Signal..                | 3.20 .....  |
| 7091      | ROD for operating lower arm on 90 Degree Two-Arm Dwarf Signal..                | 2.60 .....  |
| 7835      | FRAME, Solenoid Complete, for Upper Arm of 90 Degree Two-Arm Dwarf Signal..... | 44.00 ..... |

Order by NUMBER and NAME Appearing in Large Type.

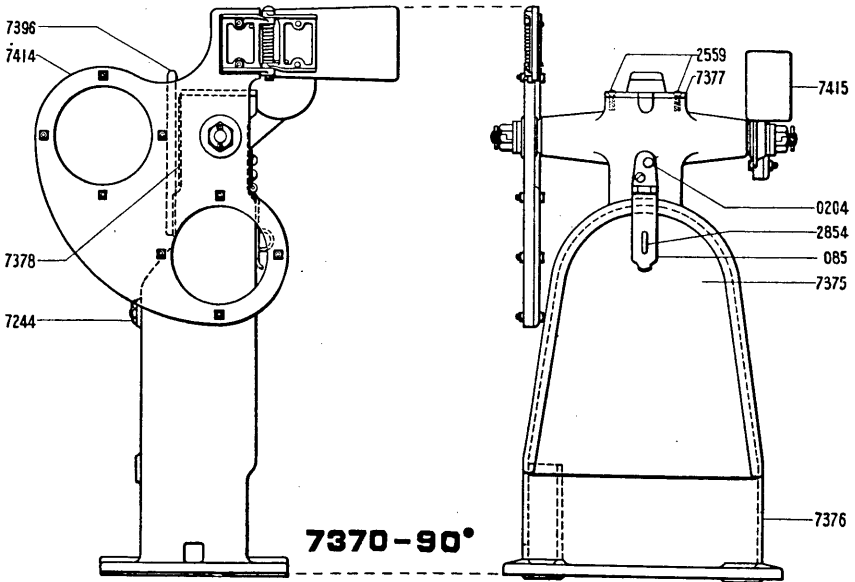
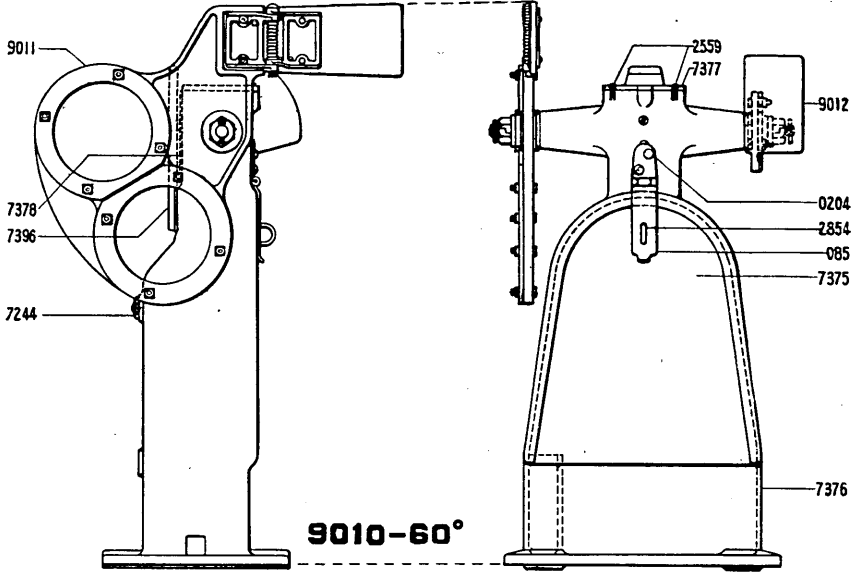
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DWARF SIGNALS.

MODEL 3, DWARF SIGNAL AND DETAIL PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



## DWARF SIGNALS.

197

| Order No. | MODEL 3, DWARF SIGNAL AND DETAIL PARTS.   | List Price. |
|-----------|---|-------------|
| 034       | COTTER PIN, $\frac{3}{32}$ " x $\frac{1}{16}$ " (per 100).....  | .80         |
| 035       | COTTER PIN, $\frac{3}{32}$ " x $\frac{3}{32}$ " (per 100).....  | .80         |
| 036       | COTTER PIN, $\frac{3}{32}$ " x $\frac{1}{4}$ " (per 100).....   | .80         |
| 040       | COTTER PIN, $\frac{1}{8}$ " x $\frac{1}{16}$ " (per 100).....   | .80         |
| 045       | COTTER PIN, $\frac{3}{16}$ " x $\frac{1}{4}$ " (per 100).....   | .80         |
| 085       | HASP for 7370 or 9010.....  | .10         |
| 0204      | RIVET, fastening Hinge to Post, for 7370 or 9010.....   | .01         |
| 0348      | HEADLESS SET SCREW, $\frac{1}{4}$ " x $\frac{3}{4}$ ", fastening 7398 or 9018 to Shaft....  | .03         |
| 0402      | CIRCULAR KEY, Crank to Shaft.....   | .10         |
| 528       | BRASS NUT, $\frac{1}{4}$ "-24.....  | .02         |
| 1225      | WASHER for Binding Post.....  | .01         |
| 1554      | UPPER CORE for 12449 or 12450.....  | .80         |
| 1555      | COPPER CAP for Core 1554.....   | .10         |
| 1925      | $\frac{1}{4}$ " LOCK WASHER.....  | .01         |
| 2173      | SCREW for holding Solenoid Caps 7384 to Post.....   | .03         |
| 2559      | SCREW holding Cover to Post 7376.....   | .02         |
| 2577      | RESTORING SPRING.....   | .40         |
| 2854      | STAPLE for Door 7375.....   | .08         |
| 3390      | LOWER CORE for 12449 or 12450.....  | 2.00        |
| 3654      | BOLT, Cap to Frame.....   | .10         |
| 3671      | ELASTIC NUT for 9078 or 9079.....   | .04         |
| 3893      | NUT for Bolt 3654.....  | .06         |
| 4252      | RETAINING COIL (Single Coil), for 60 Degree Dwarf Signals.....  | 4.00        |
| 4253      | OPERATING COIL (Single Coil), for 60 Degree Dwarf Signals.....  | 9.00        |
| 4254      | RETAINING COIL (Single Coil), for 90 Degree Dwarf Signals.....  | 6.00        |
| 4255      | OPERATING COIL (Single Coil), for 90 Degree Dwarf Signals.....  | 12.00       |
| 4256      | FELT WASHER for protecting Coils 4252, etc.....   | .02         |
| 4257      | SPACING TUBE between 7374 and 7384.....   | .30         |
| 4851      | SCREW, fastening Lamp Bracket to Post.....  | .03         |
| 6565      | WASHER for 9078 or 9079.....  | .08         |
| 6704      | INSULATING WASHER for Binding Posts and Contact Studs.....  | .24         |
| 7244      | NUT, $\frac{1}{4}$ ", Special, for 7370 or 9010.....  | .10         |
| 7370      | DWARF SIGNAL Complete, One-Arm, 90 Degree Throw, with Spectacles as specified. For Spectacles see pages 200 to 204. Lamp, Glass or Roundels are not included..... | 170.00      |
| 7371      | INSULATOR for Contact Springs.....  | .50         |
| 7372      | INSULATING BUSHING for Binding Posts.....   | .50         |
| 7374      | CIRCUIT BREAKER FRAME.....  | 10.00       |
| 7375      | DOOR for 7370 or 9010.....  | 2.00        |
| 7376      | POST, Casting, for 7370 or 9010.....  | 44.00       |
| 7377      | COVER for Post 7376.....  | 1.40        |
| 7378      | CAP for Post 7376.....  | 1.00        |
| 7379      | CONTACT SPRING (long).....  | .24         |
| 7381      | CONNECTING LINK.....  | .20         |
| 7382      | Indication Contact ARM.....   | .10         |
| 7383      | Control Contact ARM.....  | 2.00        |
| 7384      | SOLENOID CAP.....   | 7.00        |
| 7385      | SOLENOID YOKE.....  | 3.00        |
| 7386      | PIN SHAFT for Arm 7383.....   | .10         |
| 7388      | ROLLER PIN for operating Jaw.....   | .06         |
| 7390      | STUD for Front Contacts.....  | .24         |
| 7391      | INSULATING BUSHING.....   | .30         |
| 7392      | PIN for holding Contacts to Control Arm 7383.....   | .10         |
| 7395      | Thin BRASS NUT, $\frac{1}{4}$ "-24.....   | .03         |
| 7396      | LAMP BRACKET for 7370 or 9010.....  | .40         |
| 7397      | 90 Degree SHAFT for 9079.....   | 2.50        |

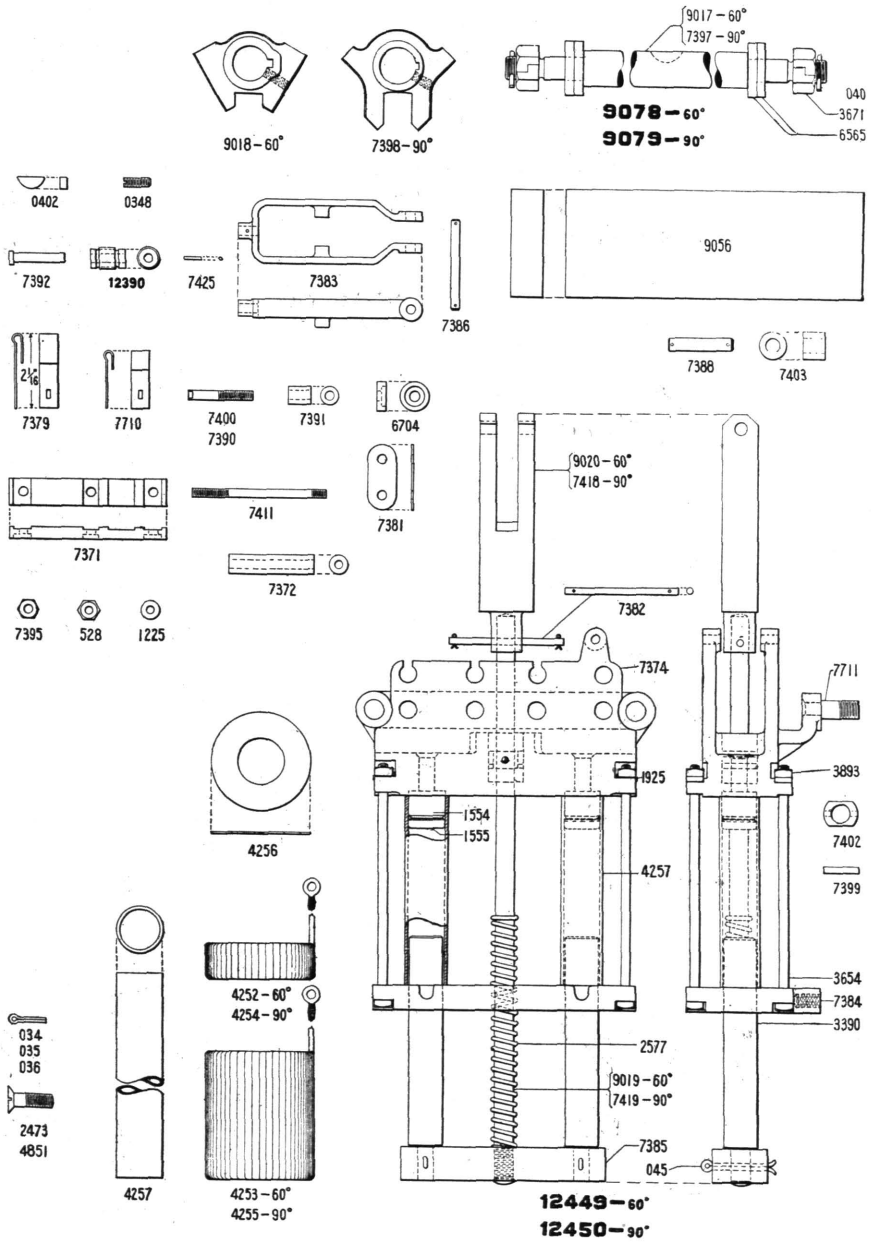
Order by NUMBER and NAME Appearing in Large Type.

## DWARF SIGNALS.

| Order No. | MODEL 3, DWARF SIGNAL AND DETAIL PARTS.—CONT.   | List Price.  |
|-----------|---|--------------|
| 7398      | CRANK for 90 Degree Dwarf Signal.....   | 5.00 .....   |
| 7399      | PIN holding 7402 to 7419 or 9019 .....  | .06 .....    |
| 7400      | STUD for Back Contacts.....   | .24 .....    |
| 7402      | OPERATING COLLAR.....   | .40 .....    |
| 7403      | ROLLER for operating Jaw.....   | .20 .....    |
| 7411      | STUD for Binding Posts.....   | .20 .....    |
| 7414      | FRONT SPECTACLE Complete, Two-Light, 6" Centers, 90 Degree<br>Throw, Glass 5 $\frac{3}{8}$ ". For Back Light see 7415.....  | 2.50 .....   |
| 7415      | BACK SPECTACLE Complete, 6" Centers, Glass 2 $\frac{1}{2}$ ". For Front Light<br>see 7414.....  | 1.00 .....   |
| 7418      | 90 Degree OPERATING JAW .....   | 5.00 .....   |
| 7419      | 90 Degree OPERATING ROD.....  | 1.00 .....   |
| 7425      | PIN, 7392 to 7383.....  | .02 .....    |
| 7710      | CONTACT SPRING (short).....   | .20 .....    |
| 7711      | STUD for holding Circuit Breaker Frame to Post .....  | .20 .....    |
| 9010      | DWARF SIGNAL Complete, One-Arm, 60 Degree Throw, with Spec-<br>tacles as specified. For Spectacles see pages 200 to 204. Lamp,<br>Glass or Roundels are not included..... | 160.00 ..... |
| 9011      | SPECTACLE Complete, Front, Two-Light, 6" Centers, 60 Degree<br>Throw, Glass 5 $\frac{3}{8}$ ". For Back Light see 9012.....   | 2.50 .....   |
| 9012      | BACK SPECTACLE Complete, 6" Centers, Glass 2 $\frac{1}{2}$ ". For Front<br>Light see 9011.....  | 1.00 .....   |
| 9017      | 60 Degree SHAFT for 9078.....   | 2.50 .....   |
| 9018      | CRANK for 60 Degree Dwarf Signal.....   | 5.00 .....   |
| 9019      | 60 Degree OPERATING ROD.....  | 1.00 .....   |
| 9020      | 60 Degree OPERATING JAW .....   | 5.00 .....   |
| 9056      | FILLER BLOCK for 60 Degree Dwarf Signals .....  | .30 .....    |
| 9078      | SHAFT Complete for 60 Degree Dwarf Signals.....   | 3.00 .....   |
| 9079      | SHAFT Complete for 90 Degree Dwarf Signals.....   | 3.00 .....   |
| 12390     | CONTACT COLLAR for Indication Arm 7382 .....  | 1.00 .....   |
| 12449     | SOLENOID FRAME Complete, as shown, for 60 Degree Dwarf Signal .....   | .....        |
| 12450     | SOLENOID FRAME Complete, as shown, for 90 Degree Dwarf Signal .....   | .....        |

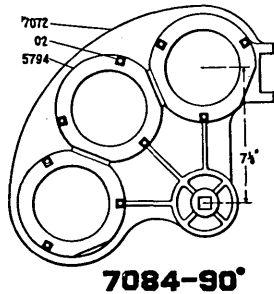
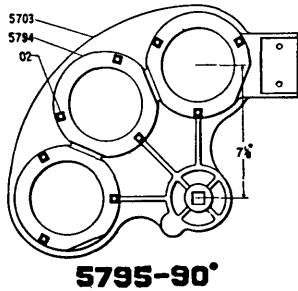
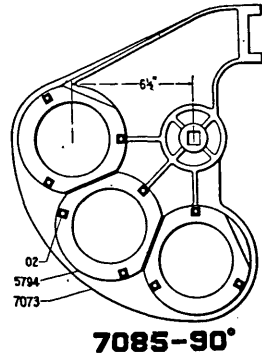
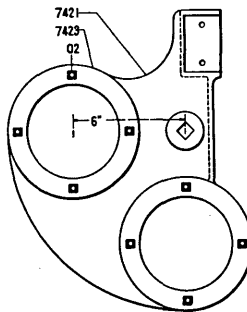
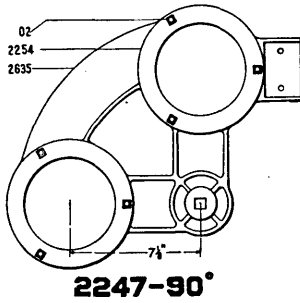
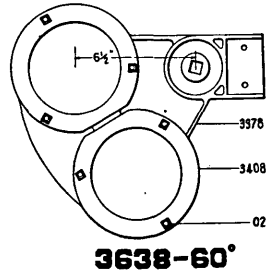
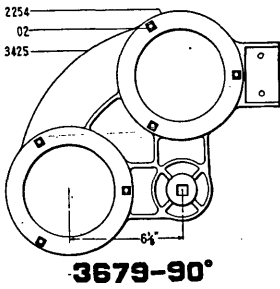
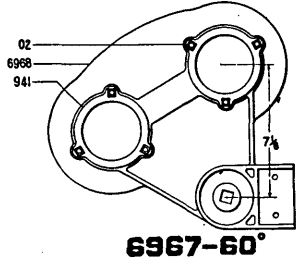
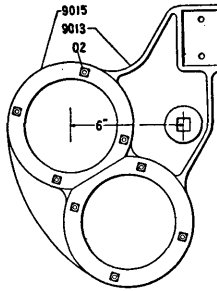
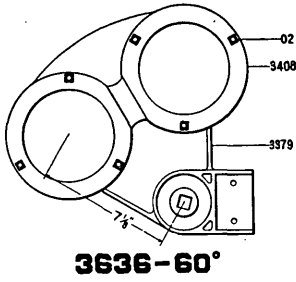
Order by NUMBER and NAME Appearing in Large Type.

MODEL 3, DWARF SIGNAL AND DETAIL PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

FRONT SPECTACLES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DWARF SIGNALS.

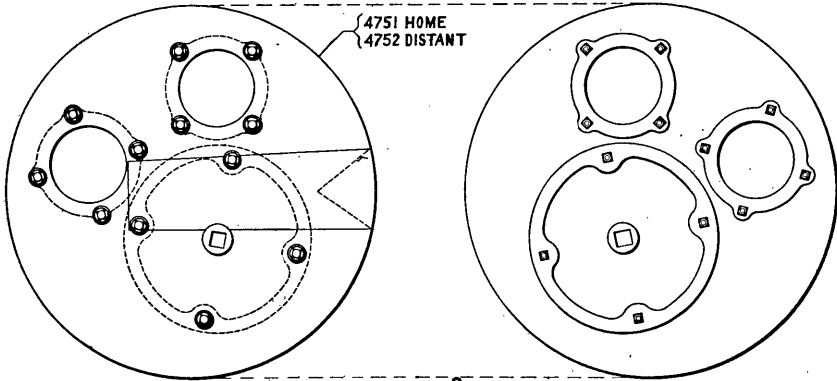
| Order No. | FRONT SPECTACLES.  | List Price. |
|-----------|--|-------------|
| 02        | BOLT and Nut, $\frac{1}{4}$ " x 1", fastening Bezel Rings to Front Spectacles..  | .02 .....   |
| 941       | BEZEL RING for 6967.....   | .10 .....   |
| 2247      | FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass $5\frac{3}{8}$ ", not included)<br>For Back Spectacle 2248.....      | 2.00 .....  |
| 2254      | BEZEL RING for 2247 or 3679.....   | .16 .....   |
| 2635      | SPECTACLE, Casting only, for 2247.....   | 1.60 .....  |
| 3378      | SPECTACLE, Casting only, for 3638.....   | 1.60 .....  |
| 3379      | SPECTACLE, Casting only, for 3636.....   | 1.60 .....  |
| 3408      | BEZEL RING for 3636 or 3638 (Sheet Metal).....   | .20 .....   |
| 3425      | SPECTACLE, Casting only, for 3679.....   | 1.50 .....  |
| 3636      | FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass, $5\frac{3}{8}$ ", not included)<br>For Back Spectacle 3637.....     | 2.00 .....  |
| 3638      | FRONT SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass $5\frac{3}{8}$ ", not included).<br>For Back Spectacle 3639.....     | 2.00 .....  |
| 3679      | FRONT SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass $5\frac{3}{8}$ ", not included)<br>For Back Spectacle see 3680.....  | 1.80 .....  |
| 5703      | SPECTACLE, Casting only, for 5795.....   | 2.40 .....  |
| 5794      | BEZEL RING for 5795.....   | .16 .....   |
| 5795      | FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass $4\frac{1}{2}$ ", not included)<br>For Back Spectacle see 2248.....  | 3.00 .....  |
| 6967      | FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass $3\frac{1}{2}$ ", not included).<br>For Back Spectacle 3637.....     | 1.80 .....  |
| 6968      | SPECTACLE, Casting only, for 6967.....   | 1.60 .....  |
| 7072      | SPECTACLE, Casting only, for 7084.....   | 2.40 .....  |
| 7073      | SPECTACLE, Casting only, for 7085.....   | 2.40 .....  |
| 7084      | FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass $4\frac{1}{2}$ ", not included)<br>For Back Spectacle see 2248.....  | 3.00 .....  |
| 7085      | FRONT SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass $4\frac{1}{2}$ ", not included).<br>For Back Spectacle see 7082..... | 3.00 .....  |
| 7414      | FRONT SPECTACLE Complete, 6" Centers (Glass $5\frac{3}{8}$ ", not included).<br>For Back Spectacle see 7415.....               | 2.50 .....  |
| 7421      | SPECTACLE, Casting only, for 7414.....   | 2.00 .....  |
| 7423      | BEZEL RING for 7414.....   | .16 .....   |
| 9011      | FRONT SPECTACLE Complete, 6" Centers (Glass $5\frac{3}{8}$ ", not included)<br>For Back Spectacle see 9012.....                | 2.50 .....  |
| 9013      | SPECTACLE, Casting only, for 9011.....   | 2.00 .....  |
| 9015      | BEZEL RING for 9011 (Sheet Metal).....   | .20 .....   |

NOTE.—Spectacles as enumerated above are made of malleable iron.

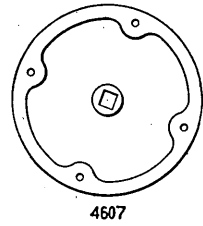
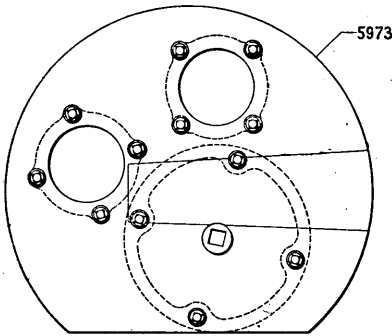
Order by NUMBER and NAME Appearing in Large Type.

# DWARF SIGNALS.

## DWARF SIGNAL DISCS.



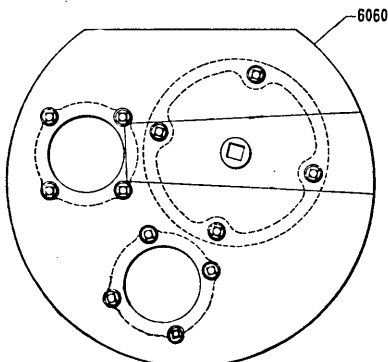
**4605-60° HOME**  
**5453-60° DISTANT**



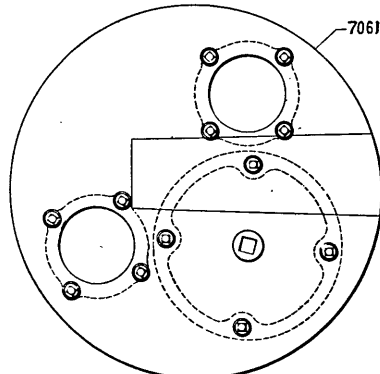
⊙ 069    ⊙ 4553

□ 02-1/4 x 1"  
 0232-1/4 x 7/8"

**5914**



**5915-60°**



**7062-90°**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## DWARF SIGNALS.

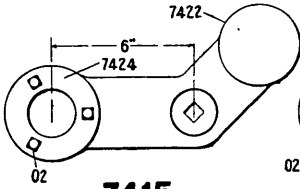
203

| Order<br>No. | DWARF SIGNAL DISCS.   | List Price. |
|--------------|---|-------------|
| 02           | BOLT and Nut, $\frac{1}{4}$ " x 1", fastening Bezel Rings to Front Discs.....   | .02 .....   |
| 069          | WASHER for $\frac{1}{4}$ " Bolt.....  | .01 .....   |
| 0232         | BOLT with Nut, $\frac{1}{4}$ " x $\frac{7}{8}$ ".....   | .02 .....   |
| 4553         | LEATHER WASHER for $\frac{1}{4}$ " Bolt. Used with Enameled Front Discs.  | .01 .....   |
| 4605         | ENAMELED FRONT DISC Complete, $6\frac{1}{2}$ " Centers, for Home Signal<br>(Glass $3\frac{1}{2}$ ", not included).....                                | 7.00 .....  |
| 4606         | BEZEL RING for Enameled Front Discs .....   | .40 .....   |
| 4607         | HUB for Enameled Front Discs .....  | 1.00 .....  |
| 4751         | ENAMELED DISC only, for 4605.....   | 5.00 .....  |
| 4752         | ENAMELED DISC only, for 5453.....   | 5.00 .....  |
| 5453         | ENAMELED FRONT DISC Complete, $6\frac{1}{2}$ " Centers, for Distant Signal.<br>(Glass $3\frac{1}{2}$ ", not included).....                            | 7.00 .....  |
| 5914         | UPPER ENAMELED FRONT DISC Complete, $6\frac{1}{2}$ " Centers. (Glass $3\frac{1}{2}$ ",<br>not included). For 60 Degree Two-Arm Dwarf Signal 3327..... | 8.00 .....  |
| 5915         | LOWER ENAMELED FRONT DISC Complete, $6\frac{1}{2}$ " Centers. (Glass<br>$3\frac{1}{2}$ ", not included). For 60 Degree Two-Arm Dwarf Signal 3327..... | 8.00 .....  |
| 5973         | DISC only, for 5914 .....   | 6.00 .....  |
| 6060         | DISC only, for 5915 .....   | 6.00 .....  |
| 7061         | DISC only, for 7062 .....   | 5.00 .....  |
| 7062         | ENAMELED FRONT DISC Complete, $6\frac{1}{2}$ " Centers. (Glass $3\frac{1}{2}$ ", not<br>included). For 90 Degree Dwarf Signals .....                  | 7.00 .....  |

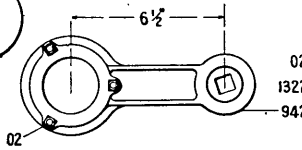
Order by NUMBER and NAME Appearing in Large Type.

DWARF SIGNALS.

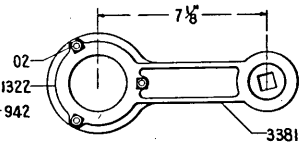
BACK SPECS, BLADES AND LAMP BRACKETS.



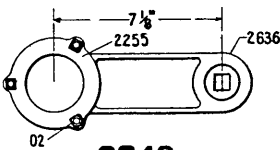
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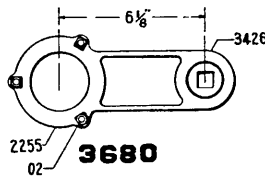
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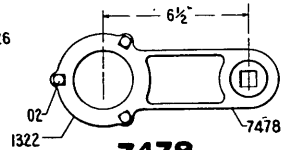
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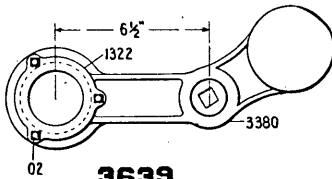
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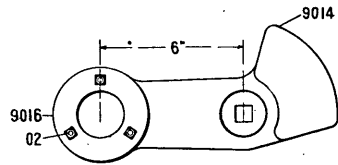
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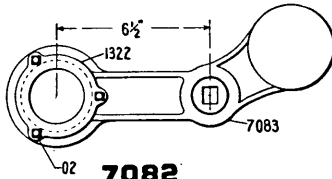
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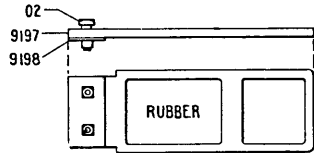
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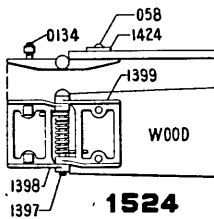
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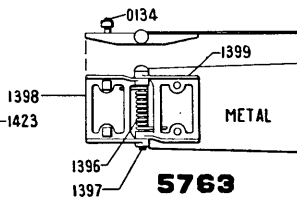
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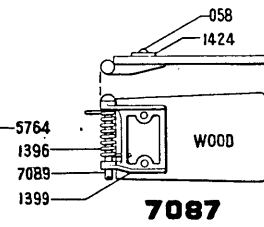
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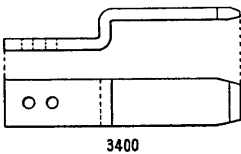
**1524**



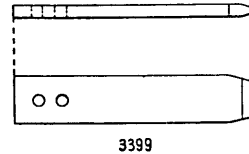
**5763**



**7087**



**3400**



**3399**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



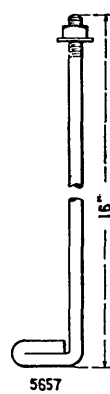
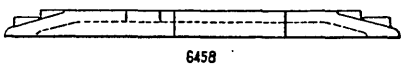
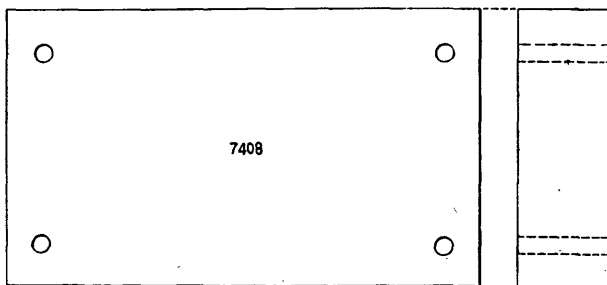
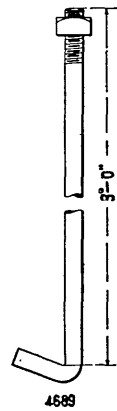
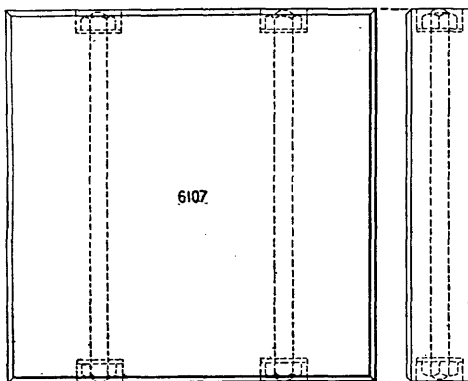
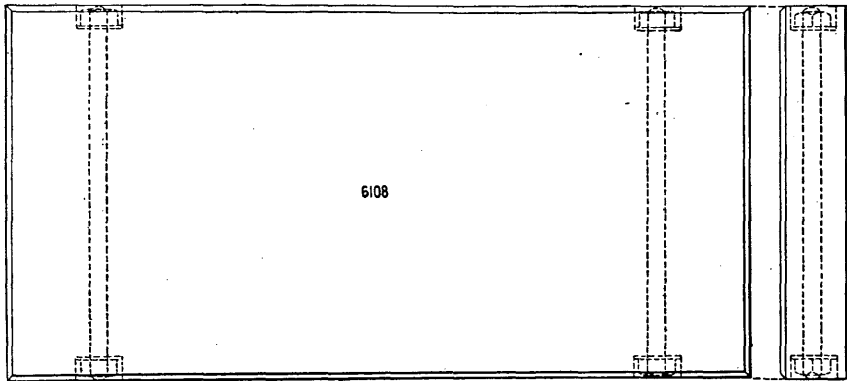
DWARF SIGNALS.

| Order No. | BACK SPECS, BLADES AND LAMP BRACKETS.   | List Price.  |
|-----------|---|--------------|
| 02        | BOLT and Nut, $\frac{1}{4}$ " x 1", for fastening Bezel Rings to Back Specs. . . .  | .02 . . . .  |
| 058       | RIVET, $\frac{3}{16}$ " x $\frac{3}{4}$ ", for 1524, etc. . . . .   | .01 . . . .  |
| 0134      | BOLT with Nut, $\frac{1}{4}$ " x $\frac{3}{4}$ ", for fastening Hinged Blades to Front Spectacles. . . . .  | .02 . . . .  |
| 942       | SPECTACLE, Casting only, for 1688. . . . .  | .54 . . . .  |
| 1322      | BEZEL RING, for 1688, etc. . . . .  | .10 . . . .  |
| 1396      | SPRING for Hinged Blades 1524, etc. . . . .   | .16 . . . .  |
| 1397      | PIN for Hinged Blades 1524, etc. . . . .  | .06 . . . .  |
| 1398      | STATIONARY HINGE for 1524 or 5763. . . . .  | .40 . . . .  |
| 1399      | SWINGING HINGE for 1524, etc. . . . .   | .40 . . . .  |
| 1423      | WOOD BLADE for 1524 or 7087. . . . .  | .30 . . . .  |
| 1424      | BACK PLATE for 1524. . . . .  | .10 . . . .  |
| 1524      | WOOD BLADE with Hinge Complete. . . . .   | 1.50 . . . . |
| 1688      | BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3" dia., not included). For use with Enameled Front Disc 4605, etc. . . . .                | .64 . . . .  |
| 2248      | BACK SPECTACLE Complete, $7\frac{1}{2}$ " Centers (Glass 3", not included) For Front Spectacle 2247 and 5795. . . . .                               | .64 . . . .  |
| 2255      | BEZEL RING for Back Spectacles 2248 or 3680 . . . . .   | .10 . . . .  |
| 2636      | SPECTACLE, Casting only, for 2248 . . . . .   | .54 . . . .  |
| 3380      | SPECTACLE, Casting only, for 3639. . . . .  | .90 . . . .  |
| 3381      | SPECTACLE, Casting only, for 3637 . . . . .   | .50 . . . .  |
| 3399      | LAMP BRACKET, Plain Style. When ordering specify style of Lamp, Front Spectacle, and number of Dwarf Signal for which Bracket is intended . . . . . | .36 . . . .  |
| 3400      | LAMP BRACKET, Offset Style. When ordering specify style of Lamp, Front Spectacle and number of Dwarf Signal for which Bracket is intended. . . . .  | .50 . . . .  |
| 3426      | SPECTACLE, Casting only, for 3680. . . . .  | .54 . . . .  |
| 3637      | BACK SPECTACLE Complete, $7\frac{1}{2}$ " Centers (Glass 3", not included) For Front Spectacle 3636. . . . .  | .64 . . . .  |
| 3639      | BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3", not included) For Front Spectacle 3638 . . . . .                                       | 1.00 . . . . |
| 3680      | BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3", not included). For Front Spectacle 3679 . . . . .                                      | .64 . . . .  |
| 5763      | METAL BLADE with Hinge Complete. . . . .  | 1.50 . . . . |
| 5764      | METAL BLADE for 5763. . . . .   | .50 . . . .  |
| 7082      | BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3", not included). For Front Spectacle 7085 . . . . .                                      | 1.00 . . . . |
| 7083      | SPECTACLE, Casting only, for 7082. . . . .  | .90 . . . .  |
| 7087      | WOOD HINGE BLADE Complete. For use with Front Spectacle 7084 or 7085. . . . .   | 1.10 . . . . |
| 7089      | PIN for 7087. . . . .   | .06 . . . .  |
| 7415      | BACK SPECTACLE Complete, 6" Centers (Glass $2\frac{1}{2}$ ", not included). For Front Spectacle 7414. . . . .                                       | 1.00 . . . . |
| 7422      | SPECTACLE, Casting only, for 7415 . . . . .   | .90 . . . .  |
| 7424      | BEZEL RING for 7415. . . . .  | .10 . . . .  |
| 7478      | SPECTACLE, Casting only, for 7479. . . . .  | .50 . . . .  |
| 7479      | BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3", not included) For Front Spectacle 7085. . . . .  | .64 . . . .  |
| 9012      | BACK SPECTACLE Complete, 6" Centers (Glass $2\frac{1}{2}$ ", not included). For Front Spectacle 9011. . . . .                                       | 1.00 . . . . |
| 9014      | SPECTACLE, Casting only, for 9012. . . . .  | .90 . . . .  |
| 9016      | BEZEL RING for 9012. . . . .  | .10 . . . .  |
| 9197      | RUBBER BLADE for 9199. . . . .  | .60 . . . .  |
| 9198      | PLATE for 9199. . . . .   | .07 . . . .  |
| 9199      | RUBBER BLADE Complete with Bolts and Plate . . . . .  | .70 . . . .  |

Order by NUMBER and NAME Appearing in Large Type.

# DWARF SIGNALS.

## DWARF SIGNAL FOUNDATION TOPS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

## DWARF SIGNALS.

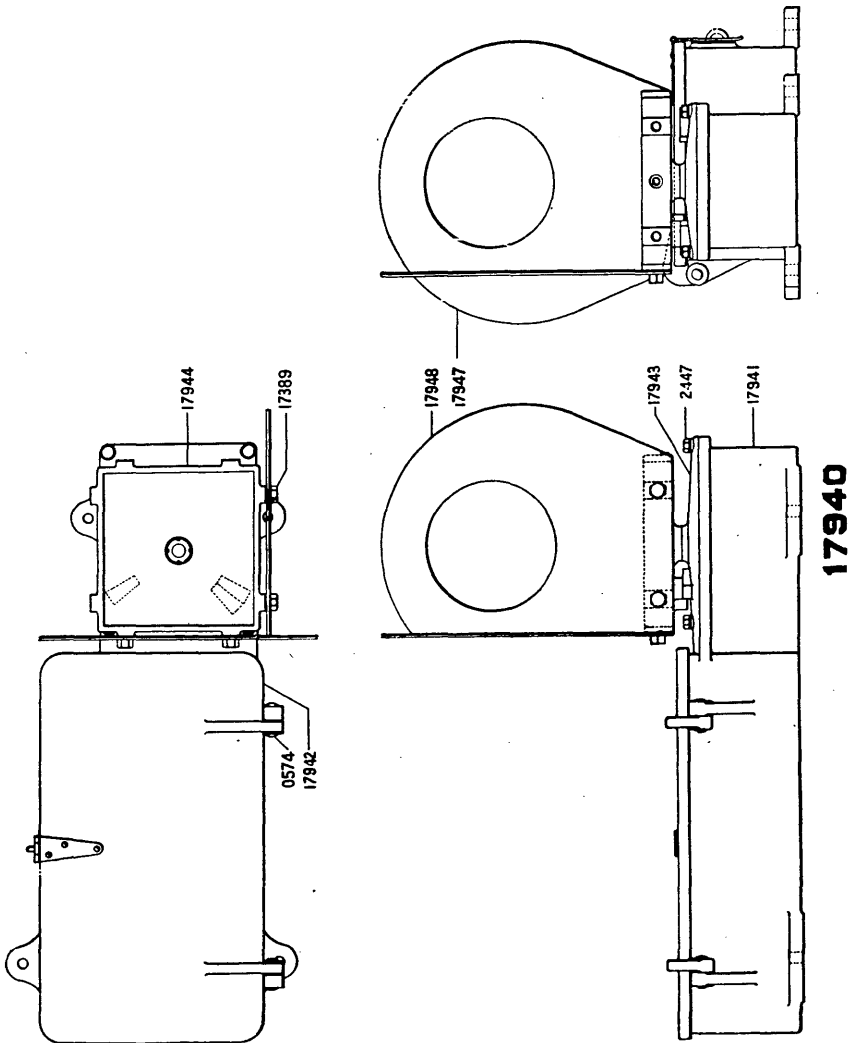
207

| Order No. | DWARF SIGNAL FOUNDATION TOPS.   | List Price |
|-----------|---|------------|
| 011       | BOLT with Nut, $\frac{1}{2}$ " x 2", for fastening Base 6459 or 6545 to Single Arm Dwarf Signals..... | .04 .....  |
| 4688      | FOUNDATION BOLT, $\frac{3}{4}$ " x 18".....   | .26 .....  |
| 4689      | FOUNDATION BOLT, $\frac{3}{4}$ " x 36".....   | .42 .....  |
| 5657      | FOUNDATION BOLT, $\frac{1}{2}$ " x 16".....   | .20 .....  |
| 6107      | OAK FOUNDATION TOP for One-Arm Dwarf Signals 3658 or 3673..   | 2.00 ..... |
| 6108      | OAK FOUNDATION TOP for Two-Arm Dwarf Signals 3327 or 7088..   | 2.50 ..... |
| 6458      | IRON WATERTIGHT BASE for Dwarf Signals 6459 or 6545.....  | 6.00 ..... |
| 7407      | PLATE WASHER for use with Foundation Top 7408.....  | .40 .....  |
| 7408      | OAK FOUNDATION TOP for Dwarf Signals 7370 or 9010.....  | 1.10 ..... |

Order by NUMBER and NAME Appearing in Large Type.

DWARF SIGNALS.

POT SIGNAL.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

**DWARF SIGNALS.**

209

Order  
No.

POT SIGNAL.

List Price.

NOTE:—Attention is called to the fact that the detail operating parts of the following assembled Pot Signal are the same as those of Model 3 Dwarf Signal, which are shown on page 199, which parts can be referred to when it is desired to order.

|  |        |  |
|--|--------|--|
| 0574 IRON RIVET, $\frac{1}{4}$ " x $1\frac{3}{4}$ ", Round Head..... | .01    |  |
| 2447 CAP SCREW, $\frac{1}{4}$ " x $\frac{7}{8}$ ", Sq. Head.....     | .06    |  |
| 17389 CAP SCREW, $\frac{3}{8}$ " x $\frac{1}{2}$ ", Hex. Head.....   | .04    |  |
| 17940 POT SIGNAL Complete .....                                      | 170.00 |  |
| 17941 CASE CASTING for 17940 .....                                   |        |  |
| 17942 HINGED COVER for 17940.....                                    |        |  |
| 17943 COVER supporting Lamp Stand, for 17940 .....                   |        |  |
| 17944 LAMP STAND for 17940 .....                                     |        |  |
| 17947 DISC for 17940 .....   |        |  |
| 17948 DISC for 17940 .....   |        |  |

DWARF SIGNALS.

GLASS.



7066-PLAIN  
9234-ROUNDEL



9226-PLAIN  
9235-ROUNDEL



1680-PLAIN  
9236-ROUNDEL



2600-PLAIN  
9237-ROUNDEL



924-PLAIN  
9238-ROUNDEL



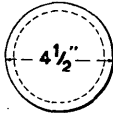
9227-PLAIN  
9239-ROUNDEL



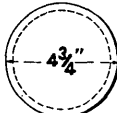
9228-PLAIN  
9240-ROUNDEL



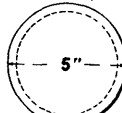
9229-PLAIN  
9241-ROUNDEL



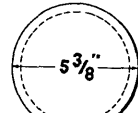
7064-PLAIN  
4682-ROUNDEL



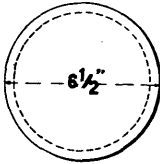
9230-PLAIN  
9242-ROUNDEL



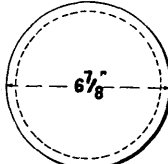
9231-PLAIN  
9243-ROUNDEL



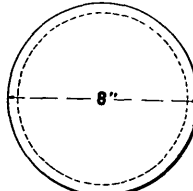
2599-PLAIN  
9244-ROUNDEL



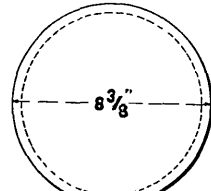
1681-PLAIN  
9245-ROUNDEL



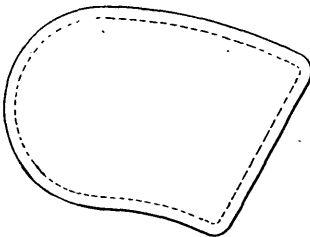
9232-PLAIN  
9246-ROUNDEL



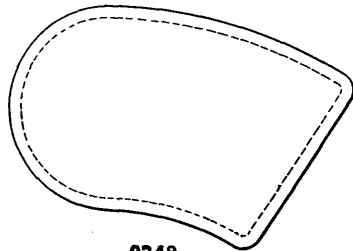
5166-PLAIN  
9247-ROUNDEL



9233-PLAIN  
4679-ROUNDEL



9248



9248

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

GLASS.

DOUBLE THICK PLAIN SEMAPHORE CIRCLES.

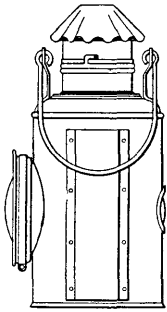
| Order Number. | Diameter.         | Flashed Red. | Pot Metal Green. | Pot Metal Yellow. | Pot Metal Blue. | Pot Metal Purple. | Clear. |
|---------------|-------------------|--------------|------------------|-------------------|-----------------|-------------------|--------|
| 7066          | 2 $\frac{3}{8}$ " | .10          | .10              | .10               | .10             | .10               | .04    |
| 9226          | 2 $\frac{1}{2}$ " | .10          | .10              | .10               | .10             | .10               | .04    |
| 1680          | 2 $\frac{7}{8}$ " | .12          | .12              | .12               | .12             | .12               | .05    |
| 2600          | 3"                | .12          | .12              | .12               | .12             | .12               | .05    |
| 924           | 3 $\frac{1}{8}$ " | .14          | .14              | .14               | .14             | .14               | .06    |
| 9227          | 3 $\frac{3}{4}$ " | .14          | .14              | .14               | .14             | .14               | .06    |
| 9228          | 4"                | .16          | .16              | .16               | .16             | .16               | .07    |
| 9229          | 4 $\frac{3}{8}$ " | .17          | .17              | .17               | .17             | .17               | .08    |
| 7064          | 4 $\frac{1}{2}$ " | .18          | .18              | .18               | .18             | .18               | .08    |
| 9230          | 4 $\frac{3}{4}$ " | .20          | .20              | .20               | .20             | .20               | .10    |
| 9231          | 5"                | .22          | .22              | .22               | .22             | .22               | .10    |
| 2599          | 5 $\frac{3}{8}$ " | .25          | .25              | .25               | .25             | .25               | .11    |
| 1681          | 6 $\frac{1}{8}$ " | .32          | .32              | .32               | .32             | .32               | .12    |
| 9232          | 6 $\frac{1}{2}$ " | .36          | .36              | .36               | .36             | .36               | .14    |
| 5166          | 8"                | .45          | .45              | .45               | .45             | .45               | .20    |
| 9233          | 8 $\frac{3}{8}$ " | .50          | .50              | .50               | .50             | .50               | .20    |

SOLID COLOR MOULDED SEMAPHORE ROUNDELS.

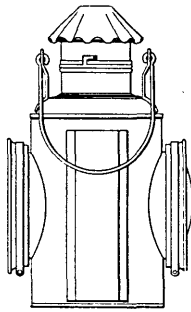
| Order Number. | Diameter.         | Red. | Green. | Yellow. | Blue. | Purple. | Clear. |
|---------------|-------------------|------|--------|---------|-------|---------|--------|
| 9234          | 2 $\frac{3}{8}$ " | .38  | .19    | .19     | .19   | .19     | .12    |
| 9235          | 2 $\frac{1}{2}$ " | .38  | .19    | .19     | .19   | .19     | .12    |
| 9236          | 2 $\frac{7}{8}$ " | .48  | .24    | .24     | .24   | .24     | .14    |
| 9237          | 3"                | .48  | .24    | .24     | .24   | .24     | .14    |
| 9238          | 3 $\frac{1}{8}$ " | .58  | .29    | .29     | .29   | .29     | .19    |
| 9239          | 3 $\frac{3}{4}$ " | .58  | .34    | .34     | .34   | .34     | .24    |
| 9240          | 4"                | .58  | .34    | .34     | .34   | .34     | .24    |
| 9241          | 4 $\frac{3}{8}$ " | .67  | .38    | .38     | .38   | .38     | .26    |
| 4682          | 4 $\frac{1}{2}$ " | .67  | .38    | .38     | .38   | .38     | .26    |
| 9242          | 4 $\frac{3}{4}$ " | .72  | .48    | .48     | .48   | .48     | .31    |
| 9243          | 5"                | .72  | .48    | .48     | .48   | .48     | .31    |
| 9244          | 5 $\frac{3}{8}$ " | .72  | .48    | .48     | .48   | .48     | .34    |
| 9245          | 6 $\frac{1}{8}$ " | 1.20 | .67    | .67     | .67   | .67     | .48    |
| 9246          | 6 $\frac{7}{8}$ " | 1.32 | .72    | .72     | .72   | .72     | .53    |
| 9247          | 8"                | 1.80 | 1.20   | 1.20    | 1.20  | 1.20    | .60    |
| 4679          | 8 $\frac{3}{8}$ " | 1.80 | 1.20   | 1.20    | 1.20  | 1.20    | .60    |
| 9248          |                   | 3.60 | 1.80   | 1.80    | 1.80  | 1.80    | ...    |
| 9249          |                   | 4.20 | 2.11   | 2.11    | 2.11  | 2.11    | ...    |

DWARF SIGNALS.

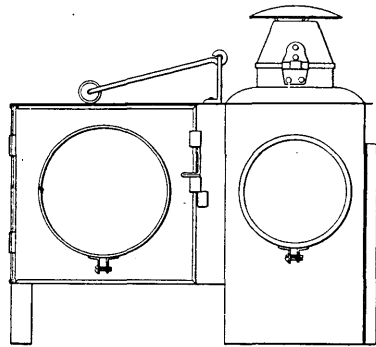
LAMPS AND BURNERS.



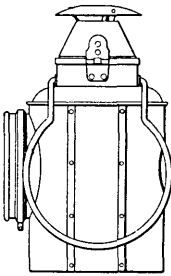
030  
4000



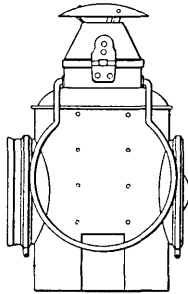
17861



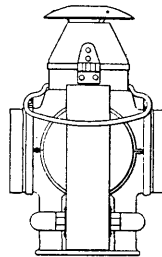
7109



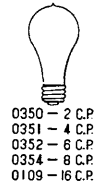
17860



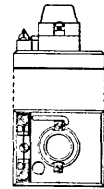
7108



17864

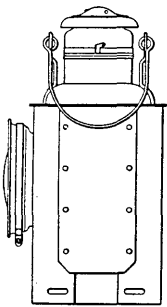


0350 - 2 C.P.  
0351 - 4 C.P.  
0352 - 6 C.P.  
0354 - 8 C.P.  
0109 - 16 C.P.

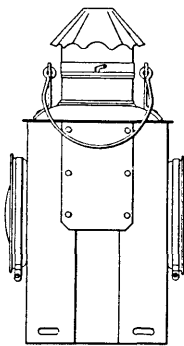


1977

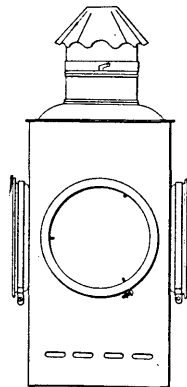
3994



17865



17866



11403



17868



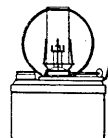
17869



17870



17871



17867

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



NOTE:—On the opposite page are shown a few Standard Semaphore Lamps. There are a number of other makes and designs not shown, all of which we are prepared to furnish.

When ordering, specify make, style of body, number of and style of lenses; whether for oil, electric light or convertible.

| Order No. | LAMPS AND BURNERS.  | List Price. |
|-----------|---|-------------|
| 030       | No. 8 DRESSEL SEMAPHORE LAMP, Arranged for Oil.....             |             |
| 0109      | LAMP, 16 C. P., 110 Volts.....                                  |             |
| 0350      | LAMP, 2 C. P., 110 Volts.....                                   |             |
| 0351      | LAMP, 4 C. P., 110 Volts.....                                   |             |
| 0352      | LAMP, 6 C. P., 110 Volts.....                                   |             |
| 0354      | LAMP, 8 C. P., 110 Volts.....                                   |             |
| 1977      | FUSE, 3 Ampere.....   | .05         |
| 3994      | ELECTRIC SOCKET Complete, for Lamp 4000.....                    |             |
| 4000      | No. 8 DRESSEL SEMAPHORE LAMP, Arranged for Electric Socket..... |             |
| 7108      | No. 605 A. & W. SEMAPHORE LAMP with inside Socket.....          |             |
| 7109      | DISTANT SEMAPHORE LAMP.....                                     |             |
| 11403     | No. 10 POT SIGNAL LAMP.....                                     |             |
| 17860     | No 508 A. & W. SEMAPHORE LAMP with One Lense.....               |             |
| 17861     | No 8 DRESSEL SEMAPHORE LAMP with Two Lenses.....                |             |
| 17864     | A. & W. STEEL BODY SEMAPHORE LAMP, Two Lenses.....              |             |
| 17865     | SQUARE SEMAPHORE LAMP, One Lense, with Slide Door.....          |             |
| 17866     | SQUARE SEMAPHORE LAMP, Two Lenses.....                          |             |
| 17867     | DRESSEL LONG TIME BURNER AND OIL FOUNT.....                     |             |
| 17868     | DRESSEL BURNER, Long Stem.....                                  |             |
| 17869     | DRESSEL BURNER, Short Stem.....                                 |             |
| 17870     | CALLENDER BURNER, Long Stem.....                                |             |
| 17871     | CALLENDER BURNER, Short Stem.....                               |             |

Order by NUMBER and NAME Appearing in Large Type.

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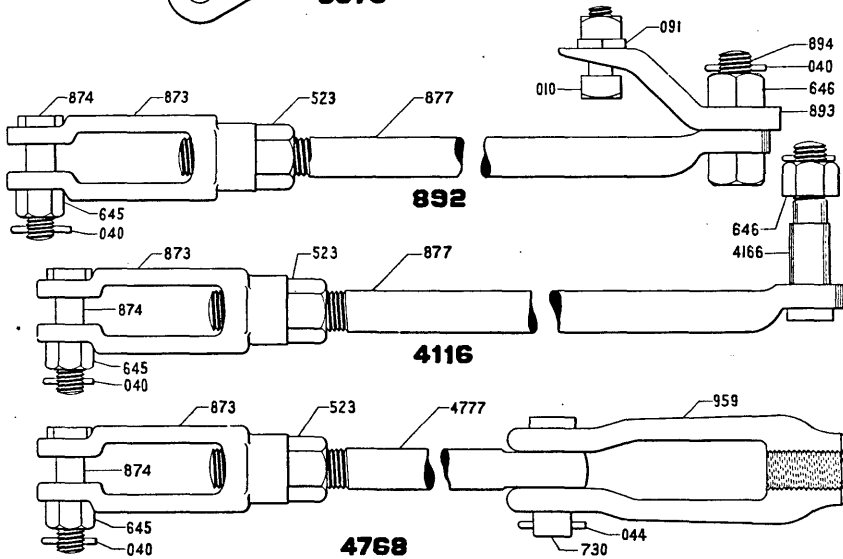
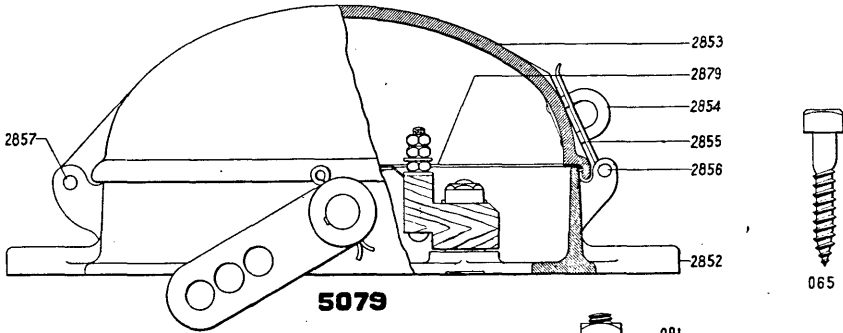
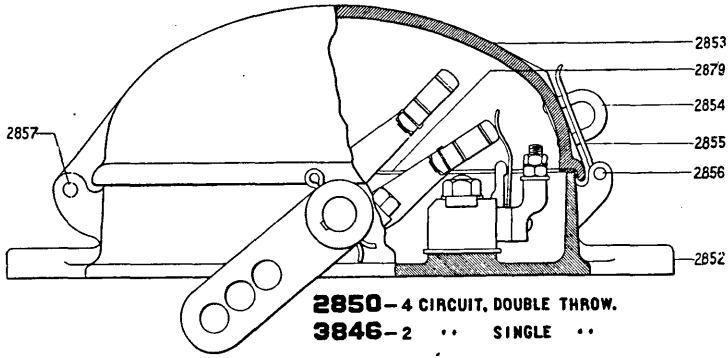
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CIRCUIT CONTROLLERS.

SWITCH BOXES AND SELECTORS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT CONTROLLERS.

Order No. SWITCH BOXES AND SELECTORS. List Price.

|      |  |       |
|------|--|-------|
| 010  | BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ "              | .04   |
| 026  | KEY for Shaft 2871   | .07   |
| 040  | COTTER PIN, $\frac{1}{8}$ " x 1" (per 100)                     | .80   |
| 043  | COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)      | .80   |
| 044  | COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)      | .80   |
| 046  | COTTER PIN, $\frac{3}{16}$ " x 2" (per 100)                    | .80   |
| 065  | LAG SCREW, $\frac{1}{2}$ " x 3"                                | .03   |
| 071  | WASHER used under 5082 for 5079                                | .01   |
| 073  | WASHER used on 2871  | .02   |
| 091  | NUT LOCK for 892   | .02   |
| 506  | BRASS WASHER for $\frac{1}{4}$ " Screw                         | .01   |
| 523  | $\frac{1}{4}$ " HEX. NUT                                       | .07   |
| 528  | BRASS NUT for $\frac{1}{4}$ " Screw                            | .02   |
| 645  | $\frac{5}{8}$ " HEX. NUT                                       | .04   |
| 646  | $\frac{3}{4}$ " HEX. NUT                                       | .05   |
| 730  | PIN, $\frac{1}{4}$ " x $2\frac{3}{8}$ "                        | .07   |
| 873  | SCREW JAW for 892, 4116 or 4768                                | .33   |
| 874  | PIN for 892, 4116 or 4768                                      | .30   |
| 877  | ROD for 892 or 4116  | 1.50  |
| 892  | OPERATING ROD Complete, connecting Switch Box to Switch Points | 3.30  |
| 893  | FOOT for 892   | .80   |
| 894  | BOLT for 892   | .20   |
| 959  | $1\frac{1}{2}$ " WROUGHT SCREW JAW for 4768                    | 1.10  |
| 1156 | NUT for Stud 2858  | .02   |
| 1225 | WASHER for 5187  | .01   |
| 1572 | SCREW for 2865   | .03   |
| 1925 | LOCK WASHER for 2859 or 2877                                   | .01   |
| 2145 | LOCK WASHER for 2859 or 2877                                   | .01   |
| 2432 | SCREW for 2859 or 2877   | .02   |
| 2850 | SWITCH BOX Complete, Model 2, Four Circuits, Double Throw      | 30.00 |
| 2852 | BASE, Casting only, for 2850, 3846 or 5079                     | 5.00  |
| 2853 | COVER, Casting only, for 2850, etc.                            | 2.50  |
| 2854 | STAPLE for Hasp, for 2850, etc.                                | .08   |
| 2855 | HASP for 2850, etc.  | .04   |
| 2856 | PIN for Hasp for 2850, etc.                                    | .04   |
| 2857 | PIN for Hinge for 2850, etc.                                   | .03   |
| 2858 | STUD holding 2865 or 5082 to 2852 Base                         | .06   |
| 2859 | CONTACT FORK Complete, with Two Contacts for 2850 or 3846      | 4.00  |
| 2860 | ARM for 2859 or 2877   | 1.50  |
| 2861 | INSULATOR for 2859 or 2877                                     | .24   |
| 2862 | BLOCK, Insulating, for 2859 or 2877                            | .80   |
| 2863 | CONTACT for 2859   | .30   |
| 2864 | CONTACT for 2877   | .50   |
| 2865 | BLOCK Complete, with Contact Springs for 2850 or 3846          | 6.00  |
| 2866 | Contact BLOCK for 2865   | 1.00  |
| 2867 | Spring HOLDER for 2865   | .40   |
| 2868 | SPRING, Contact, for 2865                                      | .24   |
| 2869 | Contact POST for 2865  | .50   |
| 2871 | SHAFT for 2850, 3846 or 5079                                   | .50   |
| 2872 | CRANK, Outside, for 2850, 3846 or 5079                         | .40   |
| 2874 | LOCK WASHER for Nut 1156 on Stud 2858                          | .02   |
| 2875 | Felt WASHER used under 2865 for 2850 or 3846                   | .02   |
| 2877 | Contact FORK Complete with One Contact (Special)               | 4.00  |
| 2879 | Felt GASKET for 2850, 3846 or 5079                             | .20   |
| 2882 | INSULATOR for 2859 or 2877                                     | .24   |
| 3520 | SCREW for 2865   | .08   |
| 3846 | SWITCH BOX Complete, Model 2, Two Circuit, Single Throw        | 20.00 |

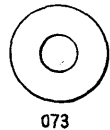
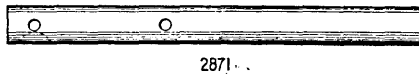
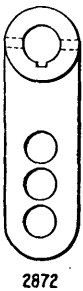
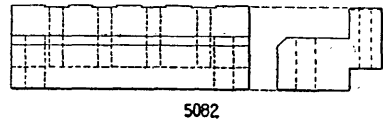
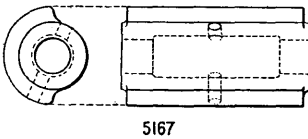
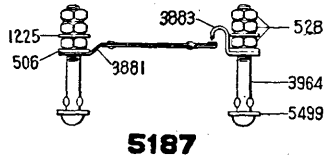
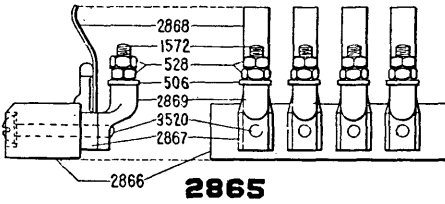
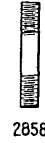
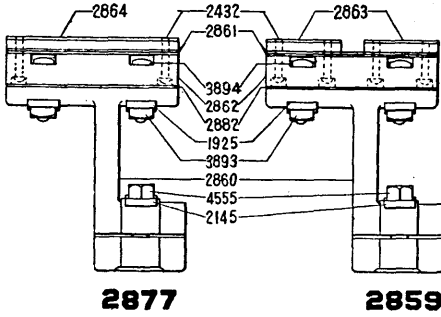
Order by NUMBER and NAME Appearing in Large Type.

## CIRCUIT CONTROLLERS.

| Order<br>No. | SWITCH BOXES AND SELECTORS.—CONT.  | List Price. |
|--------------|--|-------------|
| 3881         | SPRING CONTACT for 5187.....   | 2.00 .....  |
| 3883         | CONTACT for 5187.....  | 1.50 .....  |
| 3893         | NUT for Bolt 3894.....   | .06 .....   |
| 3894         | BOLT for 2859 or 2877.....   | .06 .....   |
| 3964         | SCREW for 5187.....  | .10 .....   |
| 4116         | OPERATING ROD Complete, connecting Switch Box to Front Rods,<br>with Jaw Ends.....   | 2.30 .....  |
| 4166         | PIN for 4116.....  | .40 .....   |
| 4555         | SCREW for 2859 or 2877.....  | .05 .....   |
| 4768         | OPERATING ROD Complete, connecting Switch Box to Front Rods,<br>with Screw Ends..... | 3.50 .....  |
| 4777         | ROD for 4768.....  | 1.60 .....  |
| 5079         | SWITCH BOX Complete, Model 3, four independent Shunt Contacts.                       | 30.00 ..... |
| 5082         | BLOCK for 5079.....  | .80 .....   |
| 5167         | CAM for Shunt Springs for 5079.....  | 2.00 .....  |
| 5187         | SPRING CONTACT Complete, with Binding Post for one Shunt Con-<br>tact, for 5079..... | 4.00 .....  |
| 5188         | PIN fastening 5167 to 2871 for 5079.....   | .04 .....   |
| 5499         | WASHER for 5187.....   | .02 .....   |
| 5563         | WASHER used on Block 5082 under Washer 2874, for 5079 .....                          | .02 .....   |

Order by NUMBER and NAME Appearing in Large Type.

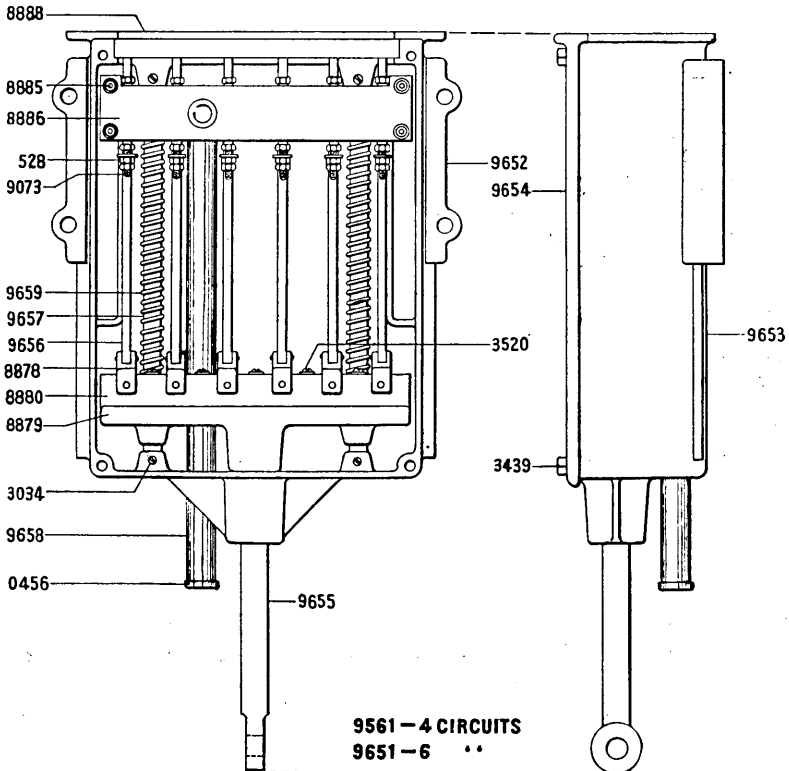
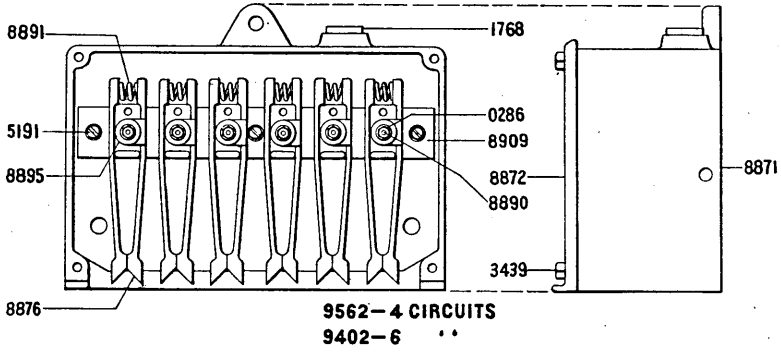
SWITCH BOXES AND SELECTORS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT CONTROLLERS.

BRIDGE CIRCUIT CLOSER.



BRIDGE CIRCUIT CLOSER

**9580-4 CIRCUITS**

**9650-6** ..

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



CIRCUIT CONTROLLERS.

221

| Order No. | BRIDGE CIRCUIT CLOSER.                                 | List Price. |
|-----------|--|-------------|
| 0286      | 1/2" HEX. NUT.....                                     | .02         |
| 0456      | BUSHING for Lead Conduit 9658.....                     | .20         |
| 528       | BRASS NUT, 1/2"-24.....                                | .02         |
| 1768      | INSULATED BUSHING for inlet wires.....                 | .30         |
| 3034      | SCREW, Rod to Case.....                                | .06         |
| 3439      | CAP SCREW, holding Cover to Case.....                  | .04         |
| 3520      | SCREW, 1/4" x 2", Rd. Hd Brass.....                    | .08         |
| 5191      | SCREW, 3/8" x 1 1/4", F. Hd. Insulator to Base.....    | .06         |
| 8871      | CASE, Casting only, for 9402.....                      | 14.00       |
| 8872      | COVER, Casting only, for 9402.....                     | 2.50        |
| 8876      | CONTACT CASTING for 9402.....                          | 2.50        |
| 8878      | SOCKET for Contact Blade for 9651.....                 | 2.00        |
| 8879      | SLIDING YOKES for Blades, for 9651.....                | 10.00       |
| 8880      | INSULATOR for Yoke 8879.....                           | 2.00        |
| 8885      | STUD supporting Spring Insulator, for 9651.....        | .50         |
| 8886      | INSULATOR for Contact Springs.....                     | 2.00        |
| 8888      | WOOD CAP, for moving Case, for 9651.....               | 2.50        |
| 8890      | CONTACT STUD for 9402.....                             | 1.00        |
| 8891      | Contact Compression SPRING for 9402.....               | .20         |
| 8895      | WASHER for 9402.....                                   | .10         |
| 8909      | CONTACT INSULATOR for 9402.....                        | 4.50        |
| 9073      | Contact Spring STUD for 9651.....                      | .10         |
| 9402      | SHORE END OF CIRCUIT CLOSER 9650.....                  | 74.00       |
| 9560      | BRIDGE CIRCUIT CLOSER, Complete for four Circuits..... | 140.00      |
| 9561      | BRIDGE END OF CIRCUIT CLOSER 9560.....                 | 86.00       |
| 9562      | SHORE END OF CIRCUIT CLOSER 9560.....                  | 54.00       |
| 9650      | BRIDGE CIRCUIT CLOSER, Complete for six Circuits.....  | 190.00      |
| 9651      | BRIDGE END OF CIRCUIT CLOSER 9650.....                 | 116.00      |
| 9652      | BASE for 9651.....                                     | 7.00        |
| 9653      | CASE for 9651.....                                     | 18.00       |
| 9654      | COVER for 9651.....                                    | 6.00        |
| 9655      | EYE ROD for 9651.....                                  | 3.00        |
| 9656      | CONTACT BAR for 9651.....                              | 2.00        |
| 9657      | GUIDE ROD for 9651.....                                | .40         |
| 9658      | INSULATED CONDUIT TUBE for 9651.....                   | 3.00        |
| 9659      | SPRING for 9651.....                                   | 1.00        |

Order by NUMBER and NAME Appearing in Large Type.

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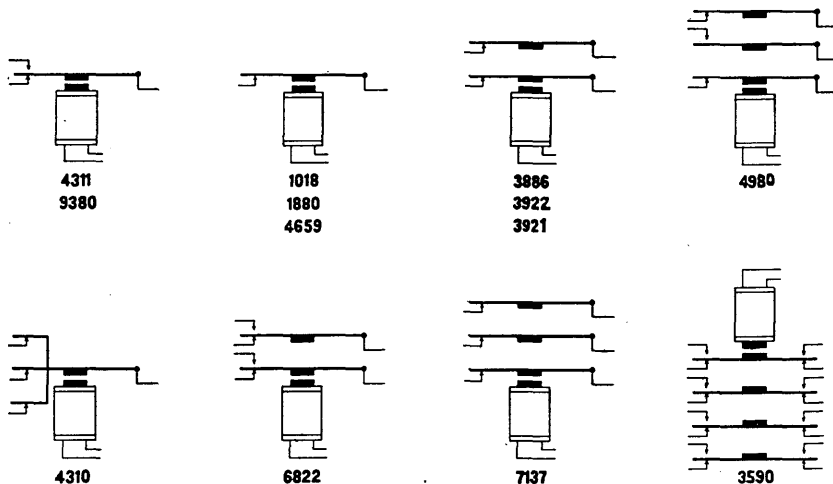
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## TRACK CIRCUIT.

## DIAGRAM OF RELAYS.



- 1018** 1 FRONT CARBON CONTACT, WITHOUT MAGNETIC BLOWOUT.  
**1880** 1 FRONT CARBON CONTACT, WITH MAGNETIC BLOWOUT.  
**3590** 8 FRONT, AND 8 BACK CONTACTS, WITH 4 FRONT, AND 4 BACK CIRCUITS.  
**3886** 2 FRONT CARBON CONTACTS, INDEPENDENT CIRCUITS.  
**3922** 2 FRONT CONTACTS, 1 CARBON, 1 SILVER, INDEPENDENT CIRCUITS.  
**3921** 2 FRONT SILVER CONTACTS, INDEPENDENT CIRCUITS.  
**4310** 3 FRONT CONTACTS, 2 CARBON, 1 SILVER.  
**4311** 1 FRONT CARBON CONTACT, 1 BACK SILVER CONTACT.  
**4659** 1 FRONT SILVER CONTACT, WITH MAGNETIC BLOWOUT.  
**4980** 2 FRONT CARBON CONTACTS, 1 BACK SILVER CONTACT, INDEPENDENT CIRCUITS.  
**6822** 2 FRONT CARBON CONTACTS, 2 BACK SILVER CONTACTS, 2 INDEPENDENT CIRCUITS.  
**7137** 3 FRONT CARBON CONTACTS, INDEPENDENT CIRCUITS.  
**9380** 1 FRONT, AND 1 BACK SILVER CONTACT.

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**RELAYS.**

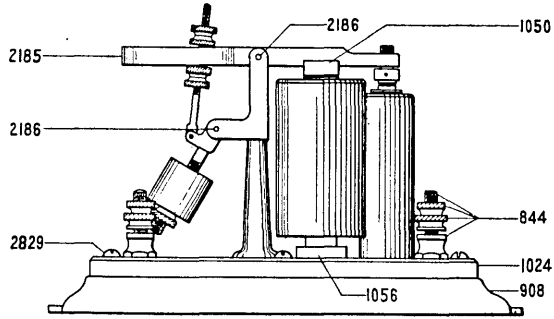
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The diagrams on the page opposite show the various forms of Model 1 Relays, open types, which are especially designed for the purpose of carrying heavy currents through the contact points for the control of the operating current for electric interlocking devices. These Relays are shown complete and in detail on pages 226 to 231 inclusive.

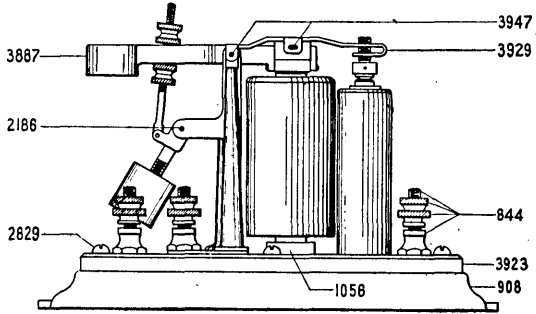
On page 234 is shown Model 11 Enclosed Type Relay for carrying heavy currents. For description see page 233.

On page 232 is shown Model 9 Relay Neutral Type. For description see page 233.

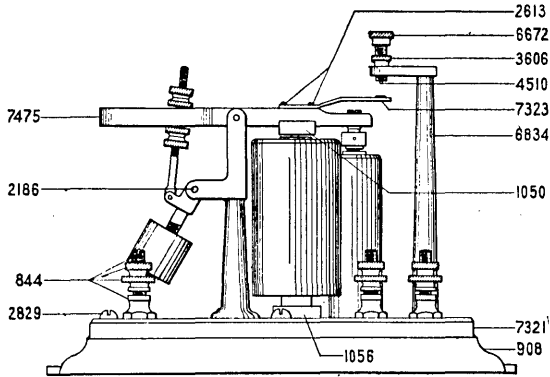
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



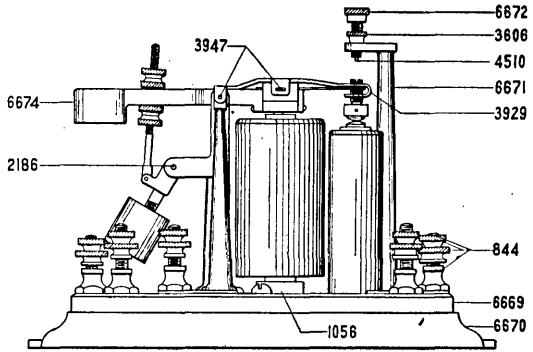
**1880** CARBON CONTACT  
**4659** SILVER CONTACT



**3886** 2 CARBON CONTACTS  
**3921** 2 SILVER CONTACTS  
**3922** 1 SILVER & 1 CARBON CONTACT

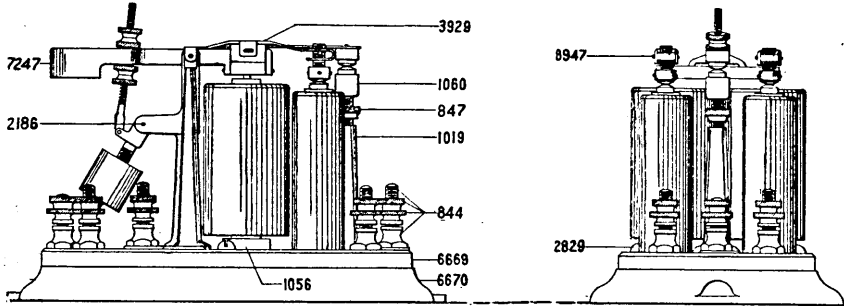


**4311** 1 FRONT CARBON & 1 BACK SILVER CONTACT

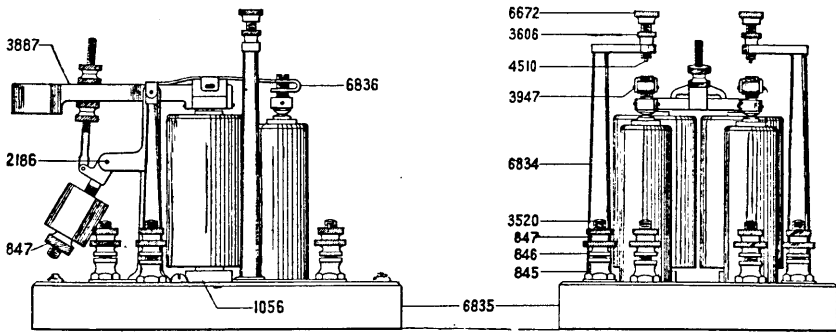


**4980** 2 FRONT CARB N & 1 BACK SILVER CONTACTS

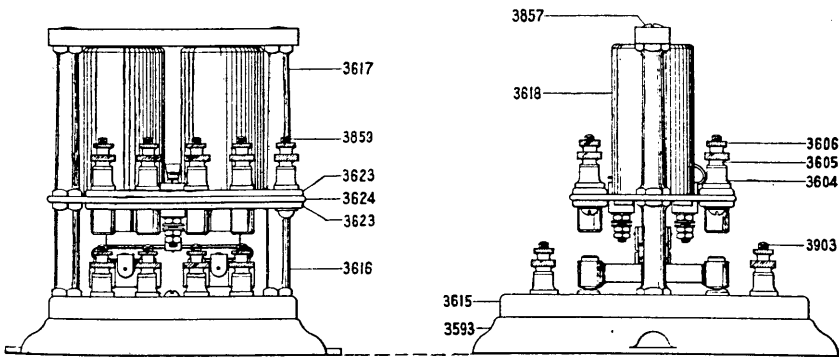
RELAYS.



**7137 3 FRONT CARBON CONTACTS**



**6822 2 FRONT CARBON & 2 BACK SILVER CONTACTS**

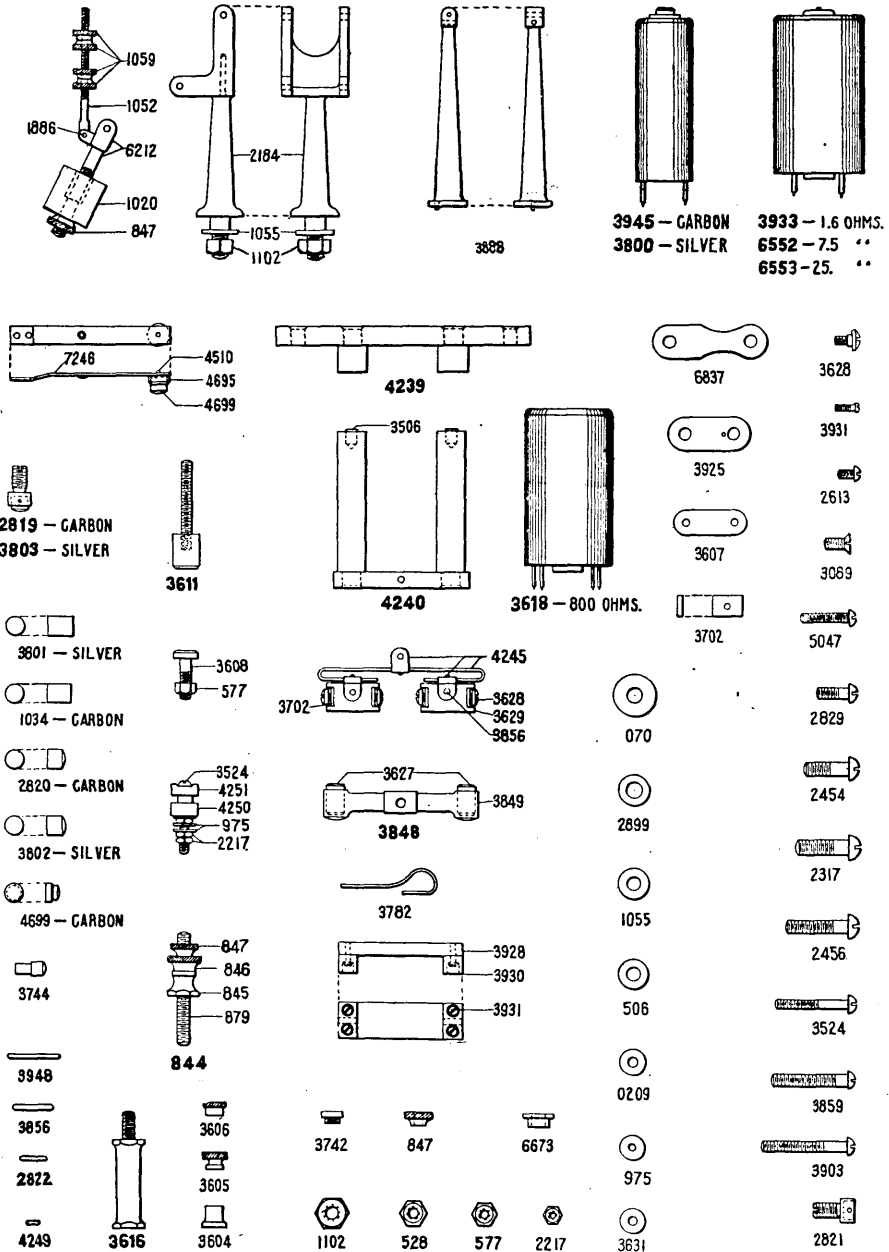


**3590 MULTIPLE CONTACT**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRACK CIRCUIT.

RELAYS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



## TRACK CIRCUIT.

229

| Order No. | RELAYS.  | List Price. |
|-----------|--|-------------|
| 070       | IRON WASHER for $\frac{5}{16}$ " Screw   | .01         |
| 0209      | COPPER WASHER  | .01         |
| 506       | BRASS WASHER for $\frac{1}{4}$ " Screw   | .01         |
| 528       | BRASS NUT for $\frac{1}{4}$ "-24 Screw   | .02         |
| 577       | NUT, No. 10-32 Brass   | .02         |
| 844       | BINDING POST, Complete for Relays  | .28         |
| 845       | BASE for Binding Posts   | .08         |
| 846       | NUT for Binding Posts  | .06         |
| 847       | NUT LOCK for Binding Posts and Counterweights  | .05         |
| 879       | SCREW for Binding Post 844   | .08         |
| 908       | IRON BASE for Relay 1880, etc.   | 1.50        |
| 975       | WASHER for No. 8 Screw   | .01         |
| 1019      | CONTACT POST for 7137  | 1.50        |
| 1020      | COUNTERWEIGHT for various Relays   | .30         |
| 1024      | SLATE BASE for 1880 or 4659  | 1.50        |
| 1034      | CARBON CONTACT for various Relays  | .20         |
| 1050      | ARMATURE for 1880, etc.  | .80         |
| 1052      | ROD supporting Counterweight for various Relays  | .20         |
| 1055      | WASHER for Stand 2184  | .02         |
| 1056      | MAGNET YOKE for 1880, etc.   | .40         |
| 1059      | NUT LOCK used on various Relays  | .05         |
| 1060      | SCREW holding Carbon Contact, for 7137   | .40         |
| 1102      | NUT holding Stands to Base, for various Relays   | .08         |
| 1880      | TRACK RELAY, Complete, with one Front Carbon Contact and Magnetic Blowout. When ordering specify ohms resistance required. | 30.00       |
| 1886      | PIN for various Relays   | .02         |
| 2184      | STAND for various Relays   | 2.50        |
| 2185      | LEVER for 1880 or 4659   | 2.00        |
| 2186      | PIN for 1880, etc.   | .04         |
| 2217      | BRASS NUT for No. 8-32 Screw   | .04         |
| 2317      | SCREW, Magnets and Contact Posts to Base, for various Relays   | .04         |
| 2454      | SCREW, fastening Hinge Post 3888 to Base, for various Relays   | .03         |
| 2456      | IRON SCREW, $\frac{1}{4}$ " x $1\frac{1}{4}$ "   | .02         |
| 2613      | SCREW for 4311   | .01         |
| 2819      | UPPER CONTACT, Complete (Carbon), for various Relays   | .70         |
| 2820      | CARBON CONTACT for various Relays  | .40         |
| 2821      | CONTACT HOLDER, used with various Relays   | .30         |
| 2822      | BRASS PIN for fastening Contacts to Holder 2821  | .02         |
| 2829      | SCREW fastening Slate to Iron Base, for 1880   | .02         |
| 2899      | BRASS WASHER for $\frac{5}{16}$ " Screw  | .02         |
| 3089      | BRASS SCREW, No. 10 x $\frac{1}{4}$ "  | .02         |
| 3506      | PIN for 4240   | .02         |
| 3520      | BRASS SCREW, $\frac{1}{4}$ " x 2"  | .08         |
| 3524      | BRASS SCREW, No. 8 x $1\frac{1}{4}$ "  | .02         |
| 3590      | MULTIPLE CONTACT RELAY, Complete. 8 Front and 8 Back Contacts  | 80.00       |
| 3593      | IRON BASE for 3590   | 2.00        |
| 3604      | BASE for Binding Post for 3590   | .08         |
| 3605      | NUT for Binding Post for 3590  | .06         |
| 3606      | NUT LOCK for Binding Post for 3590   | .05         |
| 3607      | LINK connecting Lower Contacts for Relay 3590  | .20         |
| 3608      | LOWER CONTACT for Relay 3590   | .50         |
| 3611      | UPPER CONTACT for Relay 3590   | .70         |

Order by NUMBER and NAME Appearing in Large Type.

## TRACK CIRCUIT.

| Order No. | RELAYS.  | List Price. |
|-----------|--|-------------|
| 3615      | SLATE BASE for 3590.....   | 2.00        |
| 3616      | POST, Lower, for 3590.....   | 2.00        |
| 3617      | POST, Upper, for 3590.....   | 2.00        |
| 3618      | MAGNET, (Single Magnet), Complete, 800 ohms resistance.....  | 6.00        |
| 3623      | INSULATOR for Upper Binding Posts on Relay 3590.....   | 2.00        |
| 3624      | BRASS PLATE for supporting Magnets and Upper Contacts on Relay 3590.....   | 5.00        |
| 3627      | CARBON CONTACT for Relay 3590. See 3848.....   | .50         |
| 3628      | SCREW holding 3848 to 3629 Block.....  | .30         |
| 3629      | BLOCK for holding Bar 3848 for Relay 3590.....   | .80         |
| 3631      | INSULATING WASHER for Upper Contact Screw for Relay 3590.....  | .10         |
| 3702      | SQUARE BRASS WASHER for Relay 3590.....  | .06         |
| 3742      | INSULATING THREADED BUSHING, for Relay 3590.....   | .30         |
| 3744      | CIRCUIT BREAKER PLUNGER, for Relay 3590.....   | .40         |
| 3782      | CONTACT SPRING for Relay 3590.....   | 1.00        |
| 3800      | MAGNETIC CONTACT POST, Complete with Silver Plated Contact Used on various Relays.....   | 4.00        |
| 3801      | LOWER CONTACT (Silver Plated), for various Relays.....   | .70         |
| 3802      | UPPER CONTACT (Silver Plated), for various Relays.....   | 1.00        |
| 3803      | UPPER CONTACT, Complete (Silver Plated), for various Relays.....   | 1.30        |
| 3848      | CONTACT BAR, Complete for Relay 3590.....  | 2.50        |
| 3849      | BAR only for 3848.....   | 1.50        |
| 3856      | PIN for fastening 4245 to Block 3629.....  | .04         |
| 3857      | SCREW for Relay 3590.....  | .50         |
| 3859      | SCREW, No. 10 x 1 $\frac{1}{16}$ ", Special for Relay 3590.....  | .30         |
| 3886      | TRACK RELAY, Complete, with 2 Front Carbon Contacts with independent circuits When ordering specify ohms resistance required.....            | 35.00       |
| 3887      | LEVER for Relays 3886, etc.....  | 2.00        |
| 3888      | HINGE POST for various Relays.....   | 2.00        |
| 3903      | SCREW No. 10 x 1 $\frac{3}{8}$ " for Relay 3590.....   | .20         |
| 3921      | TRACK RELAY, Complete, with Two Front Silver Contacts with independent circuits. When ordering specify ohms resistance required.....         | 35.00       |
| 3922      | TRACK RELAY, Complete, with One Silver and One Carbon Contact with independent circuits. When ordering specify ohms resistance required..... | 35.00       |
| 3923      | SLATE BASE for Relays 3886, etc.....   | 1.50        |
| 3925      | LINK used on Double Contact Relays.....  | .24         |
| 3928      | ARMATURE for various Relays.....   | 1.60        |
| 3929      | CONTACT ARM for Relays 3886, etc.....  | .80         |
| 3930      | INSULATING BLOCK. Used with Armature 3928.....   | .50         |
| 3931      | SCREW fastening 3930 to 3928.....  | .06         |
| 3933      | MAGNET (Single Magnet), Complete, 1.6 ohms resistance.....   | 5.50        |
| 3945      | MAGNETIC CONTACT POST, Complete with Carbon Contact for various Relays.....  | 4.00        |
| 3947      | PIN for various Relays.....  | .04         |
| 3948      | PIN fastening Armature to Lever For various Relays.....  | .04         |
| 4239      | UPPER YOKE, Complete with Cores for Relay 3590.....  | 5.00        |
| 4240      | LOWER YOKE, Complete with Cores for Relay 3590.....  | 6.00        |
| 4245      | SPRING, Complete, for supporting Contact Bars, for Relay 3590.....   | 2.00        |
| 4249      | SMALL PIN for 3590.....  | .01         |
| 4250      | INSULATING BUSHING for Circuit Breaker on Relay 3590.....  | .40         |
| 4251      | INSULATING WASHER for Circuit Breaker on Relay 3590.....   | .60         |

Order by NUMBER and NAME Appearing in Large Type.

# TRACK CIRCUIT.

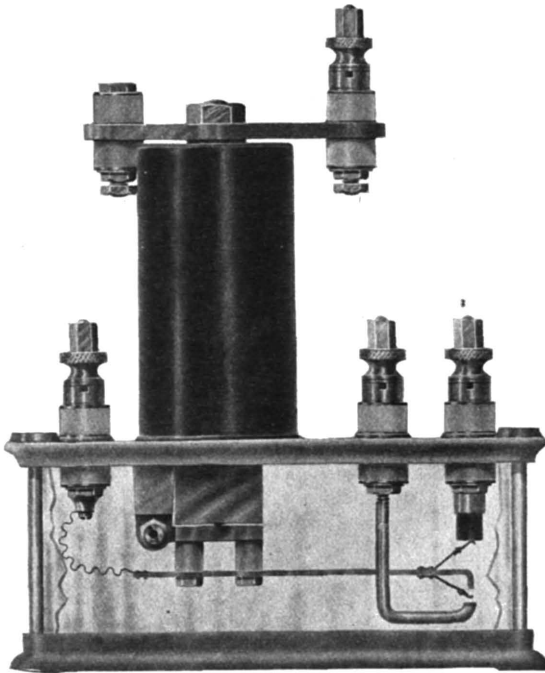
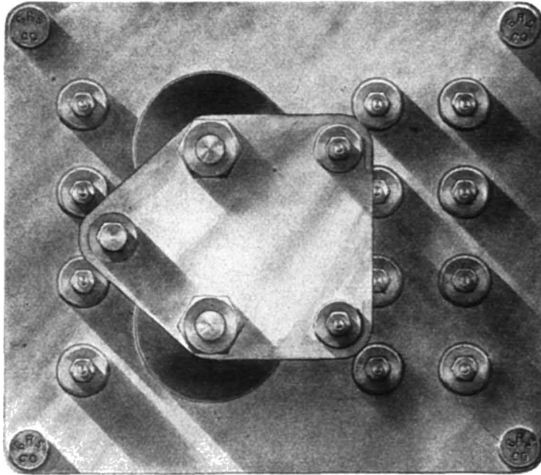
231

| Order No. | RELAYS.—CONT.   | List Price. |
|-----------|---|-------------|
| 4311      | TRACK RELAY, Complete with One Front Carbon and One Back Silver Contact. When ordering specify ohms resistance required.                                  | 35.00       |
| 4510      | SILVER CONTACT PIN for 4311, etc.   | .10         |
| 4659      | TRACK RELAY, Complete with One Silver Plated Contact and Magnetic Blowout. When ordering specify ohms resistance required.                                | 30.00       |
| 4695      | HOLDER for Carbon Contact.  | .20         |
| 4699      | CARBON CONTACT  | .40         |
| 4980      | TRACK RELAY, Complete with Two Front Carbon and One Back Silver Contact with independent circuits. When ordering specify ohms resistance required.        | 40.00       |
| 5047      | SCREW, No. 10 x 1", R. H. Brass.  | .03         |
| 6212      | BLOCK for supporting Counterweight for various Relays.  | .60         |
| 6552      | MAGNET, (Single Magnet), Complete. 7.5 ohms resistance.   | 5.50        |
| 6553      | MAGNET (Single Magnet), Complete. 25 ohms resistance.   | 5.50        |
| 6669      | SLATE BASE for Relay 4980.  | 1.50        |
| 6670      | IRON BASE for Relay 4980.   | 1.50        |
| 6671      | BACK CONTACT POST for Relay 4980.   | 4.50        |
| 6672      | BACK CONTACT SCREW for Relays 4311, etc.  | .20         |
| 6673      | BUSHING for Back Contact Posts for Relay 4311, etc.   | .30         |
| 6674      | LEVER, Complete, for Relay 4980.  | 3.50        |
| 6822      | TRACK RELAY, Complete, with Two Front Carbon and Two Back Silver Contacts, with two independent circuits. When ordering specify ohms resistance required. | 45.00       |
| 6834      | BACK CONTACT POST for Relay 6822.   | 4.50        |
| 6835      | SLATE BASE for 6822.  | 3.00        |
| 6836      | CONTACT ARM with Back Platinum Contact, for Relay 6822.   | 2.00        |
| 6837      | LINK for Relay 6822.  | .60         |
| 7137      | TRACK RELAY, Complete, with Three Front Carbon Contacts with independent circuits. When ordering specify ohms resistance required.                        | 40.00       |
| 7246      | CONTACT SPRING for Relay 7137.  | .60         |
| 7247      | LEVER only, for Relay 7137.   | 2.00        |
| 7321      | SLATE BASE for Relay 4311.  | 1.50        |
| 7323      | CONTACT SPRING with Platinum Contact for Relay 4311.  | 1.50        |
| 7475      | LEVER for Relay 4311.   | 2.00        |

Order by NUMBER and NAME Appearing in Large Type.

TRACK CIRCUIT.

MODEL 9 RELAY.



MODEL 9. NEUTRAL TYPE RELAY.

RELAYS.

On the opposite page (232) is shown our Model 9 Relay, Neutral Type. This Relay is made with from one to four Front and Back Contacts inclusive. We also make this model in a polarized type, which has the same outside appearance and dimensions. Unless otherwise specified, this style of Relay will be furnished with Carbon Front and Platinum Back Contacts.

When ordering specify resistance of Magnets.

| Order No. | MODEL 9 RELAY. NEUTRAL AND POLARIZED TYPE.   | List Price. |
|-----------|--|-------------|
| 13020     | POLARIZED RELAY, 2 point Neutral, 2 Point Polar, with 2 Front Carbon and 2 Back Platinum Contacts..... | .....       |
| 13021     | 4 POINT NEUTRAL RELAY, with 4 Front and 4 Back Contacts.....   | .....       |
| 13022     | 3 POINT NEUTRAL RELAY, with 3 Front and 3 Back Contacts.....   | .....       |
| 13023     | 2 POINT NEUTRAL RELAY, with 2 Front and 2 Back Contacts.....   | .....       |
| 13024     | 1 POINT NEUTRAL RELAY, with 1 Front and 1 Back Contact.....  | .....       |

On page 234 we show our Model 11, Heavy Current Relay of the Enclosed Type. It is equipped with a powerful magnetic blow-out. It can be equipped with from one to four sets of front or back contacts, as specified. The front contacts are provided with heavy carbon blocks which make with a rubbing contact. The back contacts are platinum. As illustrated, this Relay is completely enclosed by means of the usual brass top and bottom plates and cylindrical glass case, whereby the working parts may be seen, all connections being made from without. On account of the heavy duty imposed on this Relay, it is larger than the ordinary Track Relay (similar to Model 9) and therefore will require a special box.

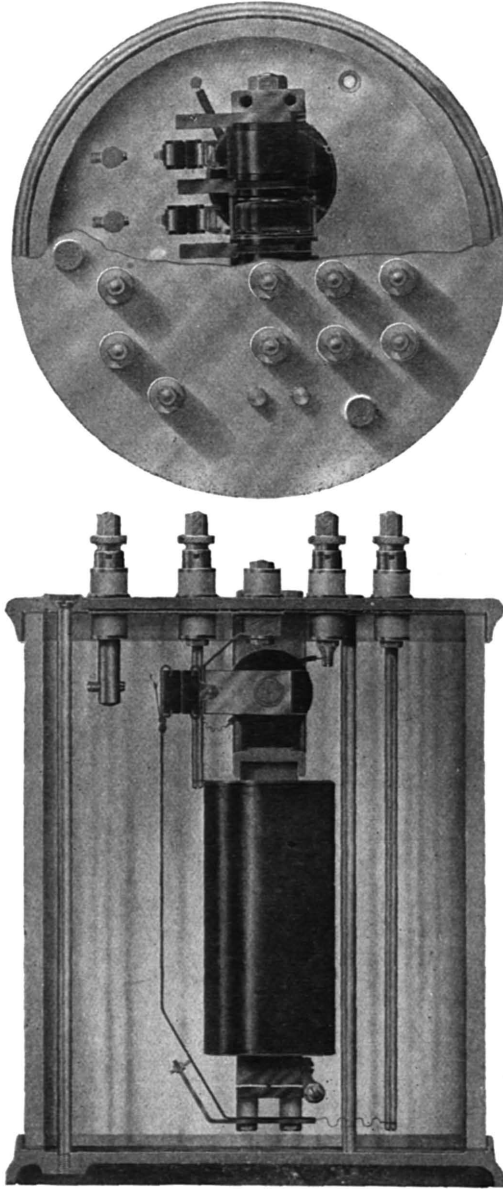
When ordering specify resistance of Magnets.

| Order No. | MODEL 11, HEAVY CURRENT RELAY.                       | List Price. |
|-----------|--|-------------|
| 18000     | 4 POINT RELAY, with 4 Front and 4 Back Contacts..... | .....       |
| 18001     | 3 POINT RELAY, with 3 Front and 3 Back Contacts..... | .....       |
| 18002     | 2 POINT RELAY, with 2 Front and 2 Back Contacts..... | .....       |
| 18003     | 1 POINT RELAY, with 1 Front and 1 Back Contact.....  | .....       |

Order by NUMBER and NAME Appearing in Large Type.

## TRACK CIRCUIT.

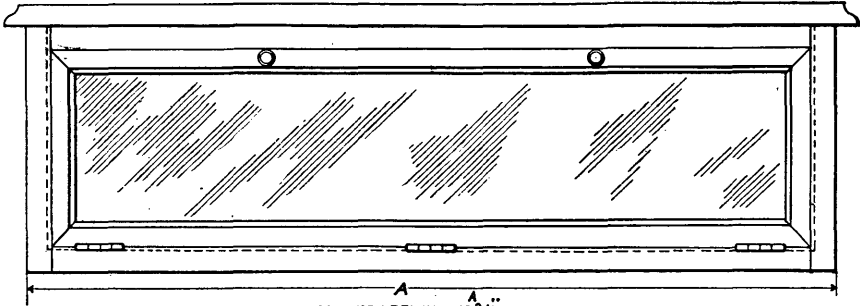
MODEL 11 RELAY.



MODEL 11. HEAVY CURRENT RELAY.

For Description and Numbers see page 233.

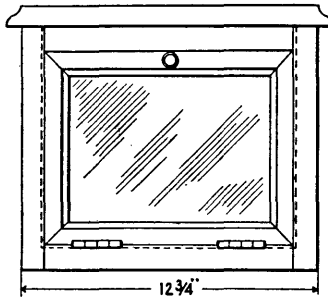
RELAY CASES AND BOXES



|      |                 |             |
|------|-----------------|-------------|
| 4468 | - FOR 1 RELAY - | 12 3/4"     |
| 1028 | 2               | 23 3/4"     |
| 1659 | 3               | 2'-10 5/16" |
| 1027 | 4               | 2'-4 3/4"   |
| 6259 | 5               | 2'-10 3/4"  |
| 4554 | 8               | 3'-4 3/4"   |
| 5292 | 7               | 3'-10 3/4"  |
| 6199 | 8               | 4'-4 3/4"   |
| 6839 | 9               | 4'-10 3/4"  |



051



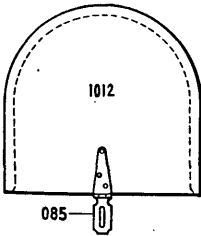
6202- FOR 1 RELAY-3590



062

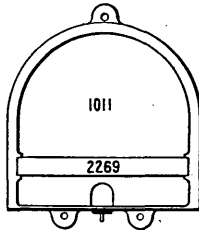


0382



1012

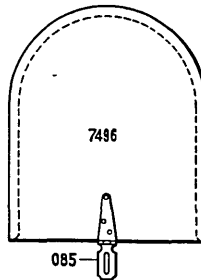
085



1011

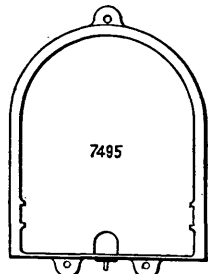
2269

2265



7486

085



7495

7512

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

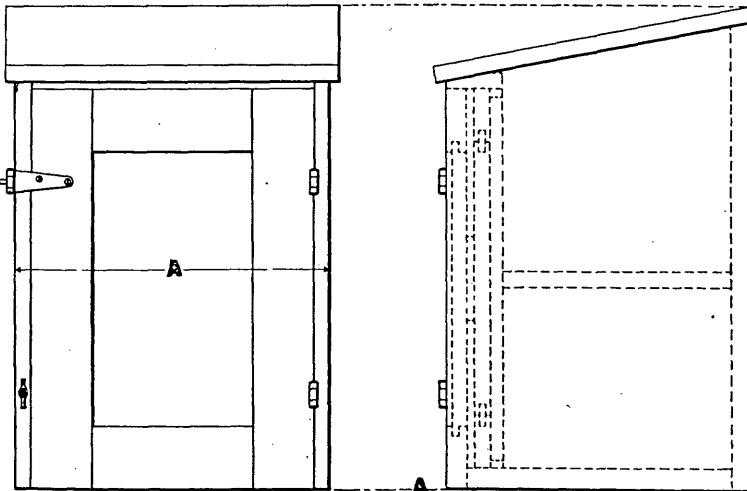
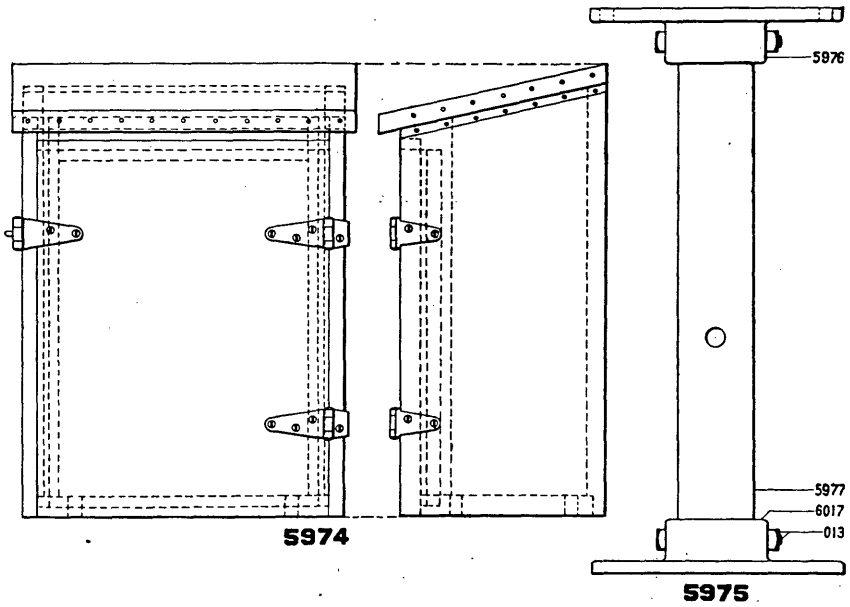
## TRACK CIRCUIT.

| Order No. | RELAY CASES AND BOXES.                                | List Price |
|-----------|---|------------|
| 013       | BOLT and Nut, $\frac{1}{2}$ " x 6"                    | .07        |
| 051       | PADLOCK only. (If Keys are required order separately) | 1.20       |
| 062       | LAG SCREW, $\frac{3}{8}$ " x 2 $\frac{1}{2}$ "        | .02        |
| 085       | HASP with Staple                                      | .10        |
| 0382      | KEY for Padlock 051                                   | .16        |
| 1011      | BOX, Cast Iron, for 2265                              | 4.50       |
| 1012      | COVER for 2265  | 2.20       |
| 1027      | OAK CASE for 4 Relays. (Side by side)                 | 24.00      |
| 1028      | OAK CASE for 2 Relays. (End to end)                   | 20.00      |
| 1659      | OAK CASE for 3 Relays. (End to end)                   | 24.00      |
| 2265      | IRON CASE Complete, for Track Relays                  | 7.00       |
| 2269      | WOOD BLOCK for 2265                                   | .30        |
| 4468      | OAK CASE for 1 Relay 1880, etc.                       | 12.00      |
| 4554      | OAK CASE for 6 Relays. (Side by side)                 | 28.00      |
| 4845      | RELAY BOX for 4 Relays                                | 12.00      |
| 4846      | RELAY BOX for 6 Relays                                | 20.00      |
| 5292      | OAK CASE for 7 Relays. (Side by side)                 | 30.00      |
| 5974      | RELAY BOX, used with Post 5975                        | 12.00      |
| 5975      | POST Complete, for supporting Relay Box 5974          | 11.00      |
| 5976      | CAP for Post 5975                                     | 2.50       |
| 5977      | IRON POST only for 5975                               | 6.00       |
| 6017      | BASE for Post 5975                                    | 2.50       |
| 6199      | OAK CASE for 8 Relays. (Side by side)                 | 32.00      |
| 6202      | OAK CASE for 1 Relay 3590                             | 12.00      |
| 6259      | OAK CASE for 5 Relays. (Side by side)                 | 26.00      |
| 6839      | OAK CASE for 9 Relays. (Side by side)                 | 34.00      |
| 7495      | BOX, Cast Iron, for 7512                              | 5.00       |
| 7496      | COVER for 7512  | 2.80       |
| 7512      | IRON CASE Complete, for Glass Encased Relays          | 8.00       |
| 7927      | RELAY BOX for 10 Relays                               | 27.00      |

Order by NUMBER and NAME Appearing in Large Type.



RELAY CASES AND BOXES.

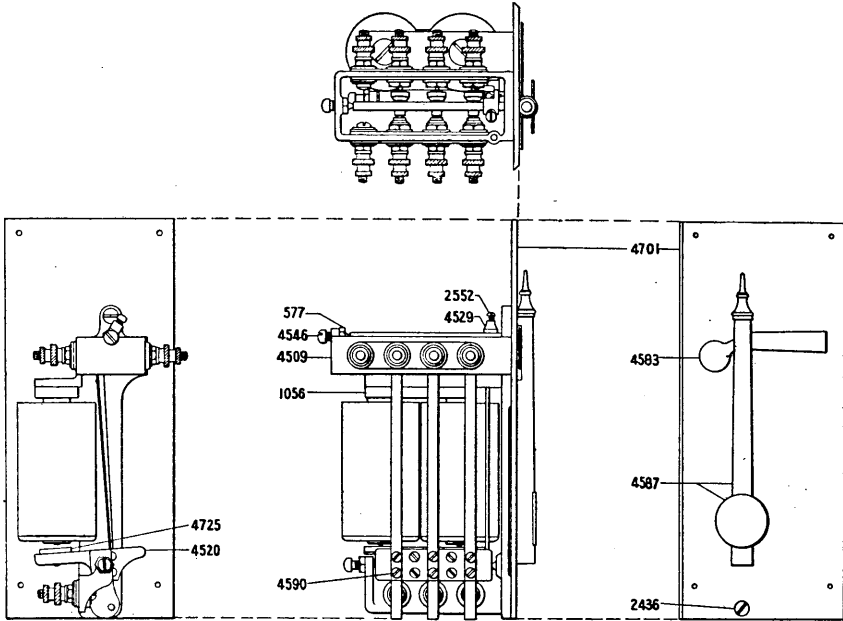


4845 FOR 4 RELAYS 15 1/4"  
 4846 " 6 " 21 3/4"  
 7927 " 10 " 34 3/4"

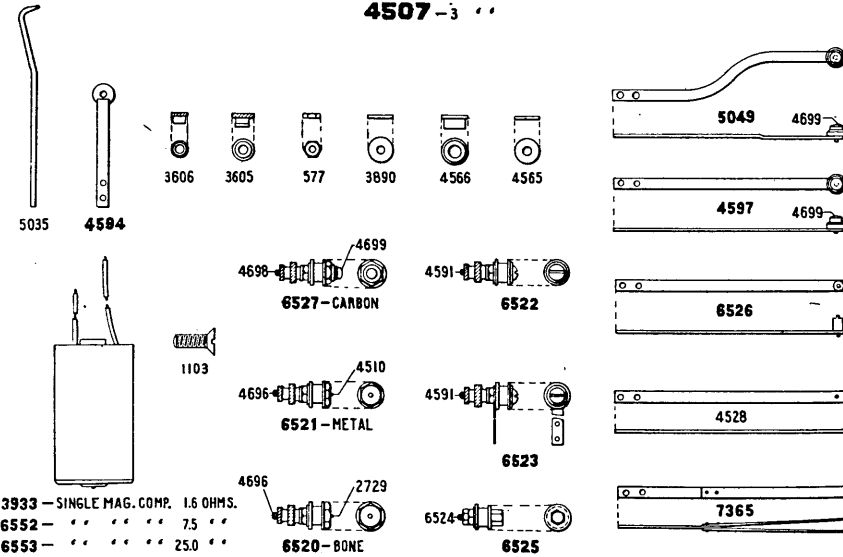
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRACK CIRCUIT.

INDICATORS.



**4581** - 1 CIRCUIT  
**4580** - 2 "  
**4507** - 3 "



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# TRACK CIRCUIT.

239

| Order No. | INDICATORS.   | List Price. |
|-----------|---|-------------|
| 577       | BRASS NUT for No. 10-32 Screw.....  | .02         |
| 1056      | YOKE for Magnets.....   | .40         |
| 1103      | SCREW, $\frac{5}{16}$ " x $\frac{3}{8}$ ", F. H. Machine.....   | .02         |
| 2436      | BRASS SCREW, No. 10 x $\frac{3}{8}$ ", F. H.....  | .01         |
| 2552      | IRON SCREW, No. 6 x $\frac{3}{8}$ ", R. H.....  | .01         |
| 2729      | BONE STOP for 6520.....   | .18         |
| 3605      | NUT for various Binding Posts.....  | .06         |
| 3606      | LOCK NUT for various Binding Posts.....   | .05         |
| 3890      | BRASS WASHER for No. 10 Screws.....   | .01         |
| 3933      | MAGNET (Single Magnet) Complete 1.6 ohms resistance. Two required per each Indicator.....                                       | 5.50        |
| 4507      | INDICATOR Complete, for Three Circuits. When ordering specify kind of Contacts, Front and Back; also resistance of Magnets..... | 32.00       |
| 4509      | FRAME, Casting only, for Indicators 4507, etc.....  | 6.00        |
| 4510      | SILVER CONTACT PIN for 6521.....  | .10         |
| 4520      | ARM supporting Armature for 4507, etc.....  | 1.20        |
| 4528      | CONTACT SPRING for use with Indicators.....   | .50         |
| 4529      | CRANK for Blade Shaft for various Indicators.....   | .50         |
| 4546      | ADJUSTING SCREW for various Indicators.....   | .16         |
| 4565      | INSULATING WASHER for various Binding Posts.....  | .06         |
| 4566      | INSULATING BUSHING for various Binding Posts.....   | .12         |
| 4580      | INDICATOR Complete for Two Circuits. When ordering specify kind of Contacts, Front and Back; also resistance of Magnets.....    | 30.00       |
| 4581      | INDICATOR Complete for One Circuit. When ordering specify kind of Contacts, Front and Back; also resistance of Magnets.....     | 28.00       |
| 4583      | ARM with Shaft Complete, for various Indicators. When ordering specify whether for Home or Distant.....                         | 1.50        |
| 4587      | POST Complete with Number Plate. When ordering specify Number or Letter.....  | 3.00        |
| 4590      | BRASS SCREW, No. 6 x $\frac{1}{2}$ ", F. H. Machine.....  | .01         |
| 4591      | BRASS SCREW, No. 10 x $\frac{1}{4}$ ", Round Head.....  | .03         |
| 4594      | FLEXIBLE CONNECTING STRIP Complete, with Washer.....  | .30         |
| 4597      | CONTACT ARM Complete, with Metal and Carbon Contacts.....   | 1.00        |
| 4696      | CONTACT SCREW for Binding Posts 6520 or 6521.....   | .20         |
| 4698      | CONTACT SCREW for Binding Post 6527.....  | .24         |
| 4699      | CARBON CONTACT.....   | .40         |
| 4701      | PLATE for Mounted Indicators.....   | 2.50        |
| 4725      | ARMATURE for various Indicators.....  | .80         |
| 5035      | OPERATING ROD used on Indicators when Normal Position is clear.....   | 1.00        |
| 5049      | CONTACT ARM Complete, with Metal and Carbon Contacts. Special.....  | 2.00        |
| 6520      | BINDING POST Complete, with Bone Stop. For various Indicators.....  | .80         |
| 6521      | BINDING POST Complete, with Metal Contact. Used Front or Back, as required.....   | .60         |
| 6522      | BINDING POST Complete. Used on various Indicators.....  | .40         |
| 6523      | BINDING POST Complete, with Flexible Conductor for Lower Terminals.....   | .60         |
| 6524      | SCREW (Special), for 6525.....  | .16         |
| 6525      | STOP Complete, for Kick-Off Spring. For use on various Indicators.....  | .40         |
| 6526      | CONTACT ARM Complete, with Metal Contact, Front and Back.....   | .80         |
| 6527      | BINDING POST Complete, with Carbon Contact.....   | 1.00        |
| 6552      | MAGNET (Single Magnet) Complete. 7.5 ohms resistance. Two required per each Indicator.....                                      | 5.50        |

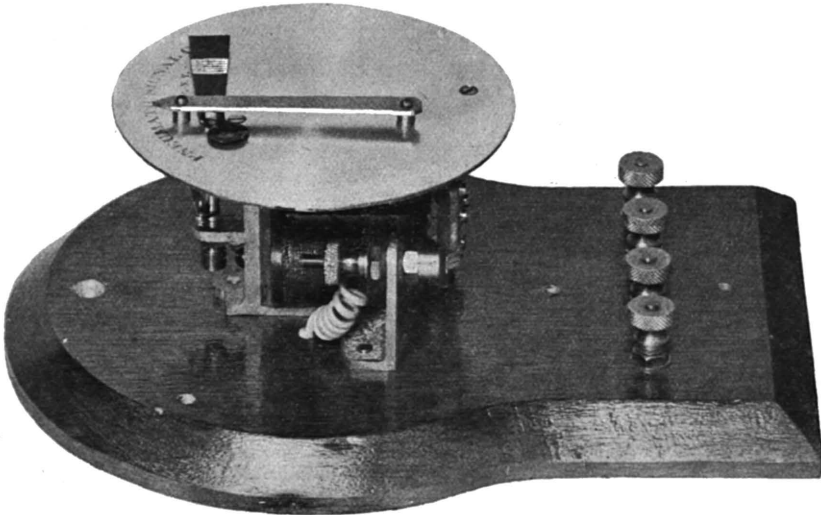
Order by NUMBER and NAME Appearing in Large Type.

TRACK CIRCUIT.

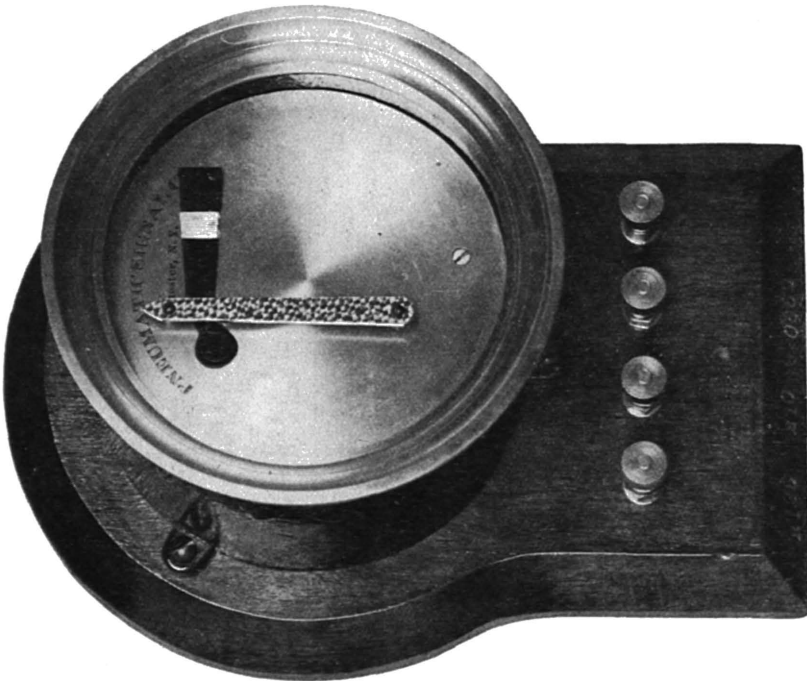
| Order No.   | INDICATORS.—CONT.  | List Price. |
|---|--|-------------|
| <b>6553</b>   | <b>MAGNET</b> (Single Magnet) Complete. 25 ohms resistance. Two required per each Indicator..... | 5.50 .....  |
| <b>7365</b>   | <b>CONTACT SPRING</b> Complete. Special for making Front Contact before breaking rear.....       | 4.00 .....  |
| <p>NOTE.—The illustration on the opposite page shows another form of Home Signal Indicator. This Indicator can be supplied with either one front or one back contact. We also manufacture a Three Position Distant Signal Indicator which has the same external appearance as the Home Signal Indicator, but has two pair of magnets so arranged that current is required to operate the blade to either the danger or clear position. This style of Indicator cannot be furnished with contacts.</p> |  |             |
| <b>8462</b>   | <b>HOME SIGNAL INDICATOR</b> without Contacts. When ordering specify resistance of Magnets.....  | 30.00 ..... |
|   | If Front and Back Contacts are required, add to List Price.....                                  | 6.00 .....  |
| <b>8463</b>   | <b>DISTANT SIGNAL INDICATOR</b> Complete. When ordering specify resistance of Magnets.....       | 36.00 ..... |

Order by NUMBER and NAME Appearing in Large Type.

INDICATORS.



HOME SIGNAL INDICATOR—CASE REMOVED.



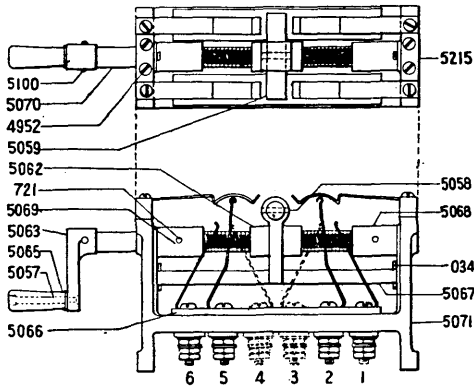
HOME SIGNAL INDICATOR—COMPLETE.

8462 HOME INDICATOR.

8463 DISTANT INDICATOR.

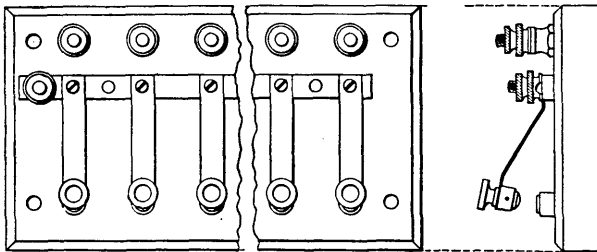
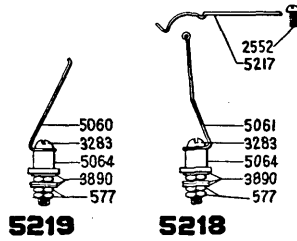
TRACK CIRCUIT.

RELEASE KEYS, PUSH BUTTONS, ETC.



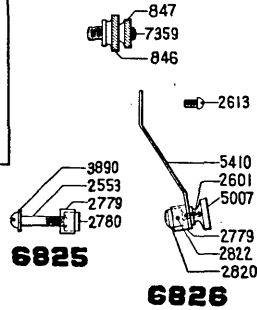
**6922** - SINGLE

**4987** - DOUBLE



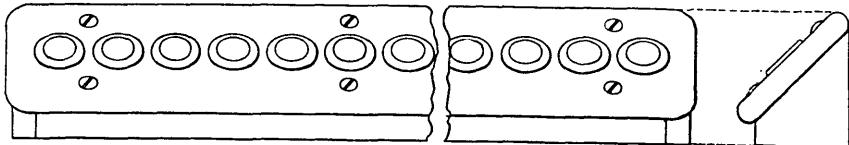
**6824**

- 5412 - 2 SPRING HAND KEYS,
- 7852 - 3 " " " " " "
- 7853 - 4 " " " " " "
- 5411 - 5 " " " " " "
- 5483 - 6 " " " " " "
- 5551 - 7 " " " " " "
- 5550 - 8 " " " " " "
- 7854 - 9 " " " " " "
- 7855 - 10 " " " " " "
- 7352 - 11 " " " " " "



**6825**

**6826**



**7343** - 8 PUSH BUTTONS.  
**4882** - 11 " " " "

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# TRACK CIRCUIT.

243

| Order No. | RELEASE KEYS, PUSH BUTTONS, ETC.  | List Price. |
|-----------|---|-------------|
| 034       | COTTER PIN, $\frac{3}{8}$ " x $\frac{1}{2}$ " (per 100).....  | .80         |
| 506       | BRASS WASHER for $\frac{1}{4}$ " Screw .....  | .01         |
| 577       | BRASS NUT for No. 10-32 Screw.....  | .02         |
| 721       | PIN, $\frac{1}{8}$ " x $\frac{5}{8}$ " .....  | .02         |
| 845       | BASE for Binding Posts.....   | .08         |
| 846       | NUT for Binding Posts.....  | .06         |
| 847       | NUT LOCK for Binding Posts.....   | .05         |
| 2552      | IRON SCREW, No. 6 x $\frac{3}{8}$ ", Rd. Hd.....  | .01         |
| 2553      | BRASS SCREW, No. 8 x $1\frac{1}{2}$ ", Rd Hd.....   | .02         |
| 2601      | BRASS SCREW, No 6 x $\frac{1}{2}$ ", F. Hd.....   | .01         |
| 2613      | BRASS SCREW, No. 6 x $\frac{1}{4}$ ", Rd. Hd.....   | .01         |
| 2779      | HOLDER for Carbon Contacts.....   | .20         |
| 2780      | CARBON CONTACT for 6825 .....   | .30         |
| 2820      | UPPER CARBON CONTACT for Spring Keys.....   | .40         |
| 2822      | PIN holding 2820 to 2779.....   | .02         |
| 3283      | BRASS SCREW, No. 10 x $1\frac{1}{2}$ ", for 5208 or 5219.....   | .03         |
| 3520      | BRASS SCREW, $\frac{1}{4}$ " x 2", Rd. Hd. ....   | .08         |
| 3890      | BRASS WASHER for No. 10 Screw.....  | .01         |
| 4882      | BOX Complete with 11 Push Buttons.....  | 10.00       |
| 4952      | IRON SCREW, No. 6 x $\frac{3}{4}$ ", Rd. Hd.....  | .01         |
| 4987      | SCREW HAND KEY Complete, equipped on both sides with Front<br>Contacts 1, 2, 5 and 6. If Back Contacts 3 and 4 are required,<br>specify separately .....      | 30.00       |
| 5007      | INSULATING BUTTON for Spring Hand Keys.....   | .20         |
| 5057      | PIN, Handle to Crank.....   | .20         |
| 5058      | PIN, $\frac{1}{8}$ " x $\frac{9}{16}$ ".....  | .04         |
| 5059      | INSULATOR for Crosshead, for 4987 or 6922.....  | .30         |
| 5060      | SIDE CONTACT SPRING for 5219.....   | .50         |
| 5061      | CENTER CONTACT SPRING for 5218.....   | .50         |
| 5062      | CROSSHEAD for 4987.....   | 2.50        |
| 5063      | CRANK for 4987.....   | 2.00        |
| 5064      | INSULATING BUSHING for 5218 or 5219 .....   | .20         |
| 5065      | CRANK HANDLE for 4987 or 6922 .....   | .30         |
| 5066      | CONTACT POST INSULATOR for 4987 or 6922.....  | .80         |
| 5067      | GUIDE ROD for 4987 or 6922.....   | .40         |
| 5068      | BACK SLEEVE for 4987 or 6922.....   | .30         |
| 5069      | FRONT SLEEVE for 4987 or 6922.....  | .30         |
| 5070      | CRANK SHAFT for 4987 or 6922.....   | 3.00        |
| 5071      | FRAME, Casting only, for 4987 or 6922.....  | 10.00       |
| 5100      | SCREW fastening 5063 to 5070.....   | .12         |
| 5215      | INSULATING BLOCK for retaining Springs for 4987 or 6922 .....   | .70         |
| 5217      | RETAINING SPRING for 5218.....  | .70         |
| 5218      | CENTER CONTACT Complete, for 4987 or 6922.....  | 1.40        |
| 5219      | SIDE CONTACT Complete, for 4987 or 6922.....  | .70         |
| 5410      | SPRING for Hand Keys.....   | .30         |
| 5411      | 5 SPRING HAND KEYS Mounted Complete .....   | 26.00       |
| 5412      | 2 SPRING HAND KEYS Mounted Complete .....   | 14.00       |
| 5483      | 6 SPRING HAND KEYS Mounted Complete .....   | 30.00       |
| 5550      | 8 SPRING HAND KEYS Mounted Complete .....   | 38.00       |
| 5551      | 7 SPRING HAND KEYS Mounted Complete .....   | 34.00       |
| 6824      | BINDING POST Complete, for Spring Hand Keys .....   | .30         |
| 6825      | LOWER CONTACT Complete.....   | .52         |
| 6826      | SPRING CONTACT Complete for Spring Hand Keys.....   | 1.20        |
| 6922      | SCREW HAND RELEASE KEY Complete, equipped on one side with<br>Front Contacts 1, 2, 5 and 6. If Back Contacts 3 and 4 are<br>required, specify separately..... | 25.00       |

Order by NUMBER and NAME Appearing in Large Type.

**TRACK CIRCUIT.**

| Order No. | RELEASE KEYS, PUSH BUTTONS, ETC.—CONT.     | List Price. |
|-----------|--|-------------|
| 7343      | BOX Complete with 8 Push Buttons. ....     | 8.00        |
| 7352      | 11 SPRING HAND KEYS mounted Complete. .... | 50.00       |
| 7359      | Binding Post STUD. ....                    | .06         |
| 7852      | 3 SPRING HAND KEYS mounted Complete. ....  | 18.00       |
| 7853      | 4 SPRING HAND KEYS mounted Complete. ....  | 22.00       |
| 7854      | 9 SPRING HAND KEYS mounted Complete. ....  | 42.00       |
| 7855      | 10 SPRING HAND KEYS mounted Complete. .... | 46.00       |

**BELL KEY.**

On the upper part of the opposite page is shown the Bell Key (8448) which is the standard of this Company. It has front and back contacts and may therefore be used on open or closed circuit or as a two-way circuit controller. The contacts are all of platinum. To change the circuit, considerable pressure must be applied to the push-button. The binding posts are carefully insulated from the frame.

|                     |  |  |
|---------------------|--|--|
| 8448 BELL KEY. .... |  |  |
|---------------------|--|--|

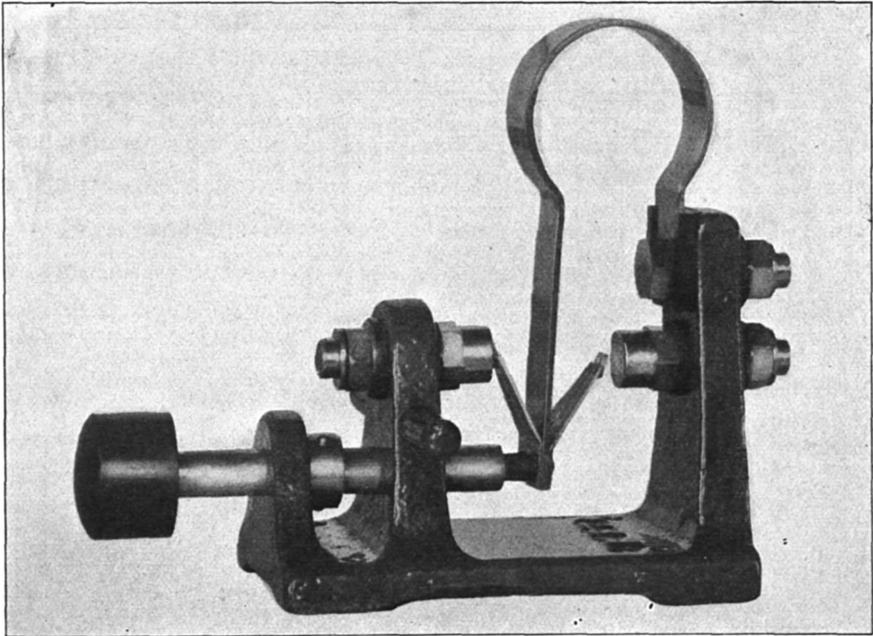
**HAND SWITCH.**

On the lower part of the same page is represented one form of hand switch (12431) made by this Company. As made in this form it is suitable for a number of different purposes. This same style of switch will be furnished with as many poles as desired.

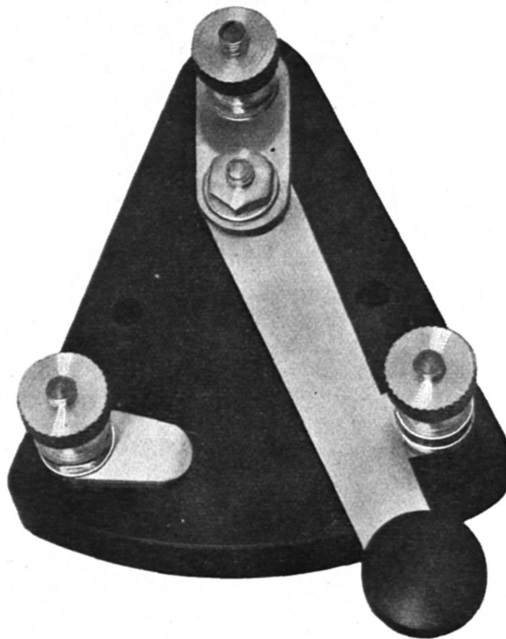
|                         |  |  |
|-------------------------|--|--|
| 12431 HAND SWITCH. .... |  |  |
|-------------------------|--|--|

Order by NUMBER and NAME Appearing in Large Type.





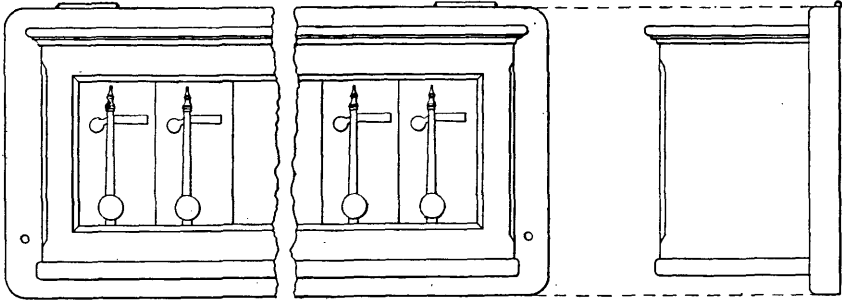
BELL KEY (8448).



HAND SWITCH (12431).

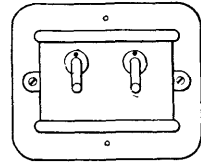
TRACK CIRCUIT.

INDICATOR AND RELEASE KEY CASES.

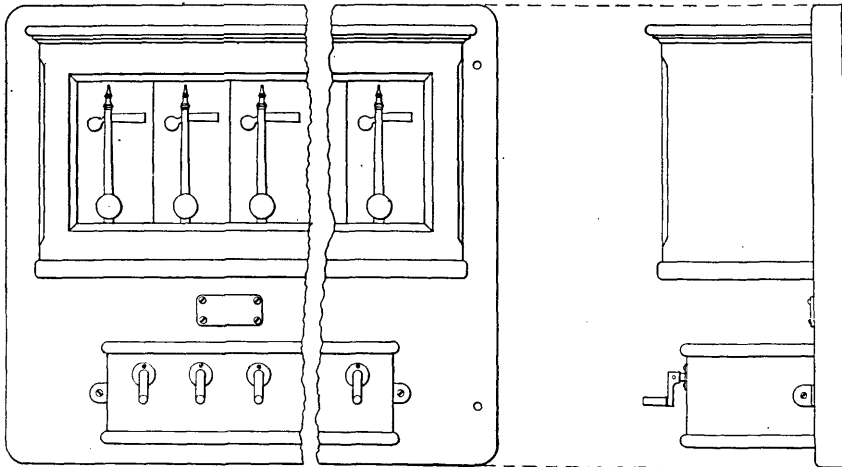


5514, CASE WITH 1 INDICATOR.

|      |   |   |    |   |
|------|---|---|----|---|
| 5457 | “ | “ | 2  | “ |
| 6630 | “ | “ | 3  | “ |
| 6260 | “ | “ | 4  | “ |
| 5456 | “ | “ | 5  | “ |
| 5484 | “ | “ | 6  | “ |
| 5552 | “ | “ | 7  | “ |
| 5508 | “ | “ | 8  | “ |
| 6631 | “ | “ | 9  | “ |
| 5509 | “ | “ | 10 | “ |
| 7858 | “ | “ | 11 | “ |
| 6238 | “ | “ | 12 | “ |
| 7859 | “ | “ | 13 | “ |
| 7860 | “ | “ | 14 | “ |
| 7351 | “ | “ | 15 | “ |



5275



6223, CASES WITH 1 INDICATOR & 1 RELEASE KEY.

|      |   |   |   |   |   |   |   |
|------|---|---|---|---|---|---|---|
| 7684 | “ | “ | 2 | “ | 2 | “ | “ |
| 6583 | “ | “ | 3 | “ | 3 | “ | “ |
| 6251 | “ | “ | 4 | “ | 3 | “ | “ |
| 4984 | “ | “ | 4 | “ | 4 | “ | “ |
| 8670 | “ | “ | 5 | “ | 4 | “ | “ |
| 9701 | “ | “ | 6 | “ | 5 | “ | “ |

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# TRACK CIRCUIT.

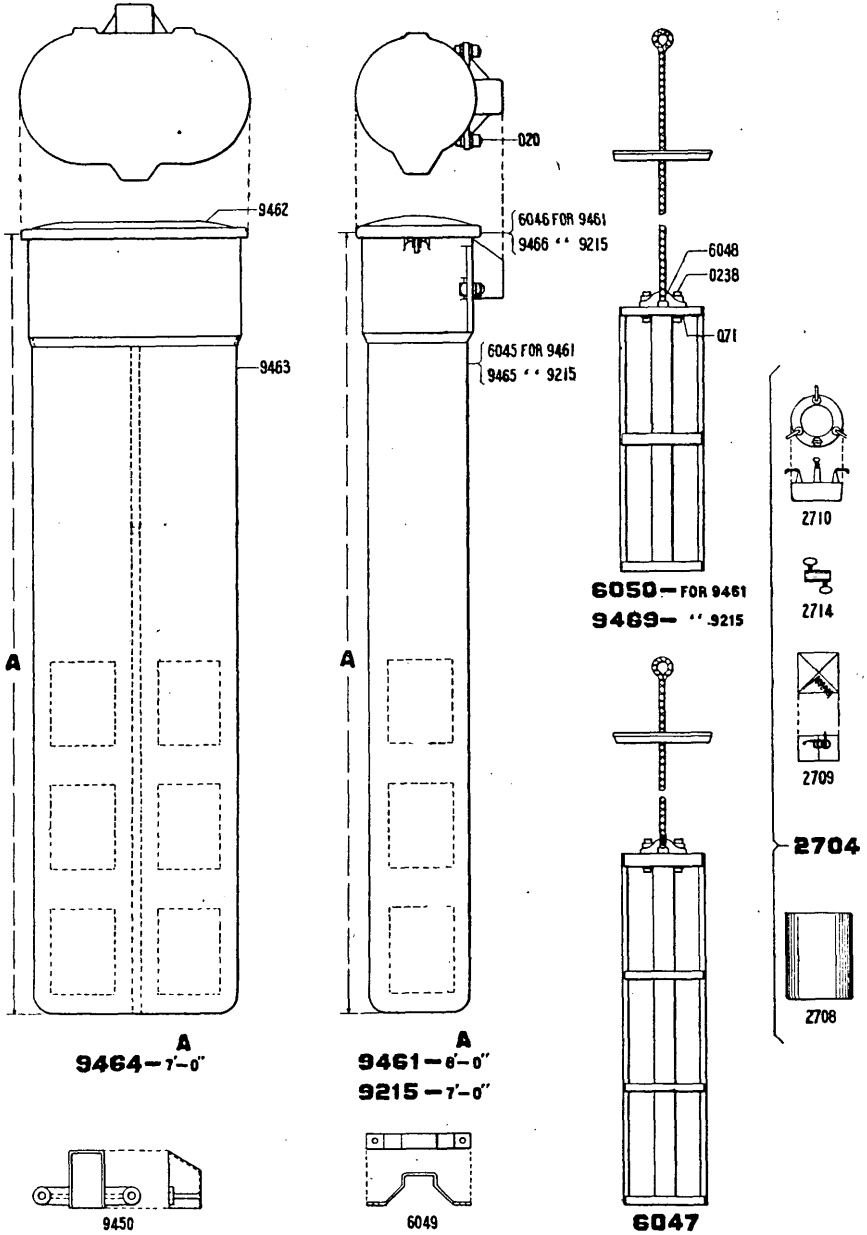
247

| Order<br>No. | INDICATOR AND RELEASE KEY CASES.                                      | List Price. |
|--------------|---|-------------|
| 4984         | 2 Cases with 4 INDICATORS and 4 RELEASE KEYS, Complete with Backboard | 272.00      |
| 5275         | 1 Case with 2 RELEASE KEYS, Complete with Backboard                   | 66.00       |
| 5456         | 1 Case with 5 INDICATORS, Complete with Backboard                     | 178.00      |
| 5457         | 1 Case with 2 INDICATORS, Complete with Backboard                     | 76.00       |
| 5484         | 1 Case with 6 INDICATORS, Complete with Backboard                     | 212.00      |
| 5508         | 1 Case with 8 INDICATORS, Complete with Backboard                     | 280.00      |
| 5509         | 1 Case with 10 INDICATORS, Complete with Backboard                    | 348.00      |
| 5514         | 1 Case with 1 INDICATOR, Complete with Backboard                      | 42.00       |
| 5552         | 1 Case with 7 INDICATORS, Complete with Backboard                     | 246.00      |
| 6223         | 2 Cases with 1 INDICATOR and 1 RELEASE KEY Complete with Backboard    | 76.00       |
| 6238         | 1 Case with 12 INDICATORS, Complete with Backboard                    | 416.00      |
| 6251         | 2 Cases with 4 INDICATORS and 3 RELEASE KEYS, Complete with Backboard | 240.00      |
| 6260         | 1 Case with 4 INDICATORS, Complete with Backboard                     | 144.00      |
| 6583         | 2 Cases with 3 INDICATORS and 3 RELEASE KEYS, Complete with Backboard | 206.00      |
| 6630         | 1 Case with 3 INDICATORS, Complete with Backboard                     | 110.00      |
| 6631         | 1 Case with 9 INDICATORS, Complete with Backboard                     | 314.00      |
| 7351         | 1 Case with 15 INDICATORS, Complete with Backboard                    | 518.00      |
| 7684         | 2 Cases with 2 INDICATORS and 2 RELEASE KEYS, Complete with Backboard | 142.00      |
| 7858         | 1 Case with 11 INDICATORS, Complete with Backboard                    | 382.00      |
| 7859         | 1 Case with 13 INDICATORS, Complete with Backboard                    | 450.00      |
| 7860         | 1 Case with 14 INDICATORS, Complete with Backboard                    | 484.00      |
| 8670         | 2 Cases with 5 INDICATORS and 4 RELEASE KEYS, Complete with Backboard | 306.00      |
| 9701         | 2 Cases with 6 INDICATORS and 5 RELEASE KEYS, Complete with Backboard | 372.00      |

Order by NUMBER and NAME Appearing in Large Type.

TRACK CIRCUIT.

BATTERIES AND CHUTES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

# TRACK CIRCUIT.

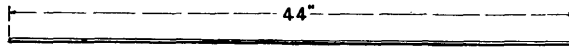
249

| Order<br>No. | BATTERIES AND CHUTES.   | List Price. |
|--------------|---|-------------|
| 020          | BOLT WITH NUT, $\frac{3}{4}$ "x2".....  | .08.....    |
| 071          | WASHER for $\frac{3}{8}$ " Bolt.....  | .01.....    |
| 0238         | BOLT WITH NUT, $\frac{3}{8}$ "x3".....  | .03.....    |
| 2704         | GRAVITY BATTERY Complete.....   | .....       |
| 2708         | GLASS JAR, 6"x8" for 2704.....  | .34.....    |
| 2709         | COPPER, with Connecting Wire, for 2704.....   | .20.....    |
| 2710         | 4 POUND ZINC, for 2704.....   | .....       |
| 2714         | CONNECTOR for Wire Terminal.....  | .....       |
| 6045         | BATTERY CHUTE, Casting only, for 9461.....  | .....       |
| 6046         | COVER for 9461.....   | .....       |
| 6047         | THREE CELL ELEVATOR for use with 9461, etc.....   | 2.10.....   |
| 6048         | HANGER for Battery Elevators.....   | .....       |
| 6049         | STRAP for holding Trunking to 9461.....   | .....       |
| 6050         | TWO-CELL ELEVATOR for use with 9461.....  | 1.82.....   |
| 9215         | FOOT CAST IRON BATTERY CHUTE Complete with Elevator and<br>Frost Board to hold 2 or 3 cells, 6"x8" Gravity Battery. When<br>ordering specify whether for two or three cells.....    | 30.50.....  |
| 9450         | CAP for holding Trunking to 9215.....   | .....       |
| 9461         | 6-FOOT CAST IRON BATTERY CHUTE Complete with Elevator and<br>Frost Board, to hold 2 or 3 cells, 6"x8" Gravity Battery. When<br>ordering specify whether for two or three cells..... | 26.30.....  |
| 9462         | COVER for Double Battery Chute 9464.....  | .....       |
| 9463         | BATTERY CHUTE, Casting only, for 9464.....  | .....       |
| 9464         | 7-FOOT DOUBLE BATTERY CHUTE Complete with Elevators and<br>Frost Board, to hold 4 or 6 cells of 6"x8" Gravity Battery. When<br>ordering specify whether for four or six cells.....  | 54.00.....  |
| 9465         | BATTERY CHUTE, Casting only, for 9215.....  | .....       |
| 9466         | COVER only for 9215.....  | .....       |
| 9469         | TWO-CELL ELEVATOR for use with 9215.....  | .....       |

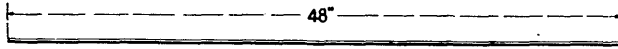
Order by NUMBER and NAME Appearing in Large Type.

# TRACK CIRCUIT.

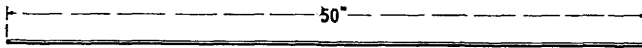
SPLICE BARS, CHANNEL PINS AND BOND WIRES.



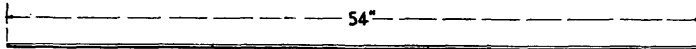
12350



12351



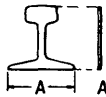
12352



12353



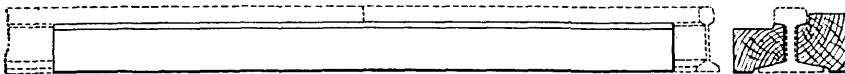
12354



- 12391 - 4 1/4"
- 12392 - 4 1/2"
- 12393 - 4 3/4"
- 12394 - 5"
- 12395 - 5 3/8"
- 12396 - 5 3/4"



10350



12349

# TRACK CIRCUIT.

Order  
No.

SPLICE BARS, CHANNEL PINS AND BOND WIRES.

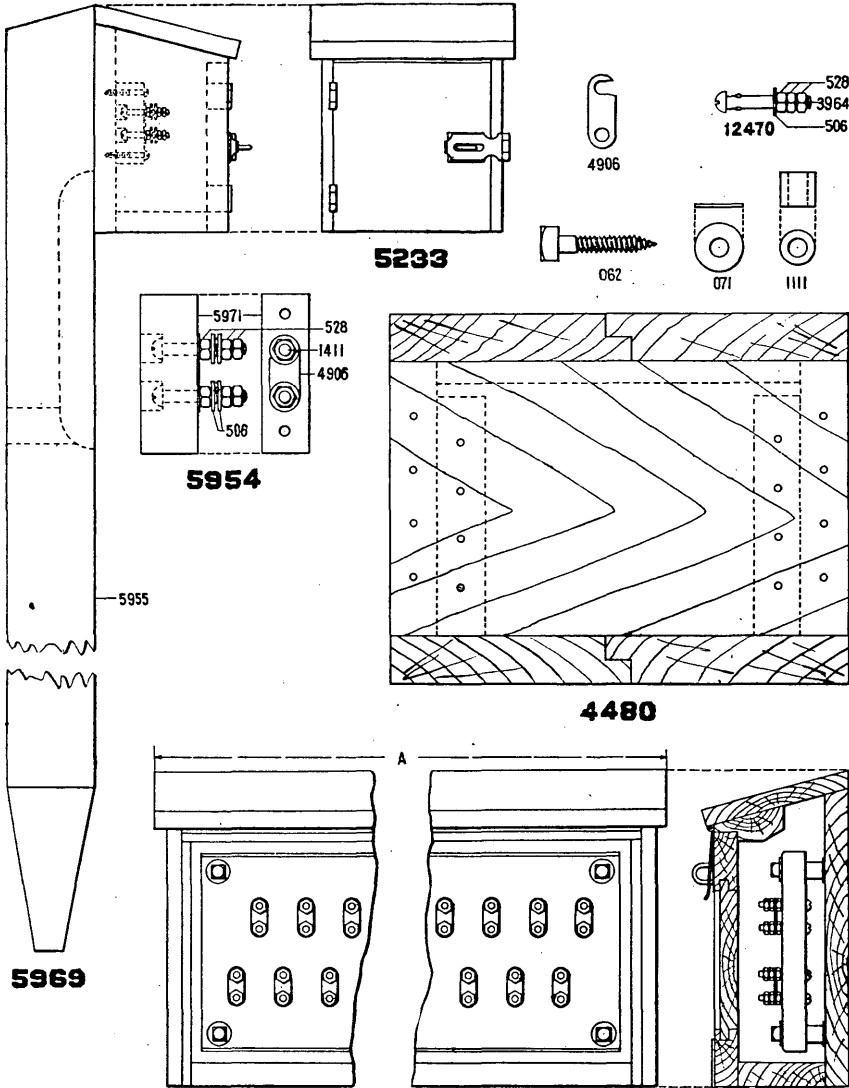
List Price.

|  | Prices on Application. |
|--|------------------------|
| <b>10350</b> CHANNEL PIN for No. 8 Bond Wire. ....   | .....                  |
| <b>12349</b> WOOD SPLICE BAR for Insulated Rail Joint. When ordering send<br>print of Rail Section. .... | .....                  |
| <b>12350</b> No. 8 GALVANIZED BOND WIRE 44" long. ....   | .....                  |
| <b>12351</b> No. 8 GALVANIZED BOND WIRE 48" long. ....   | .....                  |
| <b>12352</b> No. 8 GALVANIZED BOND WIRE 50" long. ....   | .....                  |
| <b>12353</b> No. 8 GALVANIZED BOND WIRE 54" long. ....   | .....                  |
| <b>12354</b> No. 8 GALVANIZED BOND WIRE 60" long. ....   | .....                  |
| <b>12391</b> FIBRE END POST for rail 4 $\frac{1}{4}$ " high. ....  | .....                  |
| <b>12392</b> FIBRE END POST for rail 4 $\frac{1}{2}$ " high. ....  | .....                  |
| <b>12393</b> FIBRE END POST for rail 4 $\frac{3}{4}$ " high. ....  | .....                  |
| <b>12394</b> FIBRE END POST for rail 5" high. ....   | .....                  |
| <b>12395</b> FIBRE END POST for rail 5 $\frac{1}{4}$ " high. ....  | .....                  |
| <b>12396</b> FIBRE END POST for rail 5 $\frac{3}{4}$ " high. ....  | .....                  |

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRUNKING AND STAKES.

JUNCTION BOXES.



|      |              |           |
|------|--------------|-----------|
| 4875 | FOR 12 WIRES | 19 3/4"   |
| 4876 | " 16 "       | 23 1/2"   |
| 7059 | " 28 "       | 29 3/4"   |
| 7057 | " 56 "       | 3-7 3/4"  |
| 7803 | " 112 "      | 6-11 3/4" |
| 7933 | " 140 "      | 8-7 1/2"  |
| 7339 | " 252 "      | 15-3 3/4" |

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



TRUNKING AND STAKES.

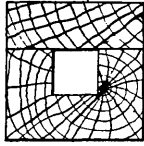
| Order No. | JUNCTION BOXES.  | List Price. |
|-----------|--|-------------|
| 062       | LAG SCREW, $\frac{3}{8}$ "x2 $\frac{1}{2}$ "                           | .02         |
| 071       | $\frac{3}{8}$ " PLATE WASHER   | .01         |
| 506       | BRASS WASHER for $\frac{1}{4}$ " Screw                                 | .01         |
| 528       | BRASS NUT for $\frac{1}{4}$ " Screw                                    | .02         |
| 1111      | BUSHING supporter between Terminal Board and Box                       | .12         |
| 1411      | BRASS SCREW, $\frac{1}{4}$ "x1 $\frac{3}{4}$ "                         | .08         |
| 3964      | BRASS SCREW $\frac{1}{4}$ "x2". Special                                | .10         |
| 4480      | WOOD JUNCTION BOX, 15 $\frac{1}{2}$ "x15 $\frac{1}{2}$ " inside        | 4.50        |
| 4875      | WOOD JUNCTION BOX Complete with Terminal Board for 12 Wires            | 18.00       |
| 4876      | WOOD JUNCTION BOX Complete with Terminal Board for 16 Wires            | 21.20       |
| 4906      | CONNECTING LINK for Terminal Binding Posts                             | .20         |
| 5233      | JUNCTION BOX for 5969  | 2.00        |
| 5954      | TERMINAL BLOCK Complete for 5969                                       | 1.10        |
| 5955      | POST for 5969  | 1.20        |
| 5969      | JUNCTION BOX AND STAKE Complete, with Terminal Block for Branch Common | 4.50        |
| 5971      | SLATE TERMINAL BLOCK for 5954  | .60         |
| 7057      | WOOD JUNCTION BOX Complete with Terminal Board for 56 Wires            | 53.20       |
| 7059      | WOOD JUNCTION BOX Complete with Terminal Board for 28 Wires            | 30.80       |
| 7339      | WOOD JUNCTION BOX Complete with Terminal Board for 252 Wires           | 176.40      |
| 7803      | WOOD JUNCTION BOX Complete with Terminal Board for 112 Wires           | 88.00       |
| 7933      | WOOD JUNCTION BOX Complete with Terminal Board for 140 Wires           | 107.60      |
| 12470     | BINDING POST for Junction Box Terminal Board                           | .18         |

Order by NUMBER and NAME Appearing in Large Type.

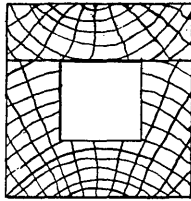
TRUNKING AND STAKES.



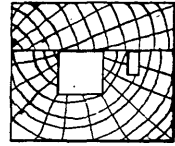
2747



898



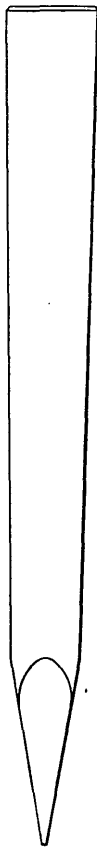
897



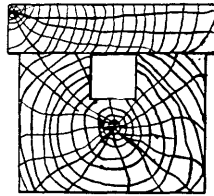
2059



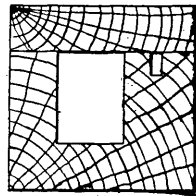
5524—3' X 4" X 4'-0"  
6034—4' X 4" X 3'-6"



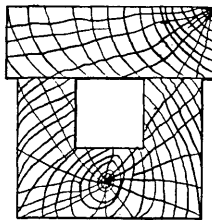
915—4' Cl. L. X 3'-0"



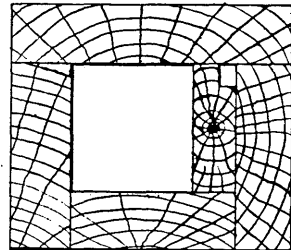
6033



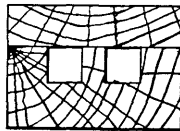
2058



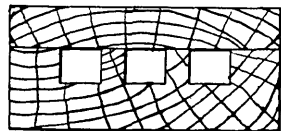
5246



2057



5731



5730

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRUNKING AND STAKES.

| Order No. | TRUNKING AND STAKES.  | List Price. |
|-----------|---|-------------|
| 897       | TRUNKING, 3"x4", with lid 1½"x4", groove 1¼"x1¼" per ft.....            | .10.....    |
| 898       | TRUNKING, 2"x3", with lid 1"x3", groove 1"x1" per ft.....               | .06.....    |
| 915       | STAKE, 4" dia. 3' long.....   | .30.....    |
| 2057      | TRUNKING, 4"x6", with lid 1½"x6", grooves 2¼"x2¼" and ½"x¾" per ft..... | .10.....    |
| 2058      | TRUNKING, 3"x4", with lid 1"x4", grooves 1½"x2" and ¼"x½" per ft..      | .10.....    |
| 2059      | TRUNKING, 2"x3½", with lid 1"x3", grooves 1"x1" and ¼"x½" per ft..      | .08.....    |
| 2747      | TRUNKING for Wood Poles, 1½"x3", groove ¾"x1" per ft.....               | .06.....    |
| 5246      | TRUNKING, 3"x4", with lid 1½"x4½", groove 1½"x1½" per ft.....           | .10.....    |
| 5524      | STAKE, 3"x4"x4' long.....   | .31.....    |
| 5730      | TRUNKING, 1½"x5½", with lid ¾"x5¾", with three grooves ¾"x7" per ft     | .10.....    |
| 5731      | TRUNKING, 1½"x3¾", with lid ¾"x3¾", with two grooves ¾"x¾" per ft..     | .07.....    |
| 6033      | TRUNKING, 3"x4", with lid 1"x4½", groove 1"x1" per ft.....              | .10.....    |
| 6034      | STAKE, 4"x4"x3'-6" long.....  | .36.....    |

Order by NUMBER and NAME Appearing in Large Type.



Under this heading have been included Gasoline and Gas Engines, Motors, Generators, Storage Batteries and Switch Boards.

**ENGINES AND BATTERIES.**

Gasoline or Gas Engines and Storage Batteries of any desired make can be furnished to suit the preference of the purchaser. As we do not manufacture these, they are therefore not listed. In a table given on pages 258 and 259 we show the size of Engine or Motor and Generator which it is recommended should be used for charging Storage Batteries of various capacities most frequently employed in electric interlocking plants.

**MOTORS AND GENERATORS.**

Motors and Generators manufactured by this Company, which are designed especially for this class of work, are shown complete and in detail on pages 260 to 267 inclusive.

**SWITCH BOARDS.**

Switch Boards of the general design, illustrated on pages 268 and 269, are also manufactured by this Company, and can be furnished on specification, as required. On account of the great variety in combination of instruments, switches, etc., which depend upon the conditions at the particular plant for which the Switch Boards are designed, we have not shown in detail all of the various kinds of Switch Boards Complete which we are prepared to furnish. Detail parts which go to make up any desired combination are illustrated and listed on pages 271 to 284 inclusive.

## POWER APPARATUS.

## BATTERY INFORMATION.

| Battery. | Normal Charging Rate. | Generator Order No. | Minimum Size of Engine Permissible. | Minimum Size of Motor Permissible. |
|----------|-----------------------|---------------------|-------------------------------------|------------------------------------|
| 30 A. H. | 3.75 Amp.             | 2262                | 1.5 H. P.                           | 1 H. P.                            |
| 40 "     | 5. "                  | 2262                | 2. "                                | 1.5 "                              |
| 45 "     | 5.6 "                 | 2262                | 2. "                                | 1.5 "                              |
| 60 "     | 7.5 "                 | 2262                | 2.5 "                               | 2. "                               |
| 75 "     | 9.3 "                 | 2262                | 3. "                                | 2.5 "                              |
| 80 "     | 10 "                  | 2262                | 3. "                                | 2.5 "                              |
| 90 "     | 11.25 "               | 2135                | 3.5 "                               | 3. "                               |
| 100 "    | 12.5 "                | 2135                | 3.75 "                              | 3.25 "                             |
| 120 "    | 15. "                 | 2135                | 4.5 "                               | 4. "                               |
| 140 "    | 17.5 "                | 6075                | 5. "                                | 4.5 "                              |
| 160 "    | 20 "                  | 6075                | 5.5 "                               | 5. "                               |

## GENERATOR INFORMATION.

| Generator Order No. | Amperes. | Volts.  | Approximate Speed. | Approximate H. P. to Drive. |
|---------------------|----------|---------|--------------------|-----------------------------|
| 2262                | 10       | 110-150 | 1400               | 2.7                         |
| 2135                | 15       | 110-150 | 1400               | 3.6                         |
| 6075                | 20       | 110-150 | 1400               | 5.                          |

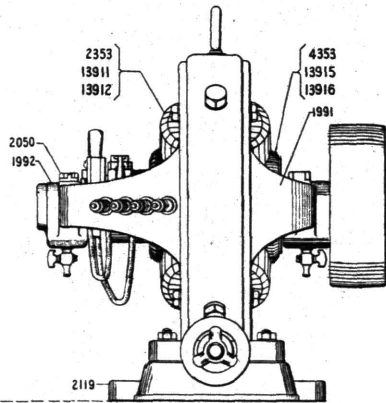
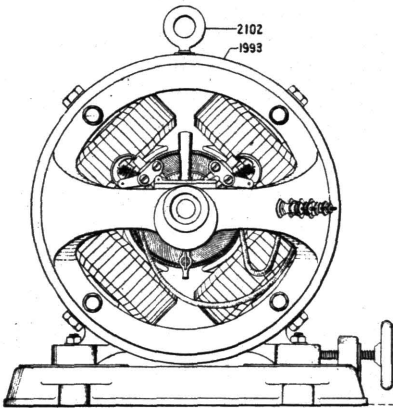
## MOTOR INFORMATION.

| Motor. | H. P. | Volts. | Approximate Amperage. | Approximate Speed. |
|--------|-------|--------|-----------------------|--------------------|
| 13897  | 2     | 110    | 17.                   | 1400               |
| 13898  | 2     | 220    | 8.5                   | 1400               |
| 13899  | 3     | 110    | 20.                   | 1400               |
| 13900  | 3     | 220    | 10.                   | 1400               |
| 6142   | 5     | 110    | 40.                   | 1400               |
| 6143   | 5     | 220    | 20.                   | 1400               |

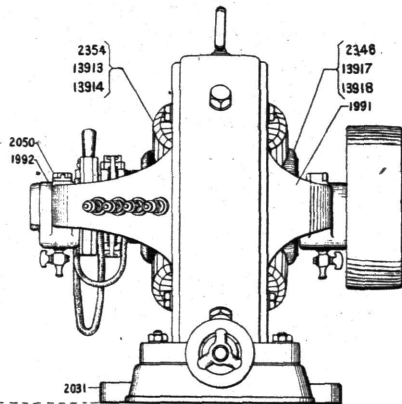
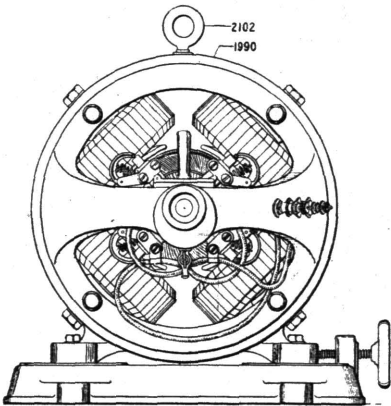
## MOTOR GENERATOR SETS.

| Motor Gen.<br>Order No. | Motor<br>Order No. | Generator<br>Order No. | INPUT.                  |        | OUTPUT.  |        |       |       |      |     |     |      |     |       |       |      |     |       |       |      |     |     |      |     |       |       |      |     |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |
|-------------------------|--------------------|------------------------|-------------------------|--------|----------|--------|-------|-------|------|-----|-----|------|-----|-------|-------|------|-----|-------|-------|------|-----|-----|------|-----|-------|-------|------|-----|-------|------|------|-----|-----|-----|-----|-------|------|-----|-----|------|------|------|-----|-----|-----|-----|------|
|                         |                    |                        | Approximate<br>Amperes. | Volts. | Amperes. | Volts. |       |       |      |     |     |      |     |       |       |      |     |       |       |      |     |     |      |     |       |       |      |     |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |
| 13903                   | 13897              | 2262                   | 17.                     | 110    | 8.       | 150    |       |       |      |     |     |      |     |       |       |      |     |       |       |      |     |     |      |     |       |       |      |     |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |
| 13904                   | 13898              |                        | 8.5                     | 220    |          |        | 13905 | 13899 | 2262 | 20. | 110 | 10.  | 150 | 13906 | 13900 | 10.  | 220 | 13907 | 13899 | 2135 | 25. | 110 | 12.5 | 150 | 13908 | 13900 | 12.5 | 220 | 13909 | 6142 | 2135 | 30. | 110 | 15. | 150 | 13910 | 6143 | 15. | 220 | 4547 | 6142 | 6075 | 40. | 110 | 20. | 150 | 7648 |
| 13905                   | 13899              | 2262                   | 20.                     | 110    | 10.      | 150    |       |       |      |     |     |      |     |       |       |      |     |       |       |      |     |     |      |     |       |       |      |     |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |
| 13906                   | 13900              |                        | 10.                     | 220    |          |        | 13907 | 13899 | 2135 | 25. | 110 | 12.5 | 150 | 13908 | 13900 | 12.5 | 220 | 13909 | 6142  | 2135 | 30. | 110 | 15.  | 150 | 13910 | 6143  | 15.  | 220 | 4547  | 6142 | 6075 | 40. | 110 | 20. | 150 | 7648  | 6143 | 20. | 220 |      |      |      |     |     |     |     |      |
| 13907                   | 13899              | 2135                   | 25.                     | 110    | 12.5     | 150    |       |       |      |     |     |      |     |       |       |      |     |       |       |      |     |     |      |     |       |       |      |     |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |
| 13908                   | 13900              |                        | 12.5                    | 220    |          |        | 13909 | 6142  | 2135 | 30. | 110 | 15.  | 150 | 13910 | 6143  | 15.  | 220 | 4547  | 6142  | 6075 | 40. | 110 | 20.  | 150 | 7648  | 6143  | 20.  | 220 |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |
| 13909                   | 6142               | 2135                   | 30.                     | 110    | 15.      | 150    |       |       |      |     |     |      |     |       |       |      |     |       |       |      |     |     |      |     |       |       |      |     |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |
| 13910                   | 6143               |                        | 15.                     | 220    |          |        | 4547  | 6142  | 6075 | 40. | 110 | 20.  | 150 | 7648  | 6143  | 20.  | 220 |       |       |      |     |     |      |     |       |       |      |     |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |
| 4547                    | 6142               | 6075                   | 40.                     | 110    | 20.      | 150    |       |       |      |     |     |      |     |       |       |      |     |       |       |      |     |     |      |     |       |       |      |     |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |
| 7648                    | 6143               |                        | 20.                     | 220    |          |        |       |       |      |     |     |      |     |       |       |      |     |       |       |      |     |     |      |     |       |       |      |     |       |      |      |     |     |     |     |       |      |     |     |      |      |      |     |     |     |     |      |

MOTORS AND GENERATORS.



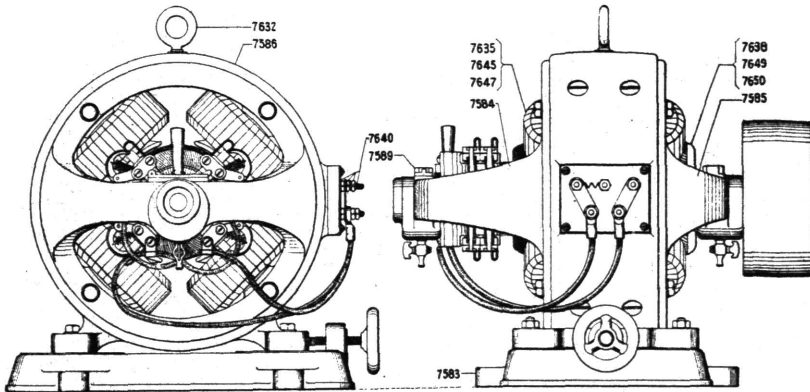
2262 - GENERATOR No.1  
 13897 - MOTOR 2 H.P. 110 V.  
 13898 - " 2 " 220 V.



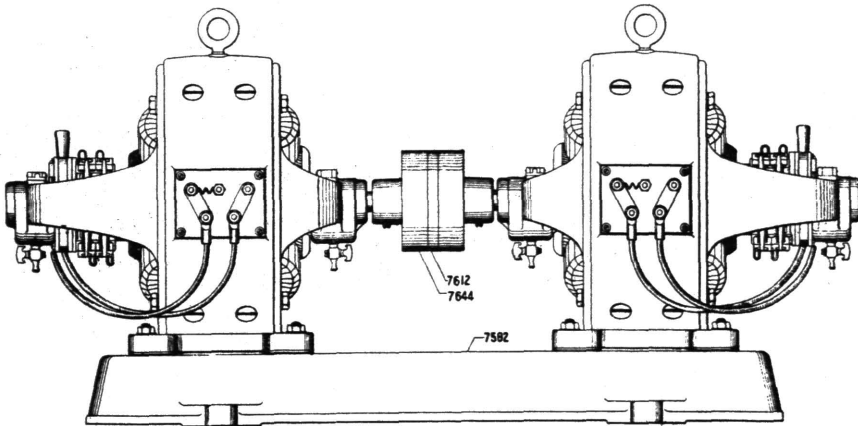
2135 - GENERATOR No.2  
 13899 - MOTOR 3 H.P. 110 V.  
 13900 - " 3 H.P. 220 V.



MOTORS AND GENERATORS.



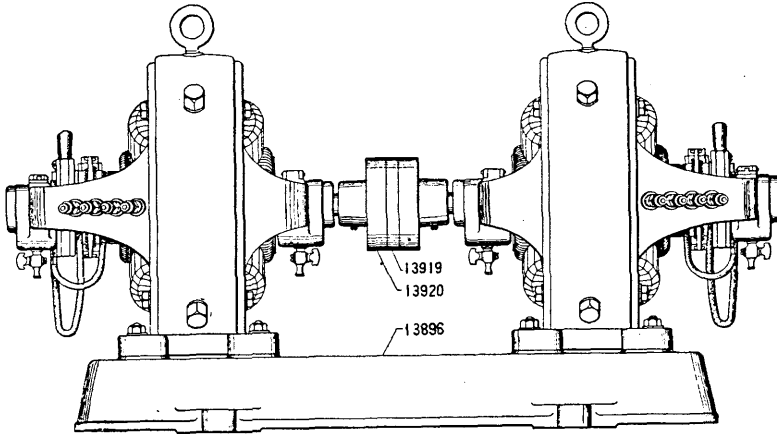
6075-GENERATOR NO. 3  
6142-MOTOR-5 H.P.-110V.  
6143- " " 5 H.P.-220V.



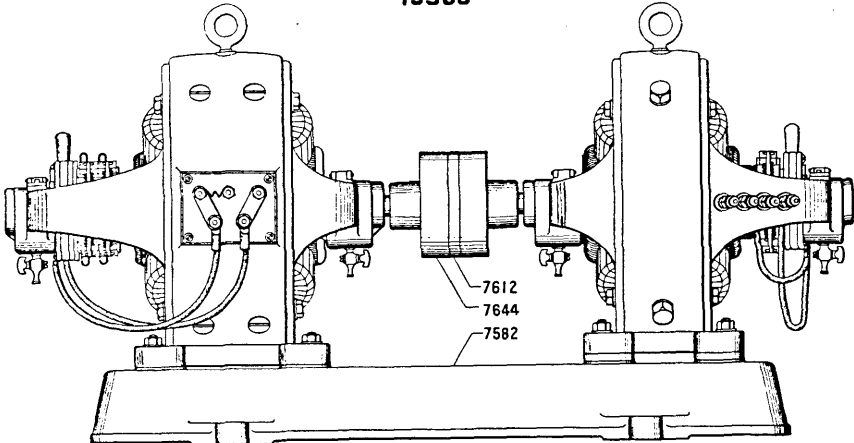
4547  
7648

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

MOTOR GENERATOR SETS.



- 13903
- 13904
- 13905
- 13906
- 13907
- 13908



- 13909
- 13910

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

POWER APPARATUS.

| Order No. | MOTORS AND GENERATORS.  | List Price. |
|-----------|---|-------------|
| 1990      | FIELD for Generator 2135.....   | 24.00       |
| 1991      | BACK BEARING BRACKET for 2135 or 2262.....  | 10.00       |
| 1992      | FRONT BEARING BRACKET for 2135 or 2262.....   | 16.00       |
| 1993      | FIELD for Generator 2262.....   | 26.00       |
| 2031      | BASE for 2135.....  | 8.00        |
| 2050      | COVER for Oil Well on 2135 or 2262.....   | .20         |
| 2102      | EYE BOLT for 2135 or 2262.....  | .40         |
| 2119      | BASE for 2262.....  | 7.00        |
| 2135      | GENERATOR Complete, 15 Amperes, 110 to 150 Volts, with Belt Tightener, Pulley and Base Complete as shown. For other data, see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....   | 240.00      |
| 2262      | GENERATOR Complete, 10 Amperes, 110 to 150 Volts, with Belt Tightener, Pulley and Base as shown. For other data, see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....            | 200.00      |
| 2346      | ARMATURE Complete, for 2135.....  | 90.00       |
| 2353      | SINGLE FIELD COIL, for 2262. (If a set is required, order 4 Coils)..  | 10.00       |
| 2354      | SINGLE FIELD COIL, for 2135. (If a set is required, order 4 Coils)..  | 12.50       |
| 4353      | ARMATURE Complete, for 2262.....  | 80.00       |
| 4547      | MOTOR GENERATOR Complete, as shown, 220 Volt Motor, 20 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....  | 624.00      |
| 6075      | GENERATOR Complete, 20 Amperes, 110 to 150 Volts, with Belt Tightener, Pulley and Base as shown. For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....             | 300.00      |
| 6142      | MOTOR Complete, 5 H.P., 110 Volt, with Belt Tightener, Pulley and Base as shown (Starting Box not included). For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266..... | 300.00      |
| 6143      | MOTOR Complete, 5 H.P., 220 Volt, with Belt Tightener, Pulley and Base as shown (Starting Box not included). For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266..... | 320.00      |
| 7582      | BASE, for 6547 or 7648.....   |             |
| 7583      | BASE, Casting only, for 6075, etc.....  |             |
| 7584      | FRONT BEARING BRACKET, for 6075, etc.....   |             |
| 7585      | BACK BEARING BRACKET, for 6075, etc.....  |             |
| 7586      | FIELD, Casting only, for 6075, etc.....   |             |
| 7589      | COVER for Oil Well, for 6075, etc.....  |             |
| 7612      | LEATHER DISC for between Flanges, for 4547 or 7648.....   |             |
| 7632      | EYE BOLT for 6075, etc.....   |             |
| 7635      | SINGLE FIELD COIL for 6075. (If a set is required, order 4 Coils)..   |             |
| 7638      | ARMATURE Complete for 6075.....   |             |
| 7640      | TERMINAL BLOCK Complete with Binding Posts, for 6075, etc.....  |             |
| 7644      | FLANGE with Studs, for 4547 or 7648.....  |             |
| 7645      | SINGLE FIELD COIL for 6142. (If a set is required, order 4 Coils)..   |             |
| 7647      | SINGLE FIELD COIL for 6143. (If a set is required, order 4 Coils)..   |             |
| 7648      | MOTOR GENERATOR Complete as shown, 110 Volt Motor, 20 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....   | 644.00      |
| 7649      | ARMATURE Complete for 6142.....   |             |
| 7650      | ARMATURE Complete for 6143.....   |             |

Order by NUMBER and NAME Appearing in Large Type.

## POWER APPARATUS.

| Order No. | MOTORS AND GENERATORS.—CONT.   | List Price. |
|-----------|--|-------------|
| 13896     | BASE for 13903, etc.....   |             |
| 13897     | MOTOR Complete, 2 H.P., 110 Volt, with Belt Tightener, Pulley and Base as shown. (Starting Box not included). For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266..... | 200.00      |
| 13898     | MOTOR Complete, 2 H.P., 220 Volt, with Belt Tightener, Pulley and Base as shown. (Starting Box not included). For other data see table, page 258. Specify size of pulley required. For sizes of Pulleys see table, page 266..... | 210.00      |
| 13899     | MOTOR Complete, 3 H.P., 110 Volt, with Belt Tightener, Pulley and Base as shown. (Starting Box not included). For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266..... | 240.00      |
| 13900     | MOTOR Complete, 3 H.P., 220 Volt, with Belt Tightener, Pulley and Base as shown. (Starting Box not included.) For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266..... | 256.00      |
| 13903     | MOTOR GENERATOR Complete, as shown, 110 Volt Motor, 8 Amperes, 110 to 150 Volt Generator. For other data see table, page 259..   | 420.00      |
| 13904     | MOTOR GENERATOR Complete as shown, 220 Volt Motor, 8 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....   | 430.00      |
| 13905     | MOTOR GENERATOR Complete as shown, 110 Volt Motor, 10 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....  | 460.00      |
| 13906     | MOTOR GENERATOR Complete as shown, 220 Volt Motor, 10 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....  | 480.00      |
| 13907     | MOTOR GENERATOR Complete as shown, 110 Volt Motor, 12.5 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....  | 500.00      |
| 13908     | MOTOR GENERATOR Complete as shown, 220 Volt Motor, 12.5 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....  | 516.00      |
| 13909     | MOTOR GENERATOR COMPLETE as shown, 110 Volt Motor, 15 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....  | 564.00      |
| 13910     | MOTOR GENERATOR Complete as shown, 220 Volt Motor, 15 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....  | 584.00      |
| 13911     | SINGLE FIELD COIL for 13897. (If a set is required, order 4) Coils.  | 10.00       |
| 13912     | SINGLE FIELD COIL for 13898. (If a set is required, order 4) Coils.  | 13.00       |
| 13913     | SINGLE FIELD COIL for 13899. (If a set is required, order 4) Coils.  | 12.50       |
| 13914     | SINGLE FIELD COIL for 13900. (If a set is required, order 4) Coils.  | 16.00       |
| 13915     | ARMATURE Complete for 13897.....   | 80.00       |
| 13916     | ARMATURE Complete for 13898.....   | 80.00       |
| 13917     | ARMATURE Complete for 13899.....   | 90.00       |
| 13918     | ARMATURE Complete for 13900.....   | 90.00       |
| 13919     | LEATHER DISC between Flange, for 13903, etc.....   |             |
| 13920     | FLANGE with Stud, for 13903.....   |             |

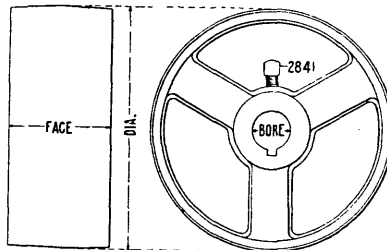
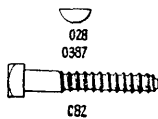
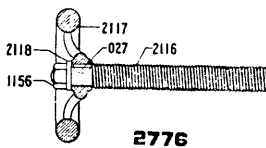
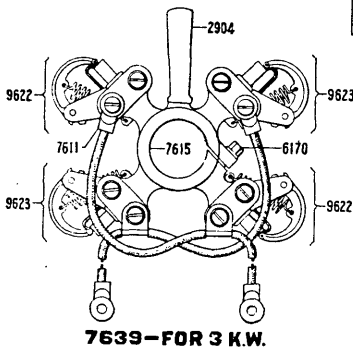
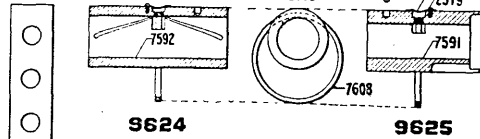
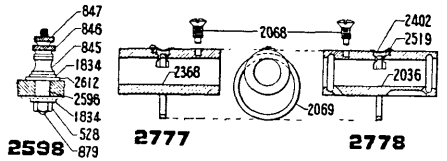
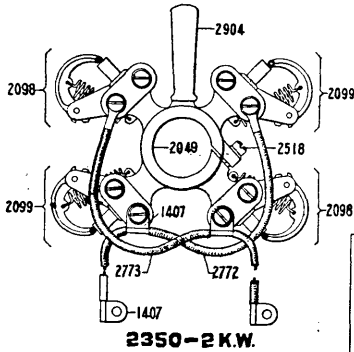
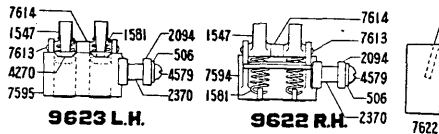
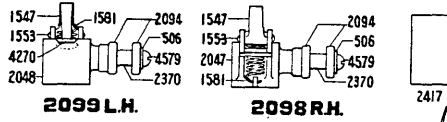
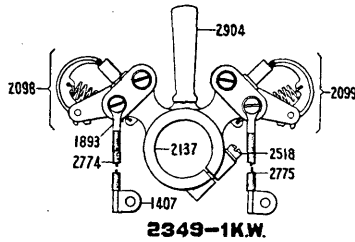
Order by NUMBER and NAME Appearing in Large Type.

POWER APPARATUS.

| Order No. | GENERATOR PARTS.  | List Price. |
|-----------|---|-------------|
| 027       | KEY for 2776.....   | .06         |
| 028       | KEY, Pulley to Shaft for 2135 or 2262.....  | .08         |
| 079       | BIBB COCK for Oil Wells for Motors and Generators.....                                | .32         |
| 082       | LAG SCREW, $\frac{3}{8}$ " x 4", Generator to floor.....                              | .06         |
| 0105      | LEATHER BELT, 2 $\frac{1}{4}$ ", Single Ply, for Generators 2135 or 2262, per ft..... | .10         |
| 0387      | KEY, Pulley to Shaft for 6075, 6142 or 6143.....                                      | .10         |
| 0557      | LEATHER BELT, 3 $\frac{1}{2}$ ", Single Ply, for Generators 6075 per ft.....          | .10         |
| 506       | BRASS WASHER for $\frac{1}{4}$ " Screw.....   | .01         |
| 528       | BRASS NUT for $\frac{1}{4}$ " Screw.....  | .02         |
| 845       | BASE for 2598 (Copper Plated).....  | .10         |
| 846       | THUMB NUT for 2598 (Copper Plated).....   | .08         |
| 847       | LOCK NUT for 2598 (Copper Plated).....  | .07         |
| 879       | SCREW for 2598 (Copper Plated).....   | .10         |
| 1156      | NUT for 2776 (Blued).....   | .04         |
| 1407      | TERMINAL for 2349 and 2350.....   | .05         |
| 1547      | ARM for various Brush Holders.....  | .36         |
| 1553      | PIN for 2098 or 2099.....   | .02         |
| 1581      | SPRING for various Brush Holders.....   | .15         |
| 1834      | INSULATING WASHER for 2598.....   | .24         |
| 1893      | TERMINAL for 2349 or 2350.....  | .05         |
| 2036      | BUSHING for 2778.....   | 4.00        |
| 2047      | BRUSH HOLDER for 2098.....  | 1.50        |
| 2048      | BRUSH HOLDER for 2099.....  | 1.50        |
| 2049      | ARM supporting Brush Holders for 2350.....  | 5.00        |
| 2068      | SCREW, Special holding Generator Bushings to Generator Brackets.....                  | .14         |
| 2069      | OIL RING for 2077 or 2778.....  | .40         |
| 2094      | INSULATOR for various Brush Holders.....  | .60         |
| 2098      | BRUSH HOLDER Complete, Right Hand, for 2349 or 2350.....                              | 3.70        |
| 2099      | BRUSH HOLDER Complete, Left Hand, for 2349 or 2350.....                               | 3.70        |
| 2116      | SCREW for 2776.....   | 1.40        |
| 2117      | HAND WHEEL for 2776.....  | 1.00        |
| 2118      | WASHER for 2776.....  | .12         |
| 2137      | ARM supporting Brush Holders for 2349.....  | 3.50        |
| 2349      | BRUSH HOLDERS Complete with Arm, for Generator 2262.....                              | 12.50       |
| 2350      | BRUSH HOLDERS Complete with Arm, for Generator 2135.....                              | 20.00       |
| 2368      | BUSHING for 2777.....   | 2.50        |
| 2370      | INSULATING BUSHING for various Brush Holders.....                                     | .16         |
| 2402      | GUIDE for 2777, etc.....  | .30         |
| 2417      | CARBON BRUSH for 2349 or 2350.....  | .20         |
| 2518      | SCREW for 2349 or 2350.....   | .04         |
| 2519      | SCREW for holding Guide to Bushing 2777, etc.....                                     | .01         |
| 2595      | INSULATING STRIP for Binding Posts.....   | .40         |
| 2596      | INSULATING BUSHING for 2598.....  | .24         |
| 2598      | BINDING POST Complete for Generators 2135 or 2262.....                                | 1.30        |
| 2612      | INSULATING WASHER for 2598.....   | .24         |
| 2772      | LEAD WIRE, Long, with Terminals for 2350.....   | .60         |
| 2773      | LEAD WIRE, Short, with Terminals for 2350.....  | .60         |
| 2774      | LEAD WIRE, Long, with Terminals for 2349.....   | .40         |
| 2775      | LEAD WIRE, Short, with Terminals for 2349.....  | .40         |
| 2776      | BELT TIGHTENING SCREW Complete, for various Generators.....                           | 2.50        |
| 2777      | BUSHING Complete for Bearing Bracket 1991.....  | 3.20        |
| 2778      | BUSHING Complete for Bearing Bracket 1992.....  | 4.70        |
| 2840      | PULLEY, 7" dia., 3" face, for 1 and 2 K. W. Generators.....                           | 3.00        |
| 2841      | SET SCREW for various-Generator Pulleys.....  | .03         |

Order by NUMBER and NAME Appearing in Large Type.

GENERATOR PARTS.



|      | FACE DIA.   | BORE |
|------|-------------|------|
| 5487 | 3" - 5 1/2" | 3/8" |
| 2387 | 3" - 6"     | 3/8" |
| 2840 | 3" - 7"     | 3/8" |
| 4460 | 3" - 8"     | 3/8" |
| 4716 | 3" - 9"     | 3/8" |
| 4738 | 3" - 10"    | 3/8" |
| 7590 | 4" - 7"     | 1/2" |
| 4719 | 4" - 9"     | 1/2" |
| 4720 | 4" - 10"    | 1/2" |

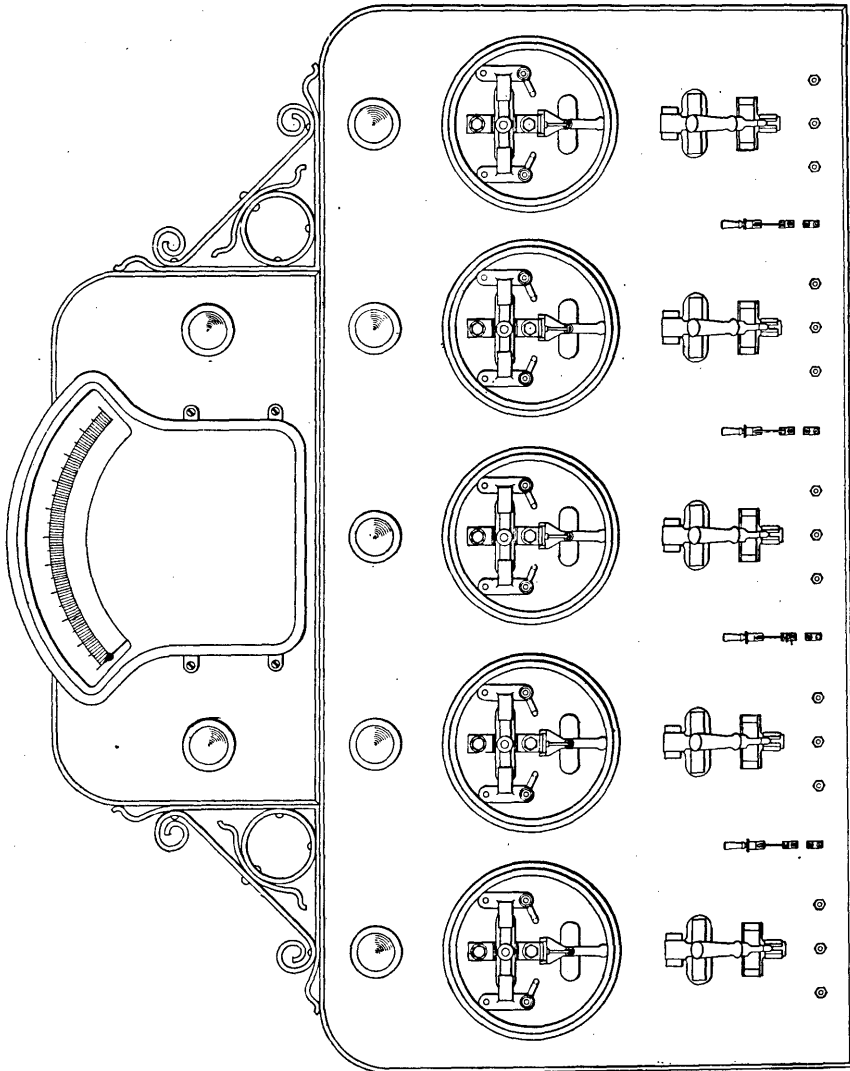
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

POWER APPARATUS.

| Order No. | GENERATOR PARTS.--CONT.  | List Price. |
|-----------|--|-------------|
| 2904      | HANDLE for 2349, 2350 or 7639 .....  | .70 .....   |
| 2987      | PULLEY, 6" dia., 3" face, for 1 and 2 K. W. Generators.....                | 2.50 .....  |
| 4270      | LATERAL SPRING for various Brush Holders.....                              | .10 .....   |
| 4460      | PULLEY, 8" dia., 3" face, for 1 and 2 K. W. Generators.....                | 3.50 .....  |
| 4579      | BRASS SCREW, No. 12 x 1 $\frac{3}{8}$ ", for various Brush Holders.....    | .04 .....   |
| 4716      | PULLEY, 9" dia., 3" face, for 1 and 2 K. W. Generators.....                | 4.00 .....  |
| 4719      | PULLEY, 9" dia., 4" face, for 3 K. W. Generators and Motors.....           | 5.00 .....  |
| 4720      | PULLEY, 10" dia., 4" face, for 3 K. W. Generators and Motors.....          | 9.50 .....  |
| 4738      | PULLEY, 10" dia., 3" face, for 1 and 2 K. W. Generators.....               | 4.50 .....  |
| 5487      | PULLEY, 5 $\frac{1}{2}$ " dia., 3" face, for 1 and 2 K. W. Generators..... | 2.50 .....  |
| 6170      | CAP SCREW, $\frac{3}{8}$ " x 1", Hex. Hd.....                              | .05 .....   |
| 7590      | PULLEY, 7" dia., 4" face, for 3 K. W. Generators and Motors.....           | 4.00 .....  |
| 7591      | BUSHING for 9625.....  | .....       |
| 7592      | BUSHING for 9624.....  | .....       |
| 7594      | BRUSH HOLDER for 9622.....   | .....       |
| 7595      | BRUSH HOLDER for 9623.....   | .....       |
| 7608      | OIL RING for 9624 or 9625 .....  | .....       |
| 7611      | TERMINAL for 7639.....   | .....       |
| 7613      | PIN for 9622 or 9623.....  | .....       |
| 7614      | WASHER for spacing Arms for 9622 or 9623.....                              | .....       |
| 7615      | ARM supporting Brush Holders for 7639.....                                 | .....       |
| 7622      | BRUSH Complete for 7639.....   | .....       |
| 7639      | BRUSH HOLDER Complete with Arm, for 6075, 6142 or 6413.....                | .....       |
| 9622      | BRUSH HOLDER Complete, Right Hand, for 7639 .....                          | .....       |
| 9623      | BRUSH HOLDER Complete, Left Hand, for 7639 .....                           | .....       |
| 9624      | BUSHING Complete for Bearing Bracket 7585.....                             | .....       |
| 9625      | BUSHING Complete for Bearing Bracket 7584.....                             | .....       |

Order by NUMBER and NAME Appearing in Large Type.

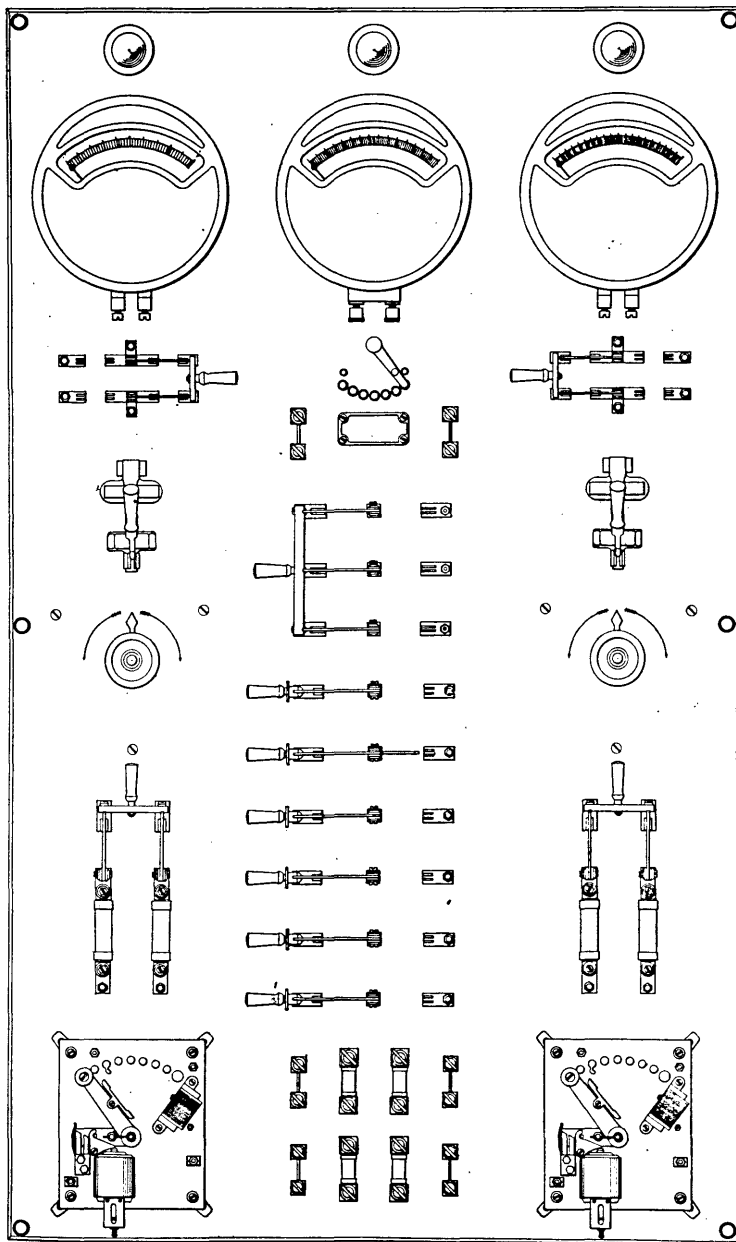
SWITCH BOARDS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.



SWITCH BOARDS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

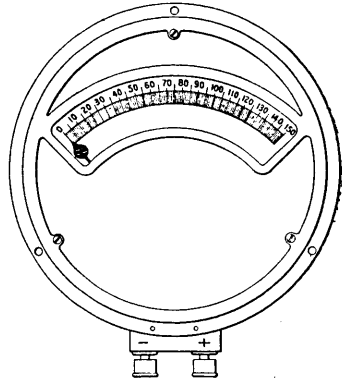
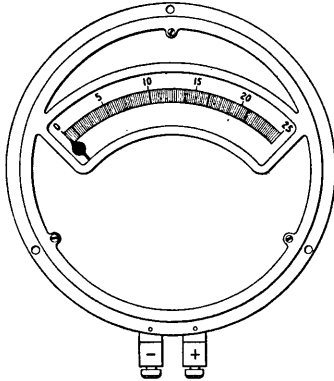
### CURRENT MEASUREMENT IN TWO OR MORE CIRCUITS USING BUT ONE AMMETER.

There are two methods of measuring the current in two or more circuits by the use of but one instrument.

One method consists in the use of a special Ammeter (0485, etc.) in combination with "external shunts." A separate shunt is required in each of the circuits to be measured, said shunts being connected to the instrument, one at a time, through the medium of a multi-circuit switch (0349, page 274). Their use is recommended on circuits of 50 amperes or over where the current flow is continuous. It is to be noted that in case repairs are necessary, not only the instrument, but all of the shunts and connecting cords, must be returned. These ammeters should be used only with the shunts and cords with which they have been calibrated.

The other method consists in the use of Ammeter Jack 10247, see page 271, in combination with Ammeter 0110, etc. The design is such that the introduction or withdrawal of plug 10248 inserts the Ammeter in, or withdraws it from the circuit in question without opening said circuit or disturbing the flow of current, as illustrated by the circuit, Fig. A, page 271. It is recommended for use on circuits of 50 amperes or less where the flow is continuous, or on circuits up to 75 amperes when the current is of short duration. One Jack is required for each circuit to be measured, and one plug for each Ammeter.

AMMETER, VOLTMETERS, ETC.

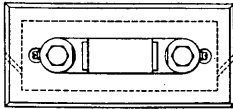


- 0110 0-25
- 0111 0-50
- 0377 0-75
- 0481 10-0-25
- 0112 15-0-35
- 0223 25-0-50
- 0484 25-0-75

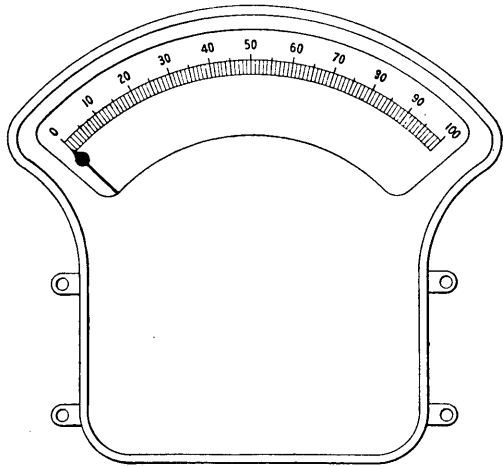
ADAPTED FOR EXTERNAL SHUNTS.

- 0485 0-25
- 0486 0-50
- 0487 0-75
- 0488 10-0-25
- 0482 15-0-35
- 0378 25-0-50
- 0489 25-0-75

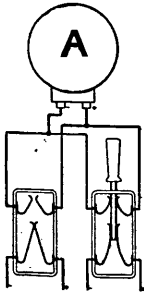
- 0108 0-150
- 0294 0-100
- 0465 0-600



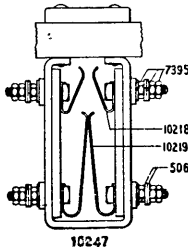
0315



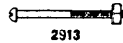
- 0489 0-75
- 0389 0-100



10248



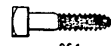
10247



2913



2912



064



2911

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

| Order No.  | AMMETERS, VOLTMETERS, ETC.  | List Price. |
|--|---|-------------|
| 064  | LAG SCREW, $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "  | .03         |
| 0108   | VOLTMETER, Round Pattern, Scale 0-150   | 56.00       |
| 0110   | AMMETER, Round Pattern, Scale 0-25  | 47.50       |
| 0111   | AMMETER, Round Pattern, Scale 0-50  | 48.00       |
| 0112   | AMMETER, Round Pattern, Scale 15-0-35   | 48.00       |
| 0223   | AMMETER, Round Pattern, Scale 25-0-50   | 49.00       |
| 0294   | VOLTMETER, Round Pattern, Scale 0-100   | 53.00       |
| 0315   | EXTERNAL SHUNT used with Ammeters 0485 (page 272), etc.   | 5.70        |
| NOTE.—These should not be ordered separately as they are calibrated and used with the Ammeter for which they are intended. |   |             |
| 0377   | AMMETER, Round Pattern, Scale 0-75  | 49.00       |
| 0378   | AMMETER, Round Pattern, Scale 25-0-50, adapted for use with external Shunts 0315, which are extra. In ordering give number of Shunts required also length of Connecting Cords. For description see page 270   | 49.00       |
| 0389   | AMMETER, Illuminated Dial, Scale 0-100, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270 | 142.50      |
| 0458   | AMMETER, Round Pattern, Scale 25-0-75, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270  | 50.00       |
| 0465   | VOLTMETER, Round Pattern, Scale 0-600   | 66.00       |
| 0481   | AMMETER, Round Pattern, Scale 10-0-25, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270  | 47.50       |
| 0482   | AMMETER, Round Pattern, Scale 15-0-35, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270  | 48.00       |
| 0484   | AMMETER, Round Pattern, Scale 25-0-75, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270  | 50.00       |

Order by NUMBER and NAME Appearing in Large Type.

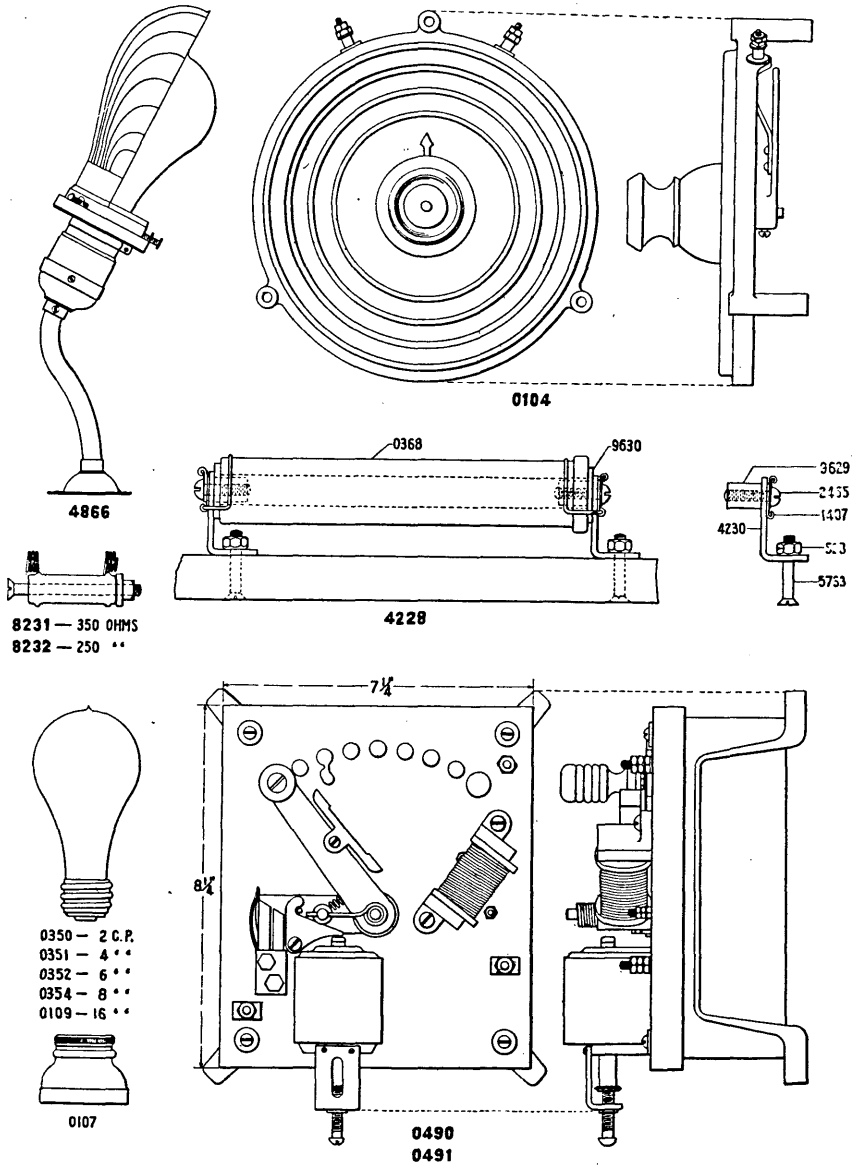
POWER APPARATUS.

273

| Order No. | AMMETERS, VOLTMETER, ETC.   | List Price. |
|-----------|---|-------------|
| 0485      | AMMETER, Round Pattern, Scale 0-25, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270.    | 47.50       |
| 0486      | AMMETER, Round Pattern, Scale 0-50, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270.    | 48.00       |
| 0487      | AMMETER, Round Pattern, Scale 0-75, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270.    | 49.00       |
| 0488      | AMMETER, Round Pattern, Scale 10-0-25, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270. | 47.50       |
| 0489      | AMMETER, Illuminated Dial, Scale 0-75, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270. | 142.50      |
| 506       | BRASS WASHER for 1/4" Screw.  | .01         |
| 2911      | SCREW WITH NUT AND WASHER for fastening Lamp Bracket to Switch Boards.  | .08         |
| 2912      | SCREW WITH NUT AND WASHER for fastening Instruments to Switch Boards.   | .10         |
| 2913      | SCREW WITH NUT AND WASHER for fastening Rheostat to Switch Boards.  | .12         |
| 7395      | BRASS NUT, Thin, for 1/4" Screw.  | .03         |
| 10218     | CONTACT SPRING for 10247.   | .30         |
| 10219     | CONTACT SPRING for 10247.   | .30         |
| 10247     | AMMETER JACK Complete. See description, page 270.   | 5.00        |
| 10248     | PLUG Complete, for use with 10247.  | 3.00        |

POWER APPARATUS.

RHEOSTATS, RESISTANCE UNITS, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

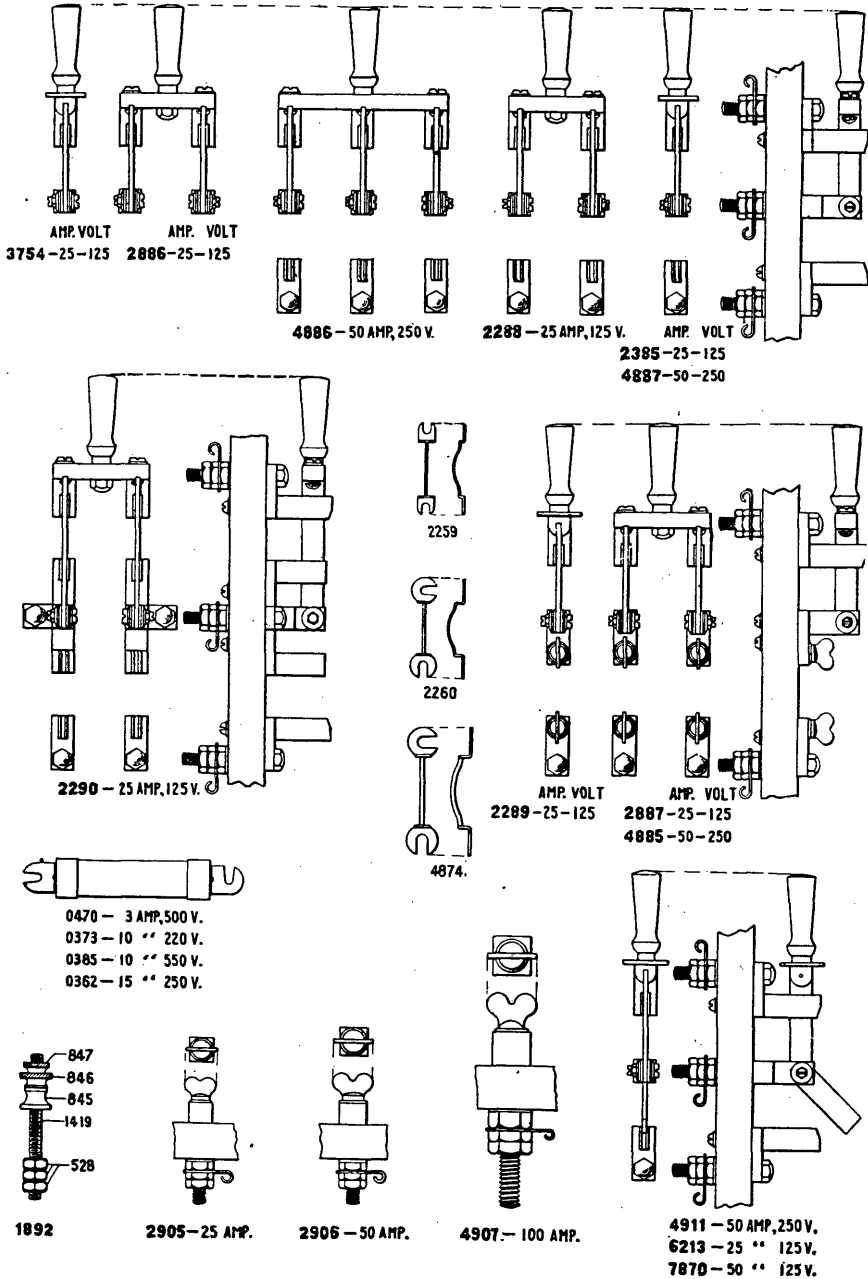
POWER APPARATUS.

275

| Order No. | RHEOSTATS, RESISTANCE UNITS, ETC.—CONT.                               | List Price. |
|-----------|---|-------------|
| 0104      | RHEOSTAT for 1 or 2 K. W. Generators.....                             | .....       |
| 0107      | SOCKET for various Lamps.....   | .....       |
| 0109      | LAMP, 16 C. P., 110 Volts.....  | .....       |
| 0350      | LAMP, 2 C. P., 110 Volts.....   | .....       |
| 0351      | LAMP, 4 C. P., 110 Volts.....   | .....       |
| 0352      | LAMP, 6 C. P., 110 Volts.....   | .....       |
| 0354      | LAMP, 8 C. P., 110 Volts.....   | .....       |
| 0368      | RESISTANCE UNIT, 60 ohms.....   | 1.44        |
| 0490      | MOTOR STARTER, from 1 to 3 H. P. In ordering, specify voltage.....    | .....       |
| 0491      | MOTOR STARTER, for 5 H. P. In ordering, specify voltage.....          | .....       |
| 528       | BRASS NUT for $\frac{1}{4}$ " Screw.....                              | .02         |
| 1407      | WIRE TERMINAL for $\frac{1}{4}$ " Screw.....                          | .05         |
| 2455      | IRON SCREW, $\frac{1}{4}$ " x 1", R. H.....                           | .02         |
| 4228      | RESISTANCE UNIT Complete, 60 ohms.....                                | 4.00        |
| 4230      | BRACKET for 4228.....   | .40         |
| 4866      | LAMP BRACKET Complete with Shield. Used on various Switch Boards..... | .....       |
| 5733      | SCREW for fastening 4228 to Switch Boards.....                        | .04         |
| 8231      | RESISTANCE UNIT, 350 ohms, complete for mounting to Switch Board..... | .80         |
| 8232      | RESISTANCE UNIT, 250 ohms, complete for mounting to Switch Board..... | .80         |
| 9629      | BUSHING for 4228.....   | .40         |
| 9630      | ASBESTOS WASHER for 4228.....   | .02         |

Order by NUMBER and NAME Appearing in Large Type.

KNIFE SWITCHES, FUSES, POSTS, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

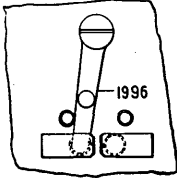


POWER APPARATUS.

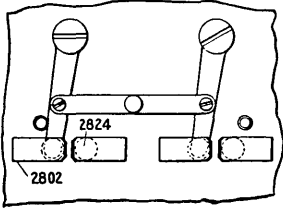
| Order No. | KNIFE SWITCHES, FUSES, POSTS, ETC.   | List Price. |
|-----------|--|-------------|
| 0362      | ENCLOSED FUSE, 15 Amperes, 250 Volts.....                                    | .50         |
| 0373      | ENCLOSED FUSE, 10 Amperes, 220 Volts.....                                    | .50         |
| 0385      | ENCLOSED FUSE, 10 Amperes, 550 Volts.....                                    | .50         |
| 0470      | ENCLOSED FUSE, 3 Amperes, 500 Volts.....                                     | .50         |
| 528       | BRASS NUT for 1/4" Screw.....  | .02         |
| 845       | BASE for Binding Post 1892.....  | .08         |
| 846       | THUMB NUT for Binding Post 1892.....   | .06         |
| 847       | LOCK NUT for Binding Post 1892.....  | .05         |
| 1419      | SCREW for Binding Post 1892.....   | .08         |
| 1892      | BINDING POST Complete.....   | .30         |
| 2259      | FUSE, 10, 15, 20 or 30 Amperes, as specified.....                            | .10         |
| 2260      | FUSE, 40, 50 or 60 Amperes, as specified.....                                | .10         |
| 2288      | KNIFE SWITCH, 25 Amperes, D. P. D. T.....                                    |             |
| 2289      | KNIFE SWITCH, 25 Amperes, S. P. S. T., with Fuse Extension.....              |             |
| 2290      | KNIFE SWITCH, 25 Amperes, D. P. S. T., with extra Binding Post at Hinge..... |             |
| 2385      | KNIFE SWITCH, 25 Amperes, S. P. D. T.....                                    |             |
| 2886      | KNIFE SWITCH, 25 Amperes, D. P. S. T.....                                    |             |
| 2887      | KNIFE SWITCH, 25 Amperes, D. P. S. T., with Fuse Extension.....              |             |
| 2905      | FUSE POST, 25 Amperes.....   | .50         |
| 2906      | FUSE POST, 50 Amperes.....   | .80         |
| 3754      | KNIFE SWITCH, 25 Amperes, S. P. S. T.....                                    |             |
| 4874      | FUSE, 60, 75 or 90 Amperes.....  | .16         |
| 4885      | KNIFE SWITCH, 50 Amperes, D. P. S. T., with Fuse Extension.....              |             |
| 4886      | KNIFE SWITCH, 50 Amperes, T. P. D. T., Single Break.....                     |             |
| 4887      | KNIFE SWITCH, 50 Amperes, S. P. D. T.....                                    |             |
| 4907      | FUSE POST, 100 Amperes.....  | 1.50        |
| 4911      | KNIFE SWITCH, 50 Amperes, 250 Volts, S. P. D. T. To make before break.....   |             |
| 6213      | KNIFE SWITCH, 25 Amperes, 125 Volts, S. P. D. T. To make before break.....   |             |
| 7870      | KNIFE SWITCH, 50 Amperes, 125 Volts, S. P. D. T. To make before break.....   |             |

Order by NUMBER and NAME Appearing in Large Type.

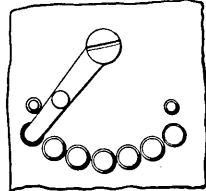
AMMETER AND VOLTMETER SWITCHES.



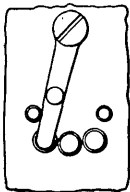
**3212**



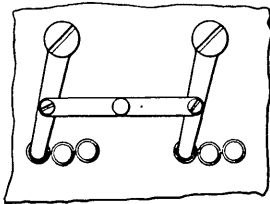
**2800**



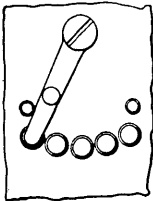
**4308**



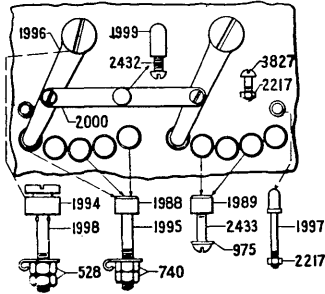
**1981**



**1983**



**1982**



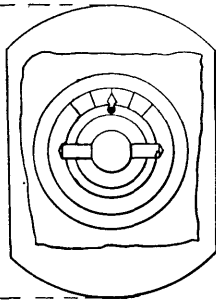
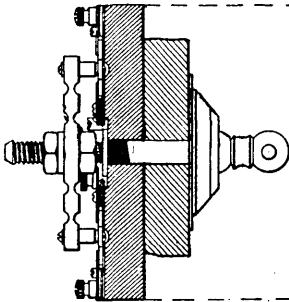
**1984**



1893



1408



1407



5080

5081

**0349** - 4 CIRCUITS.

**0341** - 5 " " "

**0212** - 6 " " "

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

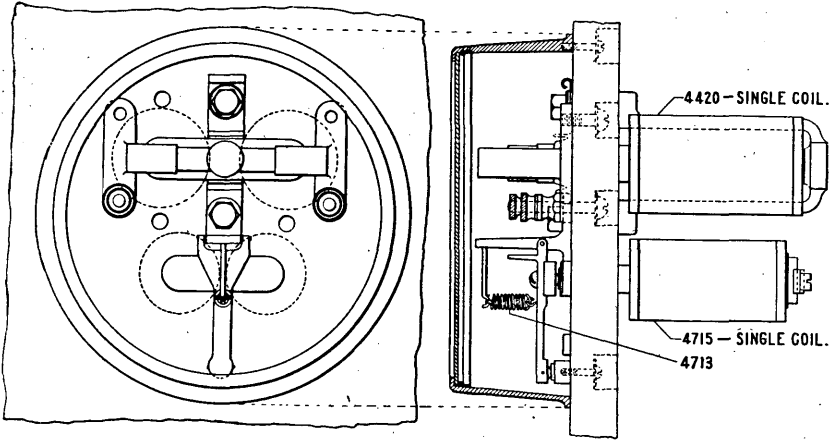
POWER APPARATUS.

279

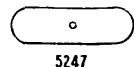
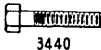
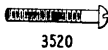
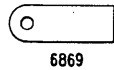
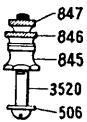
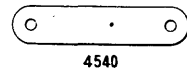
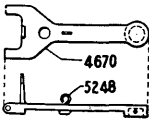
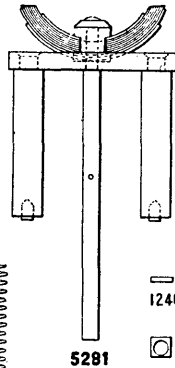
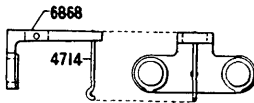
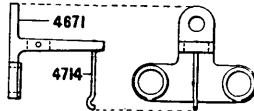
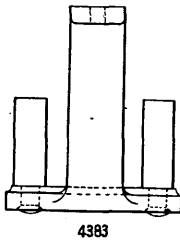
| Order No. | AMMETER AND VOLTMETER SWITCHES.                       | List Price. |
|-----------|---|-------------|
| 0212      | AMMETER SWITCH, Double Pole, 6 Circuits.....          | .02         |
| 0341      | AMMETER SWITCH, Double Pole, 5 Circuits.....          | .04         |
| 0349      | AMMETER SWITCH, Double Pole, 4 Circuits.....          | .01         |
| 528       | BRASS NUT for $\frac{1}{4}$ " Screw.....              | .05         |
| 740       | BRASS NUT for No. 12 Screw.....                       | .05         |
| 975       | BRASS WASHER for No. 8 Screw.....                     | .05         |
| 1407      | WIRE TERMINAL for $\frac{1}{4}$ " Screw.....          | .05         |
| 1408      | WIRE TERMINAL for $\frac{3}{8}$ " Screw.....          | .05         |
| 1893      | BINDING POST TERMINAL for No. 12 Wire.....            | .05         |
| 1981      | VOLTMETER SWITCH, Single Pole, 2 Circuits.....        | 3.00        |
| 1982      | VOLTMETER SWITCH, Single Pole, 3 Circuits.....        | 3.70        |
| 1983      | VOLTMETER SWITCH, Double Pole, 2 Circuits.....        | 5.50        |
| 1984      | VOLTMETER SWITCH, Double Pole, 3 Circuits.....        | 7.00        |
| 1988      | CONTACT for various Voltmeter Switches.....           | .20         |
| 1989      | INSULATED CONTACT for various Voltmeter Switches..... | .20         |
| 1994      | WASHER for various Voltmeter Switches.....            | .16         |
| 1995      | SCREW for various Voltmeter Switches.....             | .10         |
| 1996      | LEVER for various Voltmeter Switches.....             | .50         |
| 1997      | STOP for various Voltmeter Switches.....              | .30         |
| 1998      | STUD for various Voltmeter Switches.....              | .50         |
| 1999      | HANDLE for various Voltmeter Switches.....            | .40         |
| 2000      | CROSS BAR for Double Pole Voltmeter Switches.....     | 1.00        |
| 2217      | BRASS NUT for No. 8 Screw.....                        | .04         |
| 2432      | BRASS SCREW, No. 8 x $\frac{1}{4}$ ", Round Head..... | .02         |
| 2433      | BRASS SCREW, No. 8 x $\frac{1}{8}$ ", R. H.....       | .02         |
| 2800      | AMMETER SWITCH, Double Pole, 2 Circuits.....          | 7.50        |
| 2802      | CONTACT SPRING for 2800.....                          | .40         |
| 2824      | CONTACT for 2800.....                                 | .20         |
| 3212      | AMMETER SWITCH, Single Pole, 2 Circuits.....          | 4.00        |
| 3827      | BRASS SCREW, No. 8 x $\frac{1}{4}$ ".....             | .02         |
| 4308      | VOLTMETER SWITCH, Single Pole, 4 Circuits.....        | 4.40        |
| 5080      | TERMINAL for $\frac{1}{2}$ " Binding Post.....        | .10         |
| 5081      | TERMINAL for $\frac{3}{8}$ " Binding Post.....        | .10         |

Order by NUMBER and NAME Appearing in Large Type.

CIRCUIT BREAKER RELAY. MODEL 4.



4628  
6870



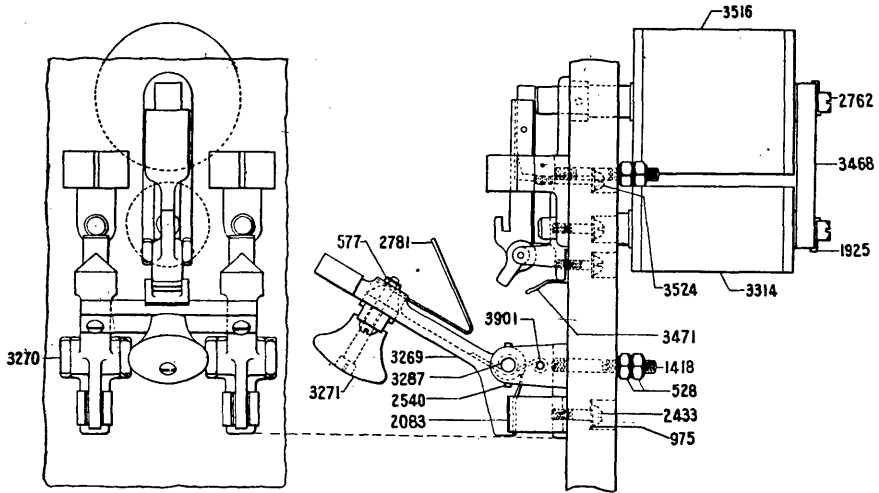
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

POWER APPARATUS.

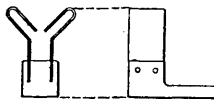
| Order No. | CIRCUIT BREAKER RELAY. MODEL 4.   | List Price. |
|-----------|---|-------------|
| 0303      | SCREW, $\frac{5}{16}$ " x 1", Flat Head.....  | .03         |
| 506       | BRASS WASHER for $\frac{1}{4}$ " Screw.....   | .01         |
| 845       | BASE for $\frac{1}{4}$ " Binding Post.....  | .08         |
| 846       | THUMB NUT for $\frac{1}{4}$ " Binding Post.....   | .06         |
| 847       | LOCK NUT for $\frac{1}{4}$ " Binding Post.....  | .05         |
| 1075      | SPRING for Relays 4628 or 6870.....   | .10         |
| 1240      | PIN holding 3503 to 5281.....   | .05         |
| 2432      | BRASS SCREW, No. 8 x $\frac{3}{8}$ ", Round Head.....   | .02         |
| 2454      | BRASS SCREW, $\frac{1}{4}$ " x $\frac{1}{4}$ ", Round Head.....   | .03         |
| 2540      | PIN, $\frac{3}{16}$ " x $\frac{3}{8}$ ", for 4628 or 6870.....  | .02         |
| 2779      | HOLDER for Carbon Contact for 4628 or 6870.....   | .20         |
| 2780      | LOWER CARBON CONTACT for 4628 or 6870.....  | .30         |
| 2820      | UPPER CARBON CONTACT for 4628 or 6870.....  | .40         |
| 2822      | BRASS PIN, $\frac{1}{16}$ ", for 4628.....  | .02         |
| 3440      | CAP SCREW, $\frac{5}{16}$ " x $1\frac{1}{8}$ " Hex. Hd.....   | .04         |
| 3503      | COLLAR used on 5281 for 4628 or 6870.....   | .10         |
| 3520      | BRASS SCREW, $\frac{1}{4}$ " x 2", Round Head.....  | .08         |
| 3890      | BRASS WASHER for No. 8 Screw.....   | .01         |
| 4383      | BACK YOKE Complete for 4628 or 6870.....  | 5.00        |
| 4412      | SPECIAL WASHER for $\frac{5}{16}$ " Screw.....  | .06         |
| 4420      | SINGLE MAGNET COIL Complete, Operating Coil for 4628 or 6870..  | 7.00        |
| 4540      | FLEXIBLE LINK for 4628.....   | .20         |
| 4628      | CIRCUIT BREAKER RELAY Complete (Model 4), used in connection with Differential Circuit Breakers 3268..... | 60.00       |
| 4670      | LEVER Only for 4628.....  | 2.00        |
| 4671      | BASE for 4628.....  | 2.00        |
| 4673      | CORE for 4628 or 6870.....  | .80         |
| 4713      | SPRING, Lever Retaining, for 4628 or 6870.....  | .20         |
| 4714      | HOOK for Spring for 4628 or 6870.....   | .24         |
| 4715      | SINGLE MAGNET COIL Complete. Actuating Coil for 4628 or 6870  | 5.00        |
| 5247      | ARMATURE for 4628 or 6870.....  | 1.00        |
| 5248      | EYE for 4670, for holding Spring 4713.....  | .10         |
| 5281      | BRUSH CONTACT with Yoke and Core Complete, for 4628 or 6870..   | 12.00       |
| 6080      | IRON SCREW, No. 10 x $\frac{1}{2}$ ", Round Head (Blued).....   | .02         |
| 6824      | BINDING POST Complete for 4628.....   | .30         |
| 6868      | BASE for 6870.....  | 2.00        |
| 6869      | FLEXIBLE LINK for 6870.....   | .20         |
| 6870      | CIRCUIT BREAKER RELAY Complete (Model 4), used in connection with Polarized Relay 4931.....               | 60.00       |

Order by NUMBER and NAME Appearing in Large Type

SWITCH BOARD CIRCUIT BREAKERS.



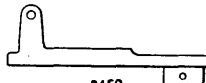
**3268**



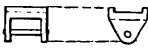
3566



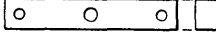
3276



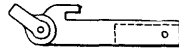
3458



3834



3273



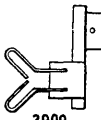
3460



2779



2780

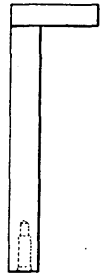


2909

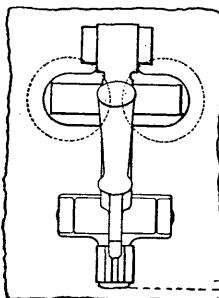
1144



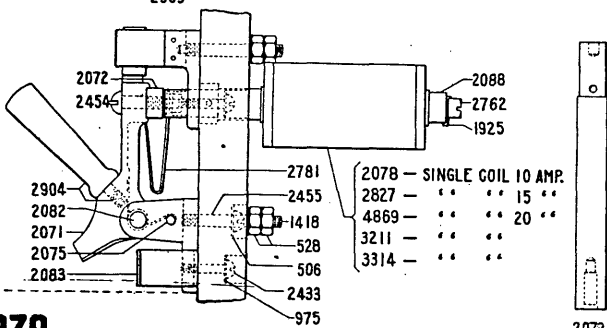
3465



3833



**2070**



- 2078 - SINGLE COIL 10 AMP.
- 2827 - " " " 15 "
- 4869 - " " " 20 "
- 3211 - " " " "
- 3314 - " " " "

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

POWER APPARATUS.

233

| Order No.   | SWITCH BOARD CIRCUIT BREAKERS.  | List Price. |
|---|---|-------------|
| 506   | BRASS WASHER for 1/4" Screw.....  | .01 .....   |
| 528   | BRASS NUT for 1/4" Screw.....   | .02 .....   |
| 577   | BRASS NUT for No. 10 Screw.....   | .02 .....   |
| 975   | BRASS WASHER for No. 8 Screw.....   | .01 .....   |
| 1144  | PIN, 1/8" x 1 1/4".....   | .04 .....   |
| 1418  | 1/4" BRASS STUD for Binding Posts.....  | .08 .....   |
| 1925  | LOCK WASHER for 1/4" Screw.....   | .01 .....   |
| 2070  | UNDERLOAD CIRCUIT BREAKER, Single Pole, Complete. See note  | 30.00 ..... |
| NOTE.—In ordering, specify Coils as follows:  |   |             |
| For 10 Ampere Underload Breakers order two Coils 2078.  |   |             |
| For 15 Ampere Underload Breakers order two Coils 2827.  |   |             |
| For 20 Ampere Underload Breakers order two Coils 4869.  |   |             |
| For 10 Ampere Differential Breakers order one Coil 2078 and one<br>Coil 3211.                       |   |             |
| For 15 Ampere Differential Breakers order one Coil 2827 and one<br>Coil 3211.                       |   |             |
| For 20 Ampere Differential Breakers order one Coil 4869 and one<br>Coil 3211.                       |   |             |
| When used in connection with Polarized Relays use two Coils<br>3314.                                |   |             |
| NOTE—The underload circuit breakers open before the current<br>reaches zero.                        |   |             |
| The differential circuit breakers open only after the current passes<br>zero and starts to reverse. |   |             |
| 2071  | ARM for 2070.....   | 2.20 .....  |
| 2072  | ARMATURE for 2070.....  | .80 .....   |
| 2075  | STOP PIN for 2070.....  | .10 .....   |
| 2078  | SINGLE MAGNET COIL, 10 Amperes, for 2070.....   | 5.00 .....  |
| 2079  | CORE for Magnets, for 2070.....   | .80 .....   |
| 2082  | PIN for Supporting Arm, for 2070.....   | .06 .....   |
| 2083  | STOP SPRING for 2070.....   | 1.00 .....  |
| 2088  | YOKE for Magnets, for 2070.....   | .80 .....   |
| 2433  | IRON SCREW, No. 8 x 7/8", for 2070 or 3268.....   | .02 .....   |
| 2454  | BRASS SCREW, 1/4" x 7/8", for 2070.....   | .03 .....   |
| 2455  | IRON SCREW, 1/4" x 1", for 2070.....  | .02 .....   |
| 2540  | PIN for 3268.....   | .02 .....   |
| 2762  | CAP SCREW, 1/4" x 3/4", Sq. Hd.....   | .06 .....   |
| 2779  | HOLDER for Carbon Contact, for 2070.....  | .20 .....   |
| 2780  | CARBON CONTACT for 2070.....  | .30 .....   |
| 2781  | AUXILIARY CONTACT SPRING for 2070 or 3268.....  | .40 .....   |
| 2827  | SINGLE MAGNET COIL, 15 Amperes, for 2070 .....  | 5.00 .....  |
| 2904  | HANDLE with Screw, for 2070.....  | .70 .....   |
| 2909  | CONTACT BLOCK Complete, for 2070.....   | 2.50 .....  |
| 3211  | SINGLE MAGNET COIL, Retaining Coil for 2070, resistance 1500 ohms   | 7.00 .....  |
| 3268  | CIRCUIT BREAKER Complete, Double Pole, Differential .....   | 50.00 ..... |
| 3269  | ARM for 3268.....   | 1.50 .....  |
| 3270  | BASE for 3268.....  | 1.00 .....  |
| 3271  | HANDLE for 3268.....  | .60 .....   |
| 3273  | BAR for Handle, for 3268.....   | 2.00 .....  |
| 3276  | OPERATING SPRING for 2070 or 3268.....  | .20 .....   |
| 3287  | PIN for Supporting Arm, for 3268.....   | .20 .....   |
| 3314  | SINGLE MAGNET COIL, used as Retaining Coil for 3268; also for<br>2070, when Polarized Relays are used. Resistance 1500 ohms.. | 7.00 .....  |
| 3458  | YOKE for 3268.....  | 2.00 .....  |

Order by NUMBER and NAME Appearing in Large Type.

## POWER APPARATUS.

| Order<br>No. | SWITCH BOARD CIRCUIT BREAKERS.                    | List Price. |
|--------------|---|-------------|
| 3460         | ARMATURE HOLDER for 3268.....                     | 2.00 .....  |
| 3465         | ARMATURE for 3268.....                            | .60 .....   |
| 3468         | MAGNET YOKE for 3268.....                         | .80 .....   |
| 3471         | STOP SPRING for 3268.....                         | .20 .....   |
| 3516         | SINGLE MAGNET COIL for 3268.....                  | 8.00 .....  |
| 3524         | BRASS SCREW, No. 8 x 1 $\frac{1}{4}$ " Rd Hd..... | .02 .....   |
| 3566         | CONTACT BLOCK Complete for 3268.....              | 2.00 .....  |
| 3833         | CORE AND POLE PIECE Complete for 3268.....        | 1.30 .....  |
| 3834         | HOLDER Complete for 3268.....                     | .50 .....   |
| 3901         | SPRING, Retaining Pin, for 3268.....              | .10 .....   |
| 4869         | SINGLE MAGNET COIL, 20 Amperes, for 2070.....     | 5.00 .....  |

Order by NUMBER and NAME Appearing in Large Type.



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EXTERIOR VIEW OF TOWER AT LA SALLE STREET, CHICAGO.

As towers and buildings for the accommodation of Interlocking Machines and Power Apparatus are usually built upon specification, we have not attempted to show details of any particular design of such buildings.

We will, however, take pleasure in furnishing estimates for any style of tower or power building upon application accompanied by detail plans and specifications.

On the opposite page is a view of the exterior of a tower erected for the L. S. & M. S. Railroad at La Salle Street, Chicago.

Below we give a list of various sizes of tower most commonly used. Should any other size be required, the dimensions may be determined by multiplying the number of lever spaces in the interlocking machine by two inches and adding the required amount of clearance space between the ends of machine and walls of building.

#### SIZES OF TOWERS.

| <i>For Machines.</i> | <i>Width.</i> | <i>Length.</i> |
|----------------------|---------------|----------------|
| 8 to 40 Spaces ..... | 12 ft.        | 12 ft.         |
| 44 " 60 " .....      | 12 "          | 15 "           |
| 64 " 70 " .....      | 12 "          | 17 "           |
| 76 " 84 " .....      | 12 "          | 19 "           |
| 88 " 104 " .....     | 12 "          | 22 "           |
| 108 " 132 " .....    | 12 "          | 27 "           |
| 136 " 152 " .....    | 12 "          | 30 "           |

In the above list  $2\frac{1}{2}$  feet has been assumed as the clearance space at each end of machine.

On the following pages will be found lists of various sizes of Commercial Bolts, Screws, Lag Screws, Cotter Pins, Rivets, etc., used in connection with Electric Interlocking Devices, to which our order numbers have been assigned.

BOLTS, SCREWS, COTTER PINS, ETC.

SQUARE HEAD MACHINE BOLTS WITH NUTS.

| Order No. | Size.                               | Order No. | Size.                              | Order No. | Size.                                |
|-----------|-------------------------------------|-----------|------------------------------------|-----------|--------------------------------------|
| 0300      | $\frac{1}{4}$ " x $\frac{1}{2}$ "   | 0185      | $\frac{3}{8}$ " x 5"               | 0269      | $\frac{5}{8}$ " x 13"                |
| 0134      | $\frac{1}{4}$ " x $\frac{3}{4}$ "   | 0192      | $\frac{1}{2}$ " x $5\frac{1}{2}$ " | 0130      | $\frac{5}{8}$ " x 14"                |
| 0232      | $\frac{1}{4}$ " x 1"                | 013       | $\frac{1}{2}$ " x 6"               | 0271      | $\frac{5}{8}$ " x 13"                |
| 02        | $\frac{1}{4}$ " x 1"                | 014       | $\frac{3}{8}$ " x $6\frac{1}{2}$ " | 020       | $\frac{5}{8}$ " x 2"                 |
| 05        | $\frac{1}{4}$ " x $1\frac{1}{4}$ "  | 015       | $\frac{1}{2}$ " x 7"               | 024       | $\frac{5}{8}$ " x $2\frac{1}{2}$ "   |
| 03        | $\frac{1}{4}$ " x $1\frac{3}{4}$ "  | 016       | $\frac{3}{8}$ " x $7\frac{1}{2}$ " | 0299      | $\frac{5}{8}$ " x $2\frac{3}{4}$ "   |
| 04        | $\frac{1}{4}$ " x 1 $\frac{3}{4}$ " | 017       | $\frac{1}{2}$ " x 8"               | 0314      | $\frac{5}{8}$ " x 3 $\frac{1}{4}$ "  |
| 0256      | $\frac{1}{4}$ " x 2"                | 0117      | $\frac{1}{2}$ " x 9"               | 0276      | $\frac{5}{8}$ " x 3 $\frac{3}{4}$ "  |
| 0258      | $\frac{1}{4}$ " x $2\frac{1}{4}$ "  | 0190      | $\frac{1}{2}$ " x $9\frac{1}{2}$ " | 0404      | $\frac{5}{8}$ " x 4"                 |
| 0343      | $\frac{1}{4}$ " x $2\frac{3}{4}$ "  | 0194      | $\frac{1}{2}$ " x 10"              | 0193      | $\frac{5}{8}$ " x 4 $\frac{1}{2}$ "  |
| 0257      | $\frac{1}{4}$ " x $2\frac{3}{4}$ "  | 0118      | $\frac{1}{2}$ " x 12"              | 0162      | $\frac{5}{8}$ " x 5"                 |
| 0196      | $\frac{5}{16}$ " x 5"               | 0369      | $\frac{1}{2}$ " x 13"              | 0163      | $\frac{5}{8}$ " x $5\frac{1}{2}$ "   |
| 06        | $\frac{5}{16}$ " x 1"               | 0119      | $\frac{1}{2}$ " x 14"              | 022       | $\frac{5}{8}$ " x 6"                 |
| 07        | $\frac{5}{16}$ " x $1\frac{1}{4}$ " | 0233      | $\frac{1}{2}$ " x 16"              | 023       | $\frac{5}{8}$ " x 6 $\frac{1}{2}$ "  |
| 0175      | $\frac{5}{16}$ " x $1\frac{3}{4}$ " | 0322      | $\frac{1}{2}$ " x 11"              | 0278      | $\frac{5}{8}$ " x 7"                 |
| 0291      | $\frac{5}{16}$ " x $1\frac{3}{4}$ " | 090       | $\frac{1}{2}$ " x $1\frac{1}{2}$ " | 0214      | $\frac{5}{8}$ " x $7\frac{1}{2}$ "   |
| 08        | $\frac{5}{16}$ " x 2"               | 0161      | $\frac{1}{2}$ " x 2"               | 0427      | $\frac{5}{8}$ " x 8"                 |
| 0238      | $\frac{5}{16}$ " x 3"               | 0419      | $\frac{1}{2}$ " x $2\frac{1}{4}$ " | 0227      | $\frac{5}{8}$ " x $8\frac{1}{2}$ "   |
| 0435      | $\frac{5}{16}$ " x 4"               | 0149      | $\frac{1}{2}$ " x $2\frac{1}{2}$ " | 0133      | $\frac{5}{8}$ " x 9"                 |
| 09        | $\frac{5}{16}$ " x 1"               | 0195      | $\frac{1}{2}$ " x 3"               | 0151      | $\frac{5}{8}$ " x 10"                |
| 077       | $\frac{5}{16}$ " x $1\frac{1}{4}$ " | 0126      | $\frac{1}{2}$ " x $3\frac{1}{2}$ " | 0437      | $\frac{5}{8}$ " x 11"                |
| 010       | $\frac{5}{16}$ " x $1\frac{1}{4}$ " | 018       | $\frac{1}{2}$ " x 4"               | 0180      | $\frac{5}{8}$ " x 12"                |
| 0390      | $\frac{5}{16}$ " x $1\frac{3}{4}$ " | 0211      | $\frac{1}{2}$ " x $4\frac{1}{2}$ " | 0131      | $\frac{5}{8}$ " x 13"                |
| 011       | $\frac{5}{16}$ " x 2"               | 019       | $\frac{1}{2}$ " x $4\frac{1}{2}$ " | 0181      | $\frac{5}{8}$ " x 14"                |
| 0136      | $\frac{5}{16}$ " x $2\frac{1}{4}$ " | 0366      | $\frac{1}{2}$ " x 5"               | 0153      | $\frac{5}{8}$ " x 14 $\frac{1}{2}$ " |
| 012       | $\frac{5}{16}$ " x $2\frac{1}{4}$ " | 0216      | $\frac{1}{2}$ " x 6"               | 0333      | $\frac{5}{8}$ " x 15"                |
| 0242      | $\frac{5}{16}$ " x 3"               | 0208      | $\frac{1}{2}$ " x 7"               | 0152      | $\frac{5}{8}$ " x 20"                |
| 098       | $\frac{5}{16}$ " x $3\frac{3}{4}$ " | 0219      | $\frac{1}{2}$ " x 8"               | 0132      | $\frac{5}{8}$ " x 22"                |
| 0150      | $\frac{5}{16}$ " x 4"               | 0135      | $\frac{1}{2}$ " x 9"               | 0425      | $\frac{5}{8}$ " x 5"                 |
| 0191      | $\frac{5}{16}$ " x $4\frac{1}{2}$ " | 086       | $\frac{1}{2}$ " x 12"              | 0202      | 1" x 12"                             |

SQUARE HEAD MACHINE BOLTS WITH HEX. NUTS.

| Order No. | Size.                              | Order No. | Size.                              | Order No. | Size.                              |
|-----------|------------------------------------|-----------|------------------------------------|-----------|------------------------------------|
| 0522      | $\frac{1}{2}$ " x $1\frac{3}{4}$ " | 0525      | $\frac{1}{2}$ " x $2\frac{3}{4}$ " | 0502      | $\frac{5}{8}$ " x $3\frac{1}{4}$ " |
| 0524      | $\frac{1}{2}$ " x 2"               | 0127      | $\frac{1}{2}$ " x $2\frac{3}{4}$ " | 0432      | $\frac{5}{8}$ " x $2\frac{3}{4}$ " |
| 092       | $\frac{1}{2}$ " x $2\frac{1}{2}$ " | 0501      | $\frac{1}{2}$ " x $2\frac{1}{2}$ " | 0412      | $\frac{5}{8}$ " x $3\frac{1}{2}$ " |

HEX. HEAD MACHINE BOLTS WITH NUTS.

| Order No. | Size.                               | Order No. | Size.                              | Order No. | Size.                              |
|-----------|-------------------------------------|-----------|------------------------------------|-----------|------------------------------------|
| 0512      | $\frac{1}{2}$ " x $1\frac{1}{2}$ "  | 081       | $\frac{3}{8}$ " x $1\frac{1}{2}$ " | 0519      | $\frac{1}{2}$ " x $3\frac{3}{4}$ " |
| 0102      | $\frac{5}{16}$ " x 1"               | 0521      | $\frac{3}{8}$ " x 2"               | 0451      | $\frac{1}{2}$ " x $2\frac{3}{4}$ " |
| 0101      | $\frac{5}{16}$ " x $1\frac{1}{4}$ " | 078       | $\frac{3}{8}$ " x $1\frac{1}{2}$ " | 0283      | $\frac{1}{2}$ " x 3"               |
| 0532      | $\frac{5}{16}$ " x $2\frac{1}{2}$ " | 076       | $\frac{1}{2}$ " x $2\frac{1}{2}$ " |           |                                    |

BOLTS, SCREWS, COTTER PINS, ETC.

HEX. HEAD TAP BOLTS

| Order No. | Size.                                | Order No. | Size.                                 | Order No. | Size.                                 |
|-----------|--------------------------------------|-----------|---------------------------------------|-----------|---------------------------------------|
| 0511      | $\frac{1}{4}'' \times \frac{7}{8}''$ | 0526      | $\frac{3}{8}'' \times 1\frac{1}{8}''$ | 0520      | $\frac{1}{2}'' \times 3''$            |
| 0455      | $\frac{5}{16}'' \times 3''$          | 0391      | $\frac{3}{8}'' \times 1''$            | 0528      | $\frac{3}{8}'' \times 1\frac{1}{2}''$ |
| 0398      | $\frac{3}{8}'' \times \frac{3}{4}''$ | 0551      | $\frac{1}{2}'' \times 1\frac{1}{2}''$ | 0503      | $\frac{5}{8}'' \times 1\frac{1}{2}''$ |

COUNTERSUNK HEAD BOLTS.

| Order No. | Size.                                 | Order No. | Size.                                 | Order No. | Size.                                 |
|-----------|---------------------------------------|-----------|---------------------------------------|-----------|---------------------------------------|
| 0255      | $\frac{1}{2}'' \times \frac{3}{4}''$  | 0346      | $\frac{5}{8}'' \times 2''$            | 021       | $\frac{3}{4}'' \times 2\frac{1}{2}''$ |
| 0261      | $\frac{1}{2}'' \times 1\frac{1}{4}''$ | 0128      | $\frac{3}{8}'' \times 1\frac{1}{4}''$ | 0448      | $\frac{3}{4}'' \times 3\frac{1}{4}''$ |
| 0531      | $\frac{3}{8}'' \times 1\frac{1}{4}''$ | 0296      | $\frac{3}{8}'' \times 2''$            |           |                                       |
| 0260      | $\frac{3}{8}'' \times 1\frac{3}{4}''$ | 0537      | $\frac{1}{4}'' \times 2\frac{1}{4}''$ |           |                                       |

HEX. HEAD CAP SCREWS

| Order No. | Size.                                  | Order No. | Size.                                  | Order No. | Size.                                  |
|-----------|--|-----------|--|-----------|--|
| 0321      | $\frac{1}{2}'' \times 1\frac{1}{4}''$  | 4814      | $\frac{1}{2}'' \times 1\frac{1}{8}''$  | 6768      | $\frac{5}{16}'' \times 1\frac{3}{8}''$ |
| 3439      | $\frac{5}{16}'' \times 1''$            | 5255      | $\frac{5}{16}'' \times 1\frac{1}{4}''$ | 6007      | $\frac{5}{16}'' \times 2''$            |
| 2878      | $\frac{7}{16}'' \times 1\frac{1}{2}''$ | 2818      | $\frac{1}{2}'' \times 1\frac{1}{2}''$  | 2890      | $\frac{5}{16}'' \times 2\frac{1}{2}''$ |
| 3440      | $\frac{5}{16}'' \times 1\frac{3}{8}''$ | 5221      | $\frac{1}{2}'' \times 1\frac{3}{8}''$  | 4811      | $\frac{5}{16}'' \times 2\frac{1}{2}''$ |
| 5048      | $\frac{5}{16}'' \times 2\frac{1}{8}''$ | 3343      | $\frac{1}{2}'' \times 2''$             | 2521      | $\frac{5}{16}'' \times 3\frac{5}{8}''$ |
| 6170      | $\frac{3}{8}'' \times 1''$             | 5190      | $\frac{3}{8}'' \times 2\frac{1}{4}''$  | 6014      | $\frac{5}{16}'' \times 2''$            |
| 2472      | $\frac{3}{8}'' \times 1\frac{1}{4}''$  | 3065      | $\frac{1}{2}'' \times 2\frac{1}{4}''$  | 6013      | $\frac{5}{16}'' \times 2\frac{1}{4}''$ |
| 6376      | $\frac{3}{8}'' \times 1\frac{1}{2}''$  | 6006      | $\frac{3}{8}'' \times 2\frac{3}{4}''$  | 6015      | $\frac{5}{16}'' \times 2\frac{1}{2}''$ |
| 0280      | $\frac{3}{8}'' \times 2\frac{1}{2}''$  | 6601      | $\frac{3}{8}'' \times 1\frac{1}{4}''$  |           |  |
| 0281      | $\frac{3}{8}'' \times 4\frac{3}{8}''$  | 2891      | $\frac{3}{8}'' \times 1\frac{1}{2}''$  |           |  |

SQUARE HEAD CAP SCREWS.

| Order No. | Size.                                  | Order No. | Size.                                  | Order No. | Size.                                 |
|-----------|--|-----------|--|-----------|---------------------------------------|
| 4780      | No. 10 x $\frac{5}{16}''$              | 2461      | $\frac{5}{16}'' \times 1\frac{1}{2}''$ | 2481      | $\frac{1}{2}'' \times 1\frac{1}{2}''$ |
| 6821      | No. 10 x $1\frac{3}{8}''$              | 2469      | $\frac{1}{2}'' \times 3\frac{3}{4}''$  | 4965      | $\frac{1}{2}'' \times 1\frac{1}{2}''$ |
| 3144      | $\frac{1}{4}'' \times \frac{5}{8}''$   | 2471      | $\frac{1}{2}'' \times 1''$             | 3259      | $\frac{1}{2}'' \times 2''$            |
| 2762      | $\frac{1}{4}'' \times \frac{3}{4}''$   | 4555      | $\frac{1}{2}'' \times 1\frac{1}{4}''$  | 3056      | $\frac{1}{2}'' \times 3\frac{1}{4}''$ |
| 2447      | $\frac{1}{4}'' \times \frac{7}{8}''$   | 1762      | $\frac{1}{2}'' \times 1\frac{1}{2}''$  | 2483      | $\frac{1}{2}'' \times 2\frac{1}{4}''$ |
| 3029      | $\frac{1}{4}'' \times 1''$             | 2476      | $\frac{1}{2}'' \times 2\frac{3}{8}''$  | 2484      | $\frac{1}{2}'' \times 2\frac{3}{4}''$ |
| 3034      | $\frac{1}{4}'' \times 1\frac{1}{8}''$  | 1761      | $\frac{1}{2}'' \times 3''$             | 4693      | $\frac{1}{2}'' \times 3''$            |
| 2457      | $\frac{5}{16}'' \times \frac{3}{4}''$  | 2894      | $\frac{5}{16}'' \times 4\frac{1}{2}''$ | 2485      | $\frac{1}{2}'' \times 3\frac{1}{4}''$ |
| 1104      | $\frac{5}{16}'' \times 1''$            | 2478      | $\frac{1}{2}'' \times 3\frac{1}{4}''$  |           |                                       |
| 2458      | $\frac{5}{16}'' \times 1\frac{1}{4}''$ | 2479      | $\frac{1}{2}'' \times 1''$             |           |                                       |

Order by NUMBER and NAME Appearing in Large Type.

ROUND HEAD IRON MACHINE SCREWS.

| Order No. | Size.                     | Order No. | Size.                     | Order No. | Size.                               |
|-----------|---------------------------|-----------|---------------------------|-----------|-------------------------------------|
| 3790      | No. 3 x $\frac{1}{8}$ "   | 628       | No. 10 x $\frac{3}{4}$ "  | 0516      | No. 14 x $1\frac{1}{8}$ "           |
| 2519      | No. 4 x $\frac{1}{4}$ "   | 3044      | No. 10 x 1"               | 3955      | $\frac{1}{4}$ " x $\frac{1}{2}$ "   |
| 2426      | No. 6 x $\frac{1}{2}$ "   | 0454      | No. 10 x $1\frac{1}{4}$ " | 2450      | $\frac{1}{4}$ " x $\frac{9}{16}$ "  |
| 2552      | No. 6 x $\frac{5}{8}$ "   | 2556      | No. 12 x $\frac{3}{8}$ "  | 2451      | $\frac{1}{4}$ " x $\frac{5}{8}$ "   |
| 4952      | No. 6 x $\frac{3}{4}$ "   | 2440      | No. 12 x $\frac{1}{2}$ "  | 2452      | $\frac{1}{4}$ " x $\frac{3}{4}$ "   |
| 2427      | No. 8 x $\frac{5}{16}$ "  | 2441      | No. 12 x $\frac{1}{4}$ "  | 2455      | $\frac{1}{4}$ " x 1"                |
| 2429      | No. 8 x $\frac{7}{16}$ "  | 2442      | No. 12 x 1"               | 0320      | $\frac{1}{4}$ " x $1\frac{1}{8}$ "  |
| 2430      | No. 8 x $\frac{1}{2}$ "   | 2169      | No. 12 x $1\frac{1}{4}$ " | 3357      | $\frac{1}{4}$ " x $1\frac{1}{2}$ "  |
| 2431      | No. 8 x $\frac{3}{4}$ "   | 1410      | No. 12 x $1\frac{3}{4}$ " | 2555      | $\frac{1}{4}$ " x $1\frac{3}{8}$ "  |
| 2433      | No. 8 x $\frac{7}{8}$ "   | 2444      | No. 12 x 2"               | 2464      | $\frac{5}{16}$ " x 1"               |
| 3523      | No. 8 x $1\frac{1}{8}$ "  | 2170      | No. 12 x $2\frac{1}{8}$ " | 2317      | $\frac{5}{16}$ " x $1\frac{1}{8}$ " |
| 2434      | No. 10 x $\frac{1}{2}$ "  | 2830      | No. 12 x $2\frac{1}{4}$ " | 2486      | $\frac{5}{16}$ " x $1\frac{1}{4}$ " |
| 2435      | No. 10 x $\frac{3}{4}$ "  | 2831      | No. 12 x $3\frac{1}{4}$ " | 1584      | $\frac{5}{16}$ " x $1\frac{3}{8}$ " |
| 3519      | No. 10 x $\frac{7}{8}$ "  | 0517      | No. 14 x $\frac{3}{4}$ "  | 3084      | $\frac{5}{16}$ " x 2"               |
| 2784      | No. 10 x $1\frac{1}{8}$ " | 0523      | No. 14 x $\frac{1}{2}$ "  |           |                                     |

FLAT HEAD IRON MACHINE SCREWS.

| Order No. | Size.                             | Order No. | Size.                               | Order No. | Size.                               |
|-----------|-----------------------------------|-----------|-------------------------------------|-----------|-------------------------------------|
| 0401      | No. 6 x $\frac{1}{4}$ "           | 2453      | $\frac{1}{2}$ " x $\frac{3}{4}$ "   | 4851      | $\frac{3}{8}$ " x $\frac{3}{4}$ "   |
| 4909      | No. 6 x $\frac{3}{8}$ "           | 7518      | $\frac{1}{2}$ " x 1"                | 2473      | $\frac{3}{8}$ " x $1\frac{1}{8}$ "  |
| 1366      | No. 6 x $\frac{1}{2}$ "           | 5733      | $\frac{1}{2}$ " x $1\frac{1}{4}$ "  | 5580      | $\frac{3}{8}$ " x $1\frac{5}{16}$ " |
| 2437      | No. 10 x $\frac{3}{8}$ "          | 6105      | $\frac{1}{2}$ " x 2"                | 2480      | $\frac{3}{8}$ " x 1"                |
| 2439      | No. 10 x $\frac{1}{2}$ "          | 1103      | $\frac{5}{16}$ " x $\frac{3}{4}$ "  | 2983      | $\frac{1}{4}$ " x $1\frac{1}{2}$ "  |
| 5263      | $\frac{1}{4}$ " x $\frac{1}{2}$ " | 0303      | $\frac{5}{16}$ " x 1"               |           |                                     |
| 2559      | $\frac{1}{4}$ " x $\frac{5}{8}$ " | 2462      | $\frac{5}{16}$ " x $1\frac{1}{8}$ " |           |                                     |

FILISTER HEAD IRON MACHINE SCREWS.

| Order No. | Size.                    | Order No. | Size.                              | Order No. | Size.                              |
|-----------|--------------------------|-----------|------------------------------------|-----------|------------------------------------|
| 0325      | No. 10 x $\frac{3}{8}$ " | 2488      | $\frac{1}{4}$ " x $\frac{3}{4}$ "  | 2474      | $\frac{3}{8}$ " x $1\frac{1}{8}$ " |
| 0472      | No. 10 x $\frac{1}{2}$ " | 2518      | $\frac{1}{4}$ " x 1"               | 5191      | $\frac{3}{8}$ " x $1\frac{3}{8}$ " |
| 0327      | No. 10 x $\frac{5}{8}$ " | 3282      | $\frac{1}{4}$ " x $1\frac{3}{8}$ " |           |                                    |
| 3043      | No. 10 x 1"              | 7662      | $\frac{3}{8}$ " x $\frac{5}{8}$ "  |           |                                    |

Order by NUMBER and NAME Appearing in Large Type.

BOLTS, SCREWS, COTTER PINS, ETC.

LAG SCREWS.

| Order No.   | Size.                              | Order No.   | Size.                              | Order No.   | Size.                |
|-------------|------------------------------------|-------------|------------------------------------|-------------|----------------------|
| <b>0541</b> | $\frac{3}{8}$ " x 2"               | <b>0566</b> | $\frac{1}{4}$ " x $3\frac{1}{2}$ " | <b>068</b>  | $\frac{3}{4}$ " x 5" |
| <b>062</b>  | $\frac{3}{8}$ " x $2\frac{1}{2}$ " | <b>066</b>  | $\frac{1}{4}$ " x 3"               | <b>0231</b> | $\frac{3}{4}$ " x 6" |
| <b>063</b>  | $\frac{1}{2}$ " x 2"               | <b>0440</b> | $\frac{1}{4}$ " x $3\frac{1}{2}$ " | <b>0567</b> | $\frac{3}{4}$ " x 7" |
| <b>064</b>  | $\frac{1}{2}$ " x $2\frac{1}{2}$ " | <b>082</b>  | $\frac{1}{4}$ " x 4"               | <b>0568</b> | $\frac{3}{4}$ " x 8" |
| <b>065</b>  | $\frac{1}{2}$ " x 3"               | <b>067</b>  | $\frac{1}{4}$ " x 4"               |             |                      |

COMMERCIAL IRON WASHERS.

| Order No.   | Size.            | Order No.   | Size.           | Order No.   | Size.            |
|-------------|------------------|-------------|-----------------|-------------|------------------|
| <b>0177</b> | $\frac{8}{16}$ " | <b>072</b>  | 1"              | <b>074</b>  | 1"               |
| <b>069</b>  | $\frac{1}{4}$ "  | <b>087</b>  | $\frac{1}{4}$ " | <b>0381</b> | $1\frac{1}{4}$ " |
| <b>070</b>  | $\frac{5}{16}$ " | <b>073</b>  | $\frac{1}{4}$ " |             |                  |
| <b>071</b>  | $\frac{8}{8}$ "  | <b>0393</b> | $\frac{1}{4}$ " |             |                  |

LOCK WASHERS.

| Order No.   | Size.           | Order No.   | Size.           | Order No.   | Size. |
|-------------|-----------------|-------------|-----------------|-------------|-------|
| <b>0510</b> | 1"              | <b>0113</b> | $\frac{1}{2}$ " | <b>0570</b> | 1"    |
| <b>0569</b> | $\frac{1}{2}$ " | <b>029</b>  | $\frac{1}{2}$ " |             |       |
| <b>091</b>  | $\frac{1}{2}$ " | <b>0426</b> | $\frac{1}{2}$ " |             |       |

COTTER PINS.

| Order No.   | Size.                               | Order No.   | Size.                               | Order No.   | Size.                              |
|-------------|-------------------------------------|-------------|-------------------------------------|-------------|------------------------------------|
| <b>033</b>  | $\frac{8}{32}$ " x $\frac{3}{8}$ "  | <b>010</b>  | $\frac{1}{4}$ " x 1"                | <b>047</b>  | $\frac{1}{4}$ " x $1\frac{1}{2}$ " |
| <b>034</b>  | $\frac{8}{32}$ " x $\frac{1}{2}$ "  | <b>041</b>  | $\frac{1}{4}$ " x $1\frac{1}{2}$ "  | <b>048</b>  | $\frac{1}{4}$ " x $1\frac{3}{4}$ " |
| <b>035</b>  | $\frac{8}{32}$ " x $\frac{3}{4}$ "  | <b>0169</b> | $\frac{1}{4}$ " x $1\frac{3}{4}$ "  | <b>0446</b> | $\frac{1}{4}$ " x 2"               |
| <b>036</b>  | $\frac{8}{32}$ " x 1"               | <b>088</b>  | $\frac{3}{16}$ " x $\frac{3}{4}$ "  | <b>0213</b> | $\frac{1}{4}$ " x $2\frac{1}{2}$ " |
| <b>0184</b> | $\frac{8}{32}$ " x 1"               | <b>042</b>  | $\frac{3}{16}$ " x 1"               | <b>049</b>  | $\frac{1}{4}$ " x 3"               |
| <b>037</b>  | $\frac{8}{32}$ " x 1"               | <b>043</b>  | $\frac{3}{16}$ " x $1\frac{1}{4}$ " | <b>0277</b> | $\frac{1}{4}$ " x $3\frac{1}{2}$ " |
| <b>0156</b> | $\frac{8}{32}$ " x $1\frac{1}{4}$ " | <b>044</b>  | $\frac{3}{16}$ " x $1\frac{1}{2}$ " | <b>050</b>  | $\frac{1}{4}$ " x 4"               |
| <b>038</b>  | $\frac{8}{32}$ " x 1"               | <b>045</b>  | $\frac{3}{16}$ " x $1\frac{3}{4}$ " | <b>0273</b> | $\frac{5}{16}$ " x 2"              |
| <b>039</b>  | $\frac{8}{32}$ " x $\frac{1}{4}$ "  | <b>046</b>  | $\frac{3}{16}$ " x 2"               | <b>0311</b> | $\frac{3}{8}$ " x $1\frac{1}{2}$ " |

Order by NUMBER and NAME Appearing in Large Type.



ROUND HEAD IRON RIVETS.

| Order No. | Size.                               | Order No. | Size.                               | Order No. | Size.                              |
|-----------|-------------------------------------|-----------|-------------------------------------|-----------|------------------------------------|
| 0178      | $\frac{3}{8}$ " X $\frac{7}{8}$ "   | 075       | $\frac{1}{2}$ " X $1\frac{5}{8}$ "  | 0347      | $\frac{1}{2}$ " X $1\frac{1}{2}$ " |
| 0342      | $\frac{1}{2}$ " X $\frac{1}{2}$ "   | 0574      | $\frac{1}{2}$ " X $1\frac{3}{4}$ "  | 0414      | $\frac{1}{2}$ " X $2\frac{1}{2}$ " |
| 055       | $\frac{1}{2}$ " X $\frac{7}{8}$ "   | 0305      | $\frac{1}{4}$ " X $1\frac{3}{8}$ "  | 060       | $\frac{5}{8}$ " X $1\frac{1}{8}$ " |
| 056       | $\frac{1}{2}$ " X $1$ "             | 080       | $\frac{1}{2}$ " X $2\frac{3}{8}$ "  | 0457      | $\frac{5}{8}$ " X $1\frac{1}{2}$ " |
| 057       | $\frac{3}{8}$ " X $1\frac{1}{4}$ "  | 0313      | $\frac{5}{16}$ " X $1\frac{3}{8}$ " | 0447      | $\frac{5}{8}$ " X $2\frac{1}{2}$ " |
| 0361      | $\frac{3}{16}$ " X $\frac{3}{16}$ " | 0413      | $\frac{3}{8}$ " X $1$ "             | 093       | $\frac{5}{8}$ " X $1\frac{1}{2}$ " |
| 0203      | $\frac{3}{16}$ " X $\frac{3}{2}$ "  | 0171      | $\frac{3}{8}$ " X $1\frac{1}{4}$ "  | 061       | $\frac{5}{8}$ " X $1\frac{1}{2}$ " |
| 0204      | $\frac{3}{16}$ " X $\frac{1}{2}$ "  | 0428      | $\frac{3}{8}$ " X $1\frac{1}{2}$ "  | 0420      | $\frac{3}{4}$ " X $2$ "            |
| 0220      | $\frac{3}{16}$ " X $\frac{5}{8}$ "  | 0360      | $\frac{3}{8}$ " X $1\frac{1}{2}$ "  | 097       | $\frac{3}{4}$ " X $2\frac{1}{4}$ " |
| 058       | $\frac{3}{16}$ " X $\frac{3}{4}$ "  | 0207      | $\frac{3}{8}$ " X $2\frac{3}{4}$ "  | 0200      | $\frac{3}{4}$ " X $3$ "            |
| 0323      | $\frac{3}{16}$ " X $1\frac{1}{2}$ " | 0235      | $\frac{1}{2}$ " X $1$ "             | 0415      | $\frac{3}{4}$ " X $6\frac{1}{2}$ " |
| 0224      | $\frac{1}{4}$ " X $\frac{3}{4}$ "   | 059       | $\frac{1}{2}$ " X $1\frac{1}{8}$ "  | 0416      | $\frac{3}{4}$ " X $8\frac{1}{4}$ " |
| 0115      | $\frac{1}{4}$ " X $1\frac{1}{4}$ "  | 0228      | $\frac{1}{2}$ " X $1\frac{3}{8}$ "  |           |                                    |
| 0114      | $\frac{1}{4}$ " X $1\frac{1}{2}$ "  | 0450      | $\frac{1}{2}$ " X $1\frac{1}{2}$ "  |           |                                    |

COUNTERSUNK HEAD IRON RIVETS.

| Order No. | Size.                              | Order No. | Size.                              | Order No. | Size.                              |
|-----------|------------------------------------|-----------|------------------------------------|-----------|------------------------------------|
| 0230      | $\frac{1}{8}$ " X $\frac{7}{16}$ " | 0218      | $\frac{3}{8}$ " X $1\frac{1}{4}$ " | 0225      | $\frac{5}{8}$ " X $1\frac{1}{2}$ " |
| 0172      | $\frac{1}{8}$ " X $\frac{1}{2}$ "  | 0529      | $\frac{1}{2}$ " X $1$ "            | 099       | $\frac{3}{4}$ " X $1\frac{1}{2}$ " |
| 0265      | $\frac{3}{16}$ " X $\frac{1}{2}$ " | 0449      | $\frac{1}{2}$ " X $1\frac{1}{4}$ " | 0226      | $\frac{3}{4}$ " X $1\frac{5}{8}$ " |
| 0166      | $\frac{3}{16}$ " X $\frac{3}{4}$ " | 0527      | $\frac{1}{2}$ " X $1\frac{3}{4}$ " | 0295      | $\frac{3}{4}$ " X $2$ "            |
| 0243      | $\frac{1}{4}$ " X $\frac{3}{4}$ "  | 089       | $\frac{3}{8}$ " X $1$ "            |           |                                    |

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| 02        | 137   | .02         | 079       | 265   | .32         | 0214      | 91    | .14         | 0404      | 91    | .12         |
| 03        | 137   | .02         | 082       | 95    | .06         | 0215      | 91    | .04         | 0407      | 171   | .10         |
| 04        | 137   | .02         | 083       | 19    | .06         | 0219      | 129   | .12         | 0410      | 171   | .02         |
| 05        | 129   | .02         | 085       | 47    | .10         | 0220      | 171   | .01         | 0411      | 171   | .03         |
| 06        | 133   | .02         | 086       | 169   | .14         | 0223      | 272   | 49.00       | 0412      | 61    | .10         |
| 07        | 79    | .02         | 087       | 169   | .01         | 0225      | 51    | .02         | 0419      | 55    | .07         |
| 08        | 183   | .03         | 088       | 21    | .008        | 0226      | 51    | .03         | 0424      | 65    | .10         |
| 010       | 55    | .04         | 089       | 79    | .01         | 0229      | 75    | .03         | 0425      | 102   | .16         |
| 011       | 17    | .04         | 091       | 73    | .02         | 0231      | 99    | .09         | 0426      | 102   | .02         |
| 012       | 17    | .04         | 093       | 51    | .03         | 0232      | 203   | .02         | 0427      | 91    | .16         |
| 013       | 159   | .07         | 094       | 47    | .01         | 0234      | 55    | .02         | 0432      | 55    | .10         |
| 014       | 133   | .07         | 095       | 47    | .01         | 0236      | 37    | .15         | 0435      | 95    | .04         |
| 016       | 159   | .07         | 097       | 65    | .04         | 0238      | 249   | .03         | 0437      | 99    | .19         |
| 017       | 159   | .07         | 098       | 95    | .05         | 0255      | 147   | .02         | 0440      | 95    | .05         |
| 019       | 129   | .09         | 0104      | 275   | ....        | 0256      | 143   | .02         | 0446      | 75    | .008        |
| 020       | 249   | .08         | 0105      | 265   | ....        | 0257      | 143   | .02         | 0447      | 65    | .03         |
| 022       | 83    | .14         | 0107      | 275   | ....        | 0260      | 73    | .06         | 0448      | 69    | .08         |
| 024       | 169   | .08         | 0108      | 272   | 56.00       | 0261      | 73    | .04         | 0449      | 73    | .02         |
| 025       | 155   | .14         | 0109      | 275   | ....        | 0265      | 171   | .01         | 0450      | 79    | .02         |
| 026       | 37    | .07         | 0110      | 272   | 47.50       | 0267      | 171   | .01         | 0451      | 75    | .14         |
| 027       | 192   | .06         | 0111      | 272   | 48.00       | 0272      | 61    | .03         | 0456      | 221   | .20         |
| 028       | 192   | .08         | 0112      | 272   | 48.00       | 0273      | 151   | .008        | 0457      | 73    | .02         |
| 029       | 47    | .02         | 0113      | 55    | .02         | 0274      | 47    | .02         | 0458      | 272   | 50.00       |
| 030       | 213   | ....        | 0114      | 155   | .01         | 0283      | 69    | .10         | 0465      | 272   | 66.00       |
| 034       | 41    | .008        | 0115      | 155   | .01         | 0286      | 155   | .02         | 0470      | 277   | .50         |
| 035       | 19    | .008        | 0117      | 159   | .09         | 0288      | 51    | .03         | 0477      | 155   | .06         |
| 036       | 19    | .008        | 0118      | 159   | .10         | 0293      | 155   | .02         | 0481      | 272   | 47.50       |
| 039       | 177   | .008        | 0119      | 159   | .10         | 0294      | 272   | 53.00       | 0482      | 272   | 48.00       |
| 040       | 45    | .008        | 0122      | 45    | .01         | 0295      | 79    | .03         | 0484      | 272   | 50.00       |
| 041       | 37    | .008        | 0126      | 69    | .07         | 0296      | 73    | .09         | 0485      | 273   | 47.50       |
| 042       | 79    | .008        | 0127      | 75    | .07         | 0299      | 91    | .10         | 0486      | 273   | 48.00       |
| 043       | 43    | .008        | 0130      | 169   | .16         | 0303      | 281   | .03         | 0487      | 273   | 49.00       |
| 044       | 55    | .008        | 0131      | 83    | .19         | 0307      | 113   | .12         | 0488      | 273   | 47.50       |
| 045       | 37    | .008        | 0133      | 91    | .16         | 0315      | 272   | 5.70        | 0489      | 273   | 42.50       |
| 046       | 43    | .008        | 0134      | 139   | .02         | 0341      | 279   | ....        | 0490      | 275   | ....        |
| 047       | 75    | .008        | 0135      | 169   | .12         | 0343      | 143   | .02         | 0491      | 275   | ....        |
| 048       | 41    | .008        | 0136      | 183   | .04         | 0347      | 79    | .02         | 0529      | 75    | .02         |
| 049       | 43    | .008        | 0149      | 79    | .07         | 0348      | 197   | .03         | 0549      | 169   | .17         |
| 050       | 83    | .008        | 0150      | 153   | .06         | 0349      | 279   | ....        | 0551      | 151   | .03         |
| 051       | 236   | 1.20        | 0151      | 83    | .16         | 0350      | 275   | ....        | 0557      | 265   | ....        |
| 052       | 37    | 1.00        | 0166      | 189   | .01         | 0351      | 275   | ....        | 0574      | 209   | .01         |
| 054       | 155   | ....        | 0169      | 41    | .008        | 0352      | 275   | ....        | 409       | 41    | .90         |
| 058       | 205   | .01         | 0171      | 79    | .01         | 0354      | 275   | ....        | 410       | 41    | 1.00        |
| 059       | 79    | .02         | 0175      | 95    | .03         | 0360      | 165   | .01         | 420       | 41    | .40         |
| 060       | 79    | .02         | 0180      | 47    | .19         | 0362      | 277   | .50         | 421       | 41    | .40         |
| 062       | 95    | .02         | 0183      | 169   | .80         | 0366      | 151   | .10         | 425       | 47    | .06         |
| 064       | 79    | .03         | 0184      | 192   | .008        | 0368      | 275   | 1.44        | 426       | 47    | .04         |
| 065       | 95    | .03         | 0190      | 133   | .09         | 0373      | 277   | .50         | 429       | 41    | .05         |
| 066       | 37    | .05         | 0192      | 133   | .06         | 0377      | 272   | 49.00       | 430       | 41    | .05         |
| 067       | 51    | .07         | 0193      | 91    | .12         | 0378      | 272   | 49.00       | 431       | 41    | .05         |
| 068       | 47    | .08         | 0194      | 133   | .09         | 0382      | 236   | .16         | 441       | 137   | .12         |
| 069       | 163   | .01         | 0195      | 83    | .07         | 0385      | 277   | .50         | 446       | 163   | .24         |
| 070       | 165   | .01         | 0203      | 47    | .01         | 0387      | 265   | .10         | 460       | 47    | .80         |
| 071       | 37    | .01         | 0204      | 197   | .01         | 0389      | 272   | 142.50      | 461       | 47    | 1.20        |
| 072       | 95    | .01         | 0208      | 129   | .12         | 0390      | 129   | .04         | 462       | 37    | .80         |
| 073       | 47    | .02         | 0209      | 229   | .01         | 0391      | 151   | .02         | 463       | 47    | 1.00        |
| 074       | 147   | .02         | 0210      | 129   | .04         | 0393      | 137   | .02         | 464       | 47    | .50         |
| 077       | 133   | .04         | 0212      | 279   | ....        | 0402      | 197   | .10         | 466       | 41    | 7.00        |

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| 468       | 41    | 2.00        | 760       | 43    | .50         | 933       | 87    | 2.00        | 1139      | 159   | 1.50        |
| 470       | 41    | .80         | 765       | 43    | 1.50        | 935       | 87    | 1.14        | 1140      | 159   | .10         |
| 472       | 41    | 4.00        | 771       | 155   | 1.30        | 937       | 137   | .16         | 1141      | 159   | .06         |
| 493       | 179   | .04         | 773       | 43    | 1.30        | 939       | 147   | .10         | 1142      | 159   | .12         |
| 506       | 21    | .01         | 774       | 113   | .02         | 941       | 201   | .10         | 1144      | 283   | .04         |
| 520       | 43    | .24         | 775       | 155   | 1.40        | 942       | 205   | .54         | 1147      | 45    | .02         |
| 522       | 43    | .15         | 776       | 155   | 1.34        | 944       | 87    | .44         | 1148      | 159   | .02         |
| 523       | 147   | .07         | 777       | 159   | 1.20        | 947       | 169   | .12         | 1150      | 159   | .30         |
| 528       | 21    | .02         | 786       | 79    | .36         | 959       | 87    | 1.10        | 1155      | 41    | .02         |
| 533       | 41    | .60         | 789       | 159   | 1.20        | 960       | 51    | 8.00        | 1156      | 45    | .02         |
| 536       | 19    | .30         | 793       | 61    | 1.70        | 962       | 55    | 7.70        | 1158      | 159   | .30         |
| 545       | 65    | .19         | 794       | 61    | 1.70        | 963       | 55    | 7.90        | 1159      | 159   | .24         |
| 554       | 47    | .12         | 796       | 131   | 4.00        | 972       | 183   | .90         | 1161      | 159   | 3.10        |
| 555       | 47    | .06         | 797       | 169   | 3.70        | 975       | 179   | .01         | 1168      | 65    | .10         |
| 558       | 51    | .40         | 798       | 169   | 3.70        | 983       | 131   | .40         | 1178      | 51    | 9.00        |
| 559       | 51    | .30         | 799       | 79    | .12         | 984       | 183   | .40         | 1179      | 17    | .20         |
| 566       | 37    | .30         | 805       | 51    | 5.00        | 996       | 169   | .40         | 1200      | 19    | .40         |
| 577       | 21    | .02         | 819       | 177   | 25.00       | 1000      | 43    | .30         | 1214      | 19    | .10         |
| 633       | 73    | 4.00        | 821       | 179   | 2.00        | 1011      | 236   | 4.50        | 1215      | 26    | .20         |
| 634       | 79    | .14         | 825       | 179   | .50         | 1012      | 236   | 2.20        | 1216      | 26    | .30         |
| 635       | 75    | .12         | 826       | 65    | 2.50        | 1015      | 43    | .06         | 1218      | 26    | .50         |
| 636       | 75    | .12         | 827       | 65    | 2.20        | 1019      | 229   | 1.50        | 1221      | 19    | 1.00        |
| 637       | 83    | 1.12        | 829       | 179   | .16         | 1020      | 229   | .30         | 1222      | 19    | .15         |
| 638       | 75    | 1.10        | 830       | 177   | .30         | 1024      | 229   | 1.50        | 1225      | 197   | .01         |
| 639       | 79    | .40         | 836       | 153   | .50         | 1027      | 236   | 24.00       | 1230      | 75    | .36         |
| 640       | 65    | .19         | 837       | 165   | 1.70        | 1028      | 236   | 20.00       | 1231      | 19    | .15         |
| 641       | 79    | .24         | 838       | 177   | .20         | 1034      | 229   | .20         | 1232      | 19    | .20         |
| 642       | 75    | .36         | 839       | 179   | .20         | 1036      | 26    | .04         | 1239      | 19    | .10         |
| 645       | 91    | .04         | 840       | 179   | .30         | 1037      | 155   | .60         | 1240      | 19    | .05         |
| 646       | 47    | .05         | 841       | 183   | .70         | 1038      | 159   | 3.30        | 1249      | 19    | 1.00        |
| 649       | 75    | .12         | 842       | 177   | 4.00        | 1047      | 55    | .09         | 1251      | 159   | .36         |
| 653       | 87    | ....        | 843       | 177   | 4.50        | 1048      | 17    | .03         | 1255      | 159   | 150.00      |
| 659       | 87    | 1.34        | 844       | 229   | .28         | 1049      | 169   | 1.00        | 1256      | 37    | .80         |
| 660       | 87    | .50         | 845       | 29    | .08         | 1050      | 229   | .80         | 1257      | 26    | .40         |
| 661       | 79    | .72         | 846       | 29    | .06         | 1052      | 229   | .20         | 1258      | 26    | .40         |
| 670       | 163   | .30         | 847       | 29    | .05         | 1055      | 229   | .02         | 1264      | 159   | 1.00        |
| 673       | 26    | .15         | 848       | 179   | .14         | 1056      | 239   | .40         | 1268      | 26    | .20         |
| 684       | 179   | .02         | 859       | 179   | .30         | 1059      | 229   | .05         | 1269      | 26    | .05         |
| 694       | 147   | 1.60        | 861       | 65    | 1.30        | 1060      | 229   | .40         | 1272      | 51    | 8.60        |
| 709       | 155   | 1.30        | 873       | 169   | .33         | 1066      | 19    | 1.00        | 1273      | 51    | 9.80        |
| 710       | 155   | 1.40        | 874       | 217   | .30         | 1069      | 19    | .10         | 1274      | 51    | 10.20       |
| 712       | 171   | .40         | 877       | 217   | 1.50        | 1070      | 19    | .20         | 1275      | 26    | .60         |
| 719       | 26    | 1.40        | 879       | 163   | .08         | 1075      | 281   | .10         | 1282      | 26    | .50         |
| 721       | 243   | .02         | 890       | 155   | .28         | 1098      | 79    | .52         | 1283      | 26    | .30         |
| 723       | 43    | .30         | 891       | 155   | .33         | 1099      | 159   | 1.00        | 1285      | 73    | 8.00        |
| 724       | 43    | .30         | 892       | 217   | 3.30        | 1102      | 229   | .08         | 1286      | 47    | .02         |
| 729       | 79    | .50         | 893       | 217   | .80         | 1103      | 239   | .02         | 1296      | 165   | 1.52        |
| 730       | 87    | .07         | 894       | 217   | .20         | 1104      | 17    | .04         | 1301      | 159   | .20         |
| 731       | 43    | .30         | 897       | 255   | .10         | 1111      | 253   | .12         | 1302      | 159   | .20         |
| 736       | 21    | .06         | 898       | 255   | .06         | 1112      | 159   | 8.00        | 1303      | 17    | 25.00       |
| 737       | 41    | .04         | 903       | 183   | 2.50        | 1113      | 159   | 8.00        | 1311      | 192   | .10         |
| 740       | 279   | .04         | 904       | 183   | .12         | 1117      | 159   | 1.00        | 1322      | 205   | .10         |
| 743       | 83    | 1.12        | 905       | 183   | .60         | 1118      | 159   | .10         | 1333      | 159   | .06         |
| 744       | 87    | .84         | 908       | 229   | 1.50        | 1119      | 159   | .12         | 1338      | 165   | 18.00       |
| 750       | 41    | .40         | 915       | 255   | .30         | 1128      | 159   | 1.00        | 1352      | 165   | 1.60        |
| 751       | 41    | .70         | 924       | 210   | ....        | 1136      | 159   | 5.00        | 1361      | 87    | 1.12        |
| 755       | 43    | 2.00        | 929       | 159   | 3.00        | 1137      | 159   | 1.00        | 1364      | 19    | 11.00       |
| 756       | 41    | 7.00        | 931       | 87    | .74         | 1138      | 159   | 1.00        | 1367      | 19    | 1.20        |

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| 1368      | 165   | 4.00        | 1549      | 37    | .50         | 1753      | 26    | .30         | 1926      | 43    | .02         |
| 1369      | 165   | 4.00        | 1550      | 37    | 7.00        | 1754      | 26    | .30         | 1928      | 43    | .14         |
| 1370      | 165   | 3.00        | 1551      | 37    | 2.00        | 1761      | 160   | .08         | 1930      | 43    | .40         |
| 1371      | 165   | 3.00        | 1553      | 37    | .02         | 1762      | 160   | .05         | 1934      | 177   | .50         |
| 1374      | 165   | .80         | 1554      | 192   | .80         | 1767      | 37    | .40         | 1941      | 147   | 1.16        |
| 1381      | 165   | .20         | 1555      | 192   | .10         | 1768      | 131   | .30         | 1942      | 27    | .40         |
| 1382      | 165   | .16         | 1568      | 17    | 3.50        | 1771      | 37    | .40         | 1943      | 27    | .40         |
| 1387      | 165   | .12         | 1572      | 37    | .03         | 1772      | 37    | .10         | 1944      | 137   | .16         |
| 1389      | 37    | .10         | 1573      | 37    | .30         | 1775      | 61    | 1.60        | 1948      | 131   | .32         |
| 1391      | 159   | .36         | 1576      | 165   | .90         | 1776      | 61    | 1.60        | 1949      | 131   | .80         |
| 1396      | 205   | .16         | 1579      | 165   | .80         | 1781      | 43    | 22.00       | 1953      | 165   | .06         |
| 1397      | 205   | .06         | 1581      | 37    | .15         | 1788      | 155   | .70         | 1968      | 17    | 24.00       |
| 1398      | 205   | .40         | 1584      | 165   | .08         | 1789      | 155   | .68         | 1969      | 17    | 36.00       |
| 1399      | 205   | .40         | 1585      | 17    | 18.00       | 1790      | 131   | 3.00        | 1970      | 17    | 48.00       |
| 1407      | 29    | .05         | 1586      | 17    | 30.00       | 1791      | 139   | .12         | 1971      | 17    | 60.00       |
| 1408      | 279   | .05         | 1587      | 17    | 42.00       | 1802      | 177   | .16         | 1976      | 33    | .12         |
| 1410      | 165   | .02         | 1588      | 17    | 54.00       | 1807      | 153   | 1.76        | 1977      | 29    | .05         |
| 1411      | 21    | .08         | 1589      | 17    | 66.00       | 1808      | 153   | 1.76        | 1978      | 29    | .05         |
| 1412      | 19    | .30         | 1590      | 17    | 78.00       | 1811      | 26    | .60         | 1981      | 279   | 3.00        |
| 1413      | 19    | .40         | 1595      | 160   | .90         | 1812      | 26    | .40         | 1982      | 279   | 3.70        |
| 1418      | 29    | .08         | 1596      | 160   | .90         | 1813      | 26    | .60         | 1983      | 279   | 5.50        |
| 1419      | 29    | .08         | 1597      | 160   | .30         | 1814      | 26    | .30         | 1984      | 279   | 7.00        |
| 1420      | 29    | .02         | 1598      | 160   | .30         | 1815      | 26    | .50         | 1988      | 279   | .20         |
| 1421      | 29    | .10         | 1600      | 37    | 2.70        | 1816      | 26    | .40         | 1989      | 279   | .20         |
| 1422      | 29    | .05         | 1601      | 37    | .01         | 1819      | 79    | .50         | 1990      | 263   | 24.00       |
| 1423      | 205   | .30         | 1602      | 37    | .02         | 1833      | 179   | .30         | 1991      | 263   | 10.00       |
| 1424      | 205   | .10         | 1639      | 160   | .02         | 1834      | 179   | .24         | 1992      | 263   | 16.00       |
| 1437      | 17    | .50         | 1640      | 160   | .04         | 1835      | 179   | .24         | 1993      | 263   | 26.00       |
| 1438      | 160   | 40.00       | 1642      | 17    | 15.00       | 1836      | 179   | .20         | 1994      | 279   | .16         |
| 1440      | 19    | 8.00        | 1647      | 160   | .10         | 1839      | 26    | 1.90        | 1995      | 279   | .10         |
| 1445      | 19    | .20         | 1649      | 37    | 2.70        | 1869      | 83    | 3.02        | 1996      | 279   | .50         |
| 1449      | 160   | .80         | 1650      | 179   | .02         | 1871      | 75    | 1.86        | 1997      | 279   | .30         |
| 1457      | 26    | .20         | 1651      | 147   | 1.68        | 1872      | 79    | .70         | 1998      | 279   | .50         |
| 1458      | 26    | .30         | 1652      | 160   | 6.00        | 1874      | 87    | 2.60        | 1999      | 279   | .40         |
| 1464      | 26    | .30         | 1653      | 183   | .04         | 1880      | 229   | 30.00       | 2000      | 279   | 1.00        |
| 1467      | 26    | .40         | 1654      | 131   | .40         | 1882      | 43    | 9.00        | 2006      | 47    | .02         |
| 1469      | 26    | .30         | 1657      | 183   | .90         | 1886      | 179   | .02         | 2014      | 73    | 8.00        |
| 1471      | 160   | 30.00       | 1659      | 236   | 24.00       | 1889      | 61    | .08         | 2031      | 263   | 8.00        |
| 1478      | 45    | .02         | 1660      | 43    | 3.00        | 1890      | 61    | .08         | 2036      | 265   | 4.00        |
| 1480      | 26    | .04         | 1661      | 131   | 1.50        | 1891      | 29    | .28         | 2047      | 265   | 1.50        |
| 1481      | 26    | .04         | 1663      | 165   | 1.65        | 1892      | 29    | .30         | 2048      | 265   | 1.50        |
| 1494      | 179   | .02         | 1668      | 169   | .30         | 1893      | 29    | .05         | 2049      | 265   | 5.00        |
| 1495      | 43    | .02         | 1671      | 153   | .05         | 1899      | 29    | .20         | 2050      | 263   | .20         |
| 1507      | 29    | 1.40        | 1677      | 26    | .40         | 1910      | 43    | 9.00        | 2056      | 47    | 4.50        |
| 1510      | 29    | 1.60        | 1678      | 26    | .60         | 1911      | 43    | 5.50        | 2057      | 255   | ....        |
| 1520      | 47    | .10         | 1680      | 210   | ....        | 1912      | 43    | 5.50        | 2058      | 255   | .10         |
| 1523      | 160   | .20         | 1681      | 210   | ....        | 1913      | 43    | .28         | 2059      | 255   | .08         |
| 1524      | 189   | 1.50        | 1687      | 160   | 6.00        | 1914      | 43    | .40         | 2064      | 133   | 1.28        |
| 1525      | 19    | 9.00        | 1688      | 205   | .64         | 1915      | 43    | .60         | 2065      | 133   | 1.40        |
| 1527      | 37    | 6.50        | 1702      | 165   | .20         | 1916      | 43    | .24         | 2066      | 133   | 1.50        |
| 1528      | 37    | 10.00       | 1713      | 160   | 1.80        | 1917      | 43    | .50         | 2067      | 133   | 1.56        |
| 1536      | 37    | 2.50        | 1714      | 160   | 3.40        | 1918      | 43    | .12         | 2068      | 265   | .14         |
| 1537      | 37    | 1.00        | 1715      | 160   | 5.50        | 1919      | 43    | .08         | 2069      | 265   | .40         |
| 1538      | 37    | .50         | 1716      | 160   | 5.20        | 1920      | 43    | .12         | 2070      | 283   | 30.00       |
| 1539      | 37    | .10         | 1722      | 160   | .90         | 1922      | 43    | .01         | 2071      | 283   | 2.20        |
| 1543      | 37    | 2.00        | 1728      | 160   | .03         | 1923      | 43    | .08         | 2072      | 283   | .80         |
| 1544      | 37    | .50         | 1746      | 160   | 2.50        | 1924      | 45    | .06         | 2075      | 283   | .10         |
| 1547      | 37    | .36         | 1747      | 160   | 2.50        | 1925      | 45    | .01         | 2078      | 283   | 5.00        |

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| 2079      | 283   | .80         | 2338      | 17    | 15.00       | 2479      | 43    | .05         | 2613      | 229   | .01        |
| 2082      | 283   | .06         | 2346      | 263   | 90.00       | 2481      | 151   | .05         | 2632      | 55    | 3.00       |
| 2083      | 283   | 1.00        | 2349      | 265   | 12.50       | 2484      | 47    | .16         | 2635      | 201   | 1.60       |
| 2088      | 283   | .80         | 2350      | 265   | 20.00       | 2485      | 47    | .20         | 2636      | 205   | .54        |
| 2094      | 265   | .60         | 2353      | 263   | 10.00       | 2486      | 160   | .04         | 2639      | 45    | .50        |
| 2098      | 265   | 3.70        | 2354      | 263   | 12.50       | 2487      | 179   | .12         | 2644      | 179   | .02        |
| 2099      | 265   | 3.70        | 2360      | 27    | .80         | 2490      | 27    | .12         | 2649      | 45    | .01        |
| 2102      | 37    | .40         | 2365      | 179   | .02         | 2492      | 177   | 35.00       | 2651      | 183   | .80        |
| 2116      | 265   | 1.40        | 2368      | 265   | 2.50        | 2493      | 177   | 4.50        | 2652      | 43    | 5.00       |
| 2117      | 265   | 1.00        | 2370      | 265   | .16         | 2494      | 177   | 5.00        | 2653      | 43    | 2.00       |
| 2118      | 265   | .12         | 2371      | 153   | .60         | 2495      | 177   | .40         | 2655      | 37    | 3.00       |
| 2119      | 263   | 7.00        | 2372      | 153   | .24         | 2498      | 179   | 2.00        | 2658      | 79    | .12        |
| 2133      | 19    | 1.20        | 2373      | 153   | .40         | 2501      | 179   | .60         | 2666      | 41    | 18.00      |
| 2135      | 263   | 240.00      | 2385      | 277   | ....        | 2502      | 179   | .40         | 2667      | 55    | .40        |
| 2137      | 265   | 3.50        | 2400      | 37    | .10         | 2503      | 179   | .70         | 2668      | 55    | 1.30       |
| 2144      | 165   | .12         | 2402      | 265   | .30         | 2507      | 179   | .20         | 2669      | 55    | .40        |
| 2145      | 165   | .01         | 2413      | 192   | .30         | 2508      | 177   | .50         | 2671      | 75    | 2.52       |
| 2154      | 192   | .02         | 2414      | 192   | .50         | 2509      | 179   | .60         | 2672      | 75    | 1.92       |
| 2163      | 165   | .40         | 2417      | 265   | .20         | 2510      | 179   | .02         | 2673      | 21    | 7.00       |
| 2164      | 27    | .50         | 2420      | 29    | .06         | 2518      | 265   | .04         | 2674      | 21    | .40        |
| 2165      | 27    | .70         | 2421      | 29    | .40         | 2519      | 265   | .01         | 2676      | 21    | 6.00       |
| 2166      | 27    | .80         | 2422      | 29    | .10         | 2540      | 281   | .02         | 2685      | 79    | .64        |
| 2172      | 65    | .30         | 2425      | 19    | .02         | 2542      | 160   | .60         | 2686      | 79    | .64        |
| 2181      | 155   | .07         | 2426      | 37    | .01         | 2543      | 160   | .40         | 2687      | 73    | 2.70       |
| 2184      | 229   | 2.50        | 2430      | 27    | .01         | 2544      | 160   | .60         | 2688      | 83    | 1.36       |
| 2185      | 229   | 2.00        | 2432      | 217   | .02         | 2545      | 160   | .40         | 2693      | 95    | .31        |
| 2186      | 229   | .04         | 2433      | 283   | .02         | 2550      | 21    | 15.00       | 2694      | 95    | .21        |
| 2187      | 165   | 5.50        | 2434      | 165   | .01         | 2552      | 45    | .01         | 2695      | 95    | .09        |
| 2192      | 27    | .70         | 2435      | 160   | .01         | 2553      | 243   | .02         | 2696      | 95    | .05        |
| 2217      | 229   | .04         | 2436      | 29    | .01         | 2555      | 29    | .02         | 2697      | 87    | 1.90       |
| 2229      | 27    | .40         | 2438      | 192   | .02         | 2559      | 192   | .02         | 2698      | 79    | .92        |
| 2230      | 27    | .70         | 2439      | 171   | .01         | 2561      | 21    | .40         | 2699      | 87    | 1.08       |
| 2236      | 133   | 1.32        | 2441      | 37    | .01         | 2562      | 21    | .40         | 2704      | 249   | ....       |
| 2237      | 133   | 1.40        | 2446      | 160   | .02         | 2565      | 21    | 1.00        | 2708      | 249   | .34        |
| 2238      | 133   | 1.50        | 2447      | 209   | .06         | 2566      | 21    | .40         | 2709      | 249   | .20        |
| 2239      | 133   | 1.56        | 2448      | 160   | .02         | 2567      | 21    | .04         | 2710      | 249   | ....       |
| 2243      | 133   | 1.40        | 2451      | 17    | .02         | 2569      | 21    | .30         | 2714      | 249   | ....       |
| 2244      | 133   | 1.44        | 2452      | 160   | .02         | 2570      | 21    | .80         | 2719      | 179   | .20        |
| 2247      | 201   | 2.00        | 2453      | 17    | .02         | 2571      | 29    | .05         | 2723      | 21    | .40        |
| 2248      | 189   | .64         | 2454      | 229   | .03         | 2573      | 179   | 4.50        | 2724      | 21    | .20        |
| 2254      | 201   | .16         | 2455      | 29    | .02         | 2574      | 179   | 2.50        | 2725      | 21    | .20        |
| 2255      | 205   | .10         | 2456      | 29    | .02         | 2577      | 197   | .40         | 2729      | 239   | .18        |
| 2259      | 277   | .10         | 2457      | 43    | .04         | 2581      | 169   | 2.00        | 2732      | 55    | .40        |
| 2260      | 277   | .10         | 2459      | 41    | .03         | 2582      | 169   | .80         | 2747      | 255   | .06        |
| 2262      | 263   | 200.00      | 2460      | 165   | .03         | 2583      | 169   | 2.50        | 2755      | 21    | 5.00       |
| 2265      | 236   | 7.00        | 2461      | 37    | .04         | 2584      | 169   | 1.10        | 2756      | 21    | 5.00       |
| 2269      | 236   | .30         | 2462      | 17    | .03         | 2588      | 21    | .04         | 2762      | 21    | .06        |
| 2279      | 43    | 4.00        | 2464      | 19    | .05         | 2595      | 265   | .40         | 2764      | 21    | 5.00       |
| 2288      | 277   | ....        | 2467      | 177   | .03         | 2596      | 265   | .24         | 2772      | 265   | .60        |
| 2289      | 277   | ....        | 2468      | 160   | .03         | 2597      | 165   | 3.30        | 2773      | 265   | .60        |
| 2290      | 277   | ....        | 2469      | 189   | .04         | 2598      | 265   | 1.30        | 2774      | 265   | .40        |
| 2300      | 80    | 1.36        | 2470      | 41    | .03         | 2599      | 210   | ....        | 2775      | 265   | .40        |
| 2302      | 27    | .60         | 2471      | 37    | .04         | 2600      | 210   | ....        | 2776      | 265   | 2.50       |
| 2313      | 27    | .50         | 2472      | 115   | .05         | 2601      | 243   | .01         | 2777      | 265   | 3.20       |
| 2314      | 27    | .40         | 2473      | 197   | .03         | 2602      | 21    | .02         | 2778      | 265   | 4.70       |
| 2315      | 27    | .60         | 2474      | 17    | .06         | 2606      | 41    | 50.00       | 2779      | 283   | .20        |
| 2317      | 229   | .04         | 2476      | 37    | .06         | 2611      | 21    | .20         | 2780      | 283   | .30        |
| 2330      | 37    | 76.00       | 2478      | 129   | .05         | 2612      | 265   | .24         | 2781      | 283   | .40        |

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| 2789      | 55    | 2.70        | 2882      | 217   | .24         | 3003      | 45    | 1.50        | 3113      | 131   | 13.00       |
| 2790      | 55    | 2.70        | 2884      | 37    | 20.00       | 3004      | 45    | .70         | 3114      | 131   | 30.00       |
| 2791      | 55    | 1.60        | 2886      | 277   | ....        | 3005      | 45    | .10         | 3115      | 131   | 40.00       |
| 2792      | 55    | .64         | 2887      | 277   | ....        | 3013      | 45    | 1.50        | 3116      | 131   | 14.50       |
| 2795      | 65    | 5.60        | 2889      | 37    | .80         | 3018      | 179   | .10         | 3117      | 131   | 34.00       |
| 2796      | 99    | 2.20        | 2890      | 37    | .14         | 3020      | 45    | 3.50        | 3118      | 131   | 43.00       |
| 2797      | 99    | .64         | 2891      | 37    | .12         | 3021      | 45    | 1.50        | 3144      | 19    | .06         |
| 2799      | 55    | 4.90        | 2892      | 37    | 160.00      | 3022      | 45    | .30         | 3150      | 27    | .40         |
| 2800      | 279   | 7.50        | 2893      | 38    | 7.50        | 3023      | 45    | .20         | 3152      | 27    | 1.50        |
| 2801      | 160   | 8.00        | 2894      | 38    | .10         | 3024      | 45    | .50         | 3153      | 27    | 2.00        |
| 2802      | 279   | .40         | 2895      | 38    | .10         | 3025      | 45    | .40         | 3154      | 27    | .06         |
| 2804      | 65    | 4.10        | 2899      | 229   | .02         | 3026      | 45    | 3.00        | 3174      | 14    | 64.00       |
| 2811      | 65    | 1.28        | 2904      | 267   | .70         | 3027      | 45    | .60         | 3175      | 14    | 60.00       |
| 2812      | 65    | .32         | 2905      | 277   | .50         | 3028      | 45    | .40         | 3176      | 14    | 44.00       |
| 2813      | 87    | .09         | 2906      | 277   | .80         | 3029      | 163   | .06         | 3177      | 14    | 48.00       |
| 2814      | 65    | 3.60        | 2908      | 19    | .20         | 3030      | 45    | .04         | 3198      | 27    | .80         |
| 2815      | 65    | 6.10        | 2909      | 283   | 2.50        | 3033      | 45    | .40         | 3200      | 27    | .80         |
| 2819      | 229   | .70         | 2911      | 273   | .08         | 3034      | 45    | .06         | 3201      | 27    | .80         |
| 2820      | 229   | .40         | 2912      | 273   | .10         | 3035      | 45    | .08         | 3208      | 27    | .80         |
| 2821      | 229   | .30         | 2913      | 273   | .12         | 3038      | 45    | .06         | 3209      | 27    | .40         |
| 2822      | 229   | .02         | 2917      | 160   | 1.00        | 3040      | 45    | 1.50        | 3211      | 283   | 7.00        |
| 2824      | 279   | .20         | 2922      | 75    | .12         | 3041      | 45    | .30         | 3212      | 279   | 4.00        |
| 2827      | 283   | 5.00        | 2923      | 75    | .12         | 3043      | 45    | .02         | 3217      | 33    | 99.00       |
| 2828      | 51    | .60         | 2924      | 75    | .12         | 3044      | 45    | .02         | 3218      | 27    | .20         |
| 2829      | 229   | .02         | 2927      | 95    | .53         | 3049      | 192   | .02         | 3241      | 29    | .03         |
| 2835      | 21    | .20         | 2928      | 95    | .024        | 3057      | 45    | .03         | 3251      | 27    | .60         |
| 2836      | 21    | .20         | 2929      | 95    | .31         | 3058      | 45    | .14         | 3252      | 21    | 7.00        |
| 2839      | 19    | .12         | 2933      | 87    | .07         | 3063      | 192   | .01         | 3253      | 21    | 1.00        |
| 2840      | 265   | 3.00        | 2934      | 95    | .05         | 3065      | 17    | .10         | 3256      | 21    | .40         |
| 2841      | 265   | .03         | 2935      | 21    | .02         | 3067      | 163   | .20         | 3257      | 45    | .30         |
| 2842      | 160   | .50         | 2936      | 160   | .24         | 3069      | 45    | .50         | 3259      | 192   | .06         |
| 2847      | 29    | 1.80        | 2937      | 160   | .24         | 3072      | 165   | .30         | 3264      | 45    | .09         |
| 2848      | 19    | .01         | 2938      | 155   | .38         | 3073      | 19    | .50         | 3268      | 283   | 50.00       |
| 2850      | 217   | 30.00       | 2939      | 155   | 1.44        | 3074      | 19    | .50         | 3269      | 283   | 1.50        |
| 2852      | 217   | 5.00        | 2940      | 155   | 1.48        | 3075      | 19    | .50         | 3270      | 283   | 1.00        |
| 2853      | 217   | 2.50        | 2941      | 155   | 1.40        | 3076      | 19    | .50         | 3271      | 283   | .60         |
| 2854      | 37    | .08         | 2943      | 155   | .07         | 3077      | 19    | .50         | 3273      | 283   | 2.00        |
| 2855      | 37    | .04         | 2944      | 21    | .02         | 3078      | 19    | .50         | 3276      | 283   | .20         |
| 2856      | 37    | .04         | 2947      | 155   | .90         | 3079      | 165   | .40         | 3283      | 243   | .03         |
| 2857      | 217   | .03         | 2948      | 155   | 1.08        | 3080      | 29    | 2.00        | 3287      | 283   | .20         |
| 2858      | 217   | .06         | 2950      | 163   | .20         | 3081      | 29    | .80         | 3314      | 283   | 7.00        |
| 2859      | 217   | 4.00        | 2953      | 165   | ....        | 3082      | 29    | 1.00        | 3327      | 189   | 280.00      |
| 2860      | 217   | 1.50        | 2956      | 160   | .40         | 3084      | 33    | .06         | 3336      | 33    | 126.00      |
| 2861      | 217   | .24         | 2960      | 160   | .12         | 3085      | 29    | .70         | 3337      | 33    | .80         |
| 2862      | 217   | .80         | 2963      | 27    | 1.00        | 3089      | 45    | .02         | 3347      | 33    | 4.00        |
| 2863      | 217   | .30         | 2964      | 27    | .60         | 3090      | 75    | .12         | 3348      | 33    | .30         |
| 2864      | 217   | .50         | 2965      | 45    | .02         | 3093      | 21    | .40         | 3349      | 33    | .30         |
| 2865      | 217   | 6.00        | 2973      | 27    | .40         | 3094      | 17    | .30         | 3370      | 189   | 54.00       |
| 2866      | 217   | 1.00        | 2974      | 75    | .36         | 3095      | 17    | .30         | 3371      | 189   | 5.00        |
| 2867      | 217   | .40         | 2975      | 75    | .36         | 3096      | 19    | 10.00       | 3372      | 189   | 2.00        |
| 2868      | 217   | .24         | 2976      | 75    | .36         | 3097      | 19    | 13.00       | 3373      | 189   | 1.50        |
| 2869      | 217   | .50         | 2977      | 79    | .70         | 3098      | 19    | 11.00       | 3374      | 192   | 6.00        |
| 2871      | 217   | .50         | 2979      | 79    | .64         | 3099      | 21    | 1.00        | 3375      | 192   | 8.00        |
| 2872      | 217   | .40         | 2982      | 75    | .12         | 3100      | 21    | 2.00        | 3377      | 189   | 1.20        |
| 2874      | 217   | .02         | 2985      | 165   | 3.60        | 3101      | 21    | 1.50        | 3378      | 201   | 1.60        |
| 2875      | 217   | .02         | 2986      | 165   | 5.10        | 3102      | 21    | 1.20        | 3379      | 201   | 1.60        |
| 2877      | 217   | 4.00        | 2987      | 267   | 2.50        | 3104      | 33    | .01         | 3380      | 205   | .90         |
| 2879      | 217   | 1.20        | 3002      | 45    | 9.00        | 3105      | 29    | .09         | 3381      | 205   | .50         |

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| 3382      | 192   | 10.00       | 3493      | 193   | .20         | 3654      | 193   | 10          | 3883      | 218   | 1.50        |
| 3383      | 192   | 2.00        | 3494      | 193   | 6.00        | 3658      | 189   | 150.00      | 3886      | 230   | 35.00       |
| 3384      | 192   | 9.00        | 3498      | 193   | .50         | 3659      | 189   | 40.00       | 3887      | 230   | 2.00        |
| 3385      | 192   | 1.50        | 3499      | 163   | .50         | 3660      | 189   | 4.00        | 3888      | 230   | 2.00        |
| 3386      | 192   | 4.00        | 3503      | 163   | .10         | 3661      | 189   | 1.50        | 3890      | 21    | .01         |
| 3387      | 192   | 4.00        | 3505      | 166   | 1.60        | 3662      | 189   | .80         | 3893      | 193   | .06         |
| 3388      | 192   | 3.00        | 3506      | 229   | .02         | 3664      | 193   | 2.80        | 3894      | 218   | .06         |
| 3389      | 192   | 5.00        | 3507      | 166   | 1.00        | 3665      | 193   | 1.20        | 3901      | 284   | .10         |
| 3390      | 192   | 2.00        | 3509      | 166   | .20         | 3667      | 193   | .80         | 3903      | 230   | .20         |
| 3391      | 192   | .24         | 3510      | 163   | .50         | 3368      | 193   | 10.00       | 3905      | 133   | 2.60        |
| 3392      | 192   | .10         | 3513      | 163   | .20         | 3669      | 193   | 9.00        | 3906      | 133   | 3.10        |
| 3393      | 192   | 1.80        | 3516      | 284   | 8.00        | 3670      | 189   | .20         | 3907      | 133   | 2.20        |
| 3394      | 192   | 2.60        | 3520      | 217   | .08         | 3671      | 193   | .04         | 3908      | 133   | 3.00        |
| 3395      | 192   | 3.20        | 3524      | 229   | .02         | 3673      | 189   | 160.00      | 3909      | 133   | 4.00        |
| 3396      | 192   | 3.20        | 3529      | 193   | 1.50        | 3679      | 201   | 1.80        | 3910      | 133   | 4.90        |
| 3397      | 193   | 1.30        | 3530      | 163   | .20         | 3680      | 205   | .64         | 3914      | 45    | .10         |
| 3399      | 205   | .36         | 3531      | 163   | 5.00        | 3688      | 21    | .40         | 3917      | 163   | 7.00        |
| 3400      | 205   | .50         | 3532      | 163   | 5.00        | 3691      | 21    | 2.00        | 3921      | 230   | 35.00       |
| 3401      | 193   | .40         | 3533      | 163   | 40.00       | 3702      | 230   | .06         | 3922      | 230   | 35.00       |
| 3402      | 75    | .02         | 3536      | 163   | 30.00       | 3703      | 193   | 9.00        | 3923      | 230   | 1.50        |
| 3403      | 193   | 4.00        | 3538      | 55    | 12.50       | 3704      | 193   | 9.00        | 3925      | 230   | .24         |
| 3405      | 193   | .40         | 3537      | 55    | 2.00        | 3705      | 193   | 5.00        | 3928      | 230   | 1.60        |
| 3406      | 193   | .50         | 3558      | 55    | .24         | 3706      | 193   | 44.00       | 3929      | 230   | .80         |
| 3407      | 189   | .20         | 3559      | 55    | 2.50        | 3707      | 193   | 44.00       | 3930      | 230   | .50         |
| 3408      | 201   | .20         | .....     | ..... | .....       | 3733      | 177   | 35.00       | 3931      | 230   | .06         |
| 3411      | 193   | .06         | 3566      | 284   | 2.00        | 3735      | 179   | 3.00        | 3933      | 230   | 5.50        |
| 3412      | 193   | 8.00        | 3575      | 183   | .60         | 3738      | 166   | 130.00      | 3945      | 230   | 4.00        |
| 3425      | 201   | 1.50        | 3576      | 183   | .80         | 3742      | 230   | .30         | 3947      | 230   | .04         |
| 3426      | 205   | .54         | 3577      | 183   | .80         | 3744      | 230   | .40         | 3948      | 230   | .04         |
| 3435      | 33    | .04         | 3578      | 183   | .20         | 3748      | 27    | .60         | 3954      | 160   | .04         |
| 3437      | 33    | 54.00       | 3579      | 183   | .50         | 3752      | 33    | 67.50       | 3955      | 160   | .01         |
| 3439      | 221   | .04         | 3580      | 183   | .50         | 3754      | 277   | .....       | 3964      | 29    | .10         |
| 3440      | 281   | .04         | 3584      | 183   | .40         | 3761      | 193   | 44.00       | 3965      | 193   | .12         |
| 3444      | 33    | 90.00       | 3585      | 183   | 1.20        | 3782      | 230   | 1.00        | 3966      | 155   | 1.36        |
| 3446      | 33    | 63.00       | 3590      | 229   | 80.00       | 3784      | 19    | 11.00       | 3967      | 33    | 31.50       |
| 3448      | 33    | 1.00        | 3593      | 229   | 2.00        | 3785      | 19    | .30         | 3973      | 193   | .40         |
| 3458      | 283   | 2.00        | 3599      | 33    | 72.00       | 3800      | 230   | 4.00        | 3974      | 189   | .40         |
| 3460      | 284   | 2.00        | 3604      | 229   | .08         | 3801      | 230   | .70         | 3975      | 17    | 15.00       |
| 3461      | 193   | .30         | 3605      | 229   | .06         | 3802      | 230   | 1.00        | 3978      | 169   | 4.00        |
| 3462      | 193   | .30         | 3606      | 229   | .05         | 3803      | 230   | 1.30        | 3982      | 160   | 5.50        |
| 3465      | 284   | .60         | 3607      | 229   | .20         | 3825      | 19    | 13.00       | 3987      | 43    | 22.00       |
| 3468      | 284   | .80         | 3608      | 229   | .50         | 3826      | 27    | .60         | 3994      | 213   | .....       |
| 3469      | 75    | .12         | 3611      | 229   | .70         | 3827      | 279   | .02         | 4000      | 213   | .....       |
| 3471      | 284   | .20         | 3615      | 230   | 2.00        | 3833      | 284   | 1.30        | 4001      | 160   | .24         |
| 3477      | 193   | .20         | 3616      | 230   | 2.00        | 3834      | 284   | .50         | 4002      | 177   | .20         |
| 3480      | 163   | 45.00       | 3617      | 230   | 2.00        | 3846      | 217   | 20.00       | 4007      | 133   | .28         |
| 3481      | 193   | .10         | 3618      | 230   | 6.00        | 3848      | 230   | 2.50        | 4008      | 133   | .32         |
| 3482      | 163   | 1.00        | 3623      | 230   | 2.00        | 3849      | 230   | 1.50        | 4009      | 133   | .38         |
| 3483      | 163   | 5.00        | 3624      | 230   | 5.00        | 3856      | 230   | .04         | 4014      | 133   | .70         |
| 3484      | 163   | .90         | 3627      | 230   | .50         | 3857      | 230   | .50         | 4015      | 133   | .80         |
| 3485      | 163   | 6.50        | 3628      | 230   | .30         | 3859      | 230   | .30         | 4016      | 133   | .90         |
| 3486      | 193   | 5.00        | 3629      | 230   | .80         | 3860      | 19    | .03         | 4018      | 133   | .24         |
| 3487      | 193   | 6.00        | 3631      | 230   | .10         | 3866      | 27    | .80         | 4019      | 134   | .28         |
| 3488      | 193   | 1.50        | 3636      | 189   | 2.00        | 3867      | 27    | .80         | 4020      | 134   | .30         |
| 3489      | 193   | .40         | 3637      | 189   | .64         | 3871      | 160   | 150.00      | 4021      | 134   | .36         |
| 3490      | 193   | .80         | 3638      | 189   | 2.00        | 3874      | 160   | 2.00        | 4022      | 21    | .10         |
| 3491      | 163   | 5.00        | 3639      | 189   | 1.00        | 3877      | 33    | 45.00       | 4023      | 133   | 17.50       |
| 3492      | 193   | .20         | 3649      | 83    | 3.50        | 3881      | 218   | 2.00        | 4024      | 133   | 19.50       |

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| 4025      | 133   | 15.00       | 4130      | 131   | 10.00       | 4303      | 171   | .04         | 4538      | 95    | 2.04        |
| 4026      | 133   | 17.00       | 4134      | 131   | .90         | 4308      | 279   | 4.40        | 4540      | 281   | .20         |
| 4027      | 160   | 8.00        | 4137      | 131   | .90         | 4309      | 33    | 198.00      | 4546      | 239   | .16         |
| 4037      | 169   | .20         | 4142      | 131   | 1.20        | 4311      | 231   | 35.00       | 4547      | 263   | 624.00      |
| 4038      | 169   | .50         | 4145      | 134   | .42         | 4322      | 91    | 5.50        | 4549      | 80    | .28         |
| 4039      | 169   | .50         | 4147      | 153   | .60         | 4323      | 91    | 2.80        | 4552      | 177   | .02         |
| 4040      | 169   | .50         | 4148      | 153   | .24         | 4324      | 91    | 1.30        | 4553      | 203   | .01         |
| 4046      | 131   | 136.00      | 4151      | 131   | 4.00        | 4325      | 91    | .50         | 4554      | 236   | 28.00       |
| 4047      | 131   | 80.00       | 4152      | 134   | .10         | 4326      | 91    | .72         | 4555      | 218   | .05         |
| 4053      | 33    | 40.50       | 4153      | 134   | 1.00        | 4327      | 91    | .62         | 4560      | 19    | 5.00        |
| 4055      | 133   | .28         | 4155      | 131   | 4.00        | 4328      | 91    | 1.48        | 4562      | 139   | 5.40        |
| 4056      | 133   | .30         | 4157      | 131   | 4.00        | 4329      | 91    | 1.40        | 4565      | 239   | .06         |
| 4057      | 133   | .34         | 4160      | 61    | .08         | 4330      | 91    | 2.00        | 4566      | 239   | .12         |
| 4058      | 133   | .38         | 4166      | 218   | .40         | 4331      | 91    | 1.36        | 4579      | 267   | .04         |
| 4063      | 83    | 2.00        | 4167      | 65    | 6.10        | 4333      | 91    | .08         | 4580      | 239   | 30.00       |
| 4064      | 83    | .40         | 4168      | 65    | 1.20        | 4336      | 27    | .80         | 4581      | 239   | 28.00       |
| 4065      | 83    | 1.45        | 4170      | 65    | 3.16        | 4337      | 169   | 3.30        | 4582      | 139   | 4.80        |
| 4066      | 83    | 2.00        | 4172      | 65    | 2.20        | 4353      | 263   | 80.00       | 4583      | 239   | 1.50        |
| 4067      | 83    | 1.00        | 4195      | 87    | 1.10        | 4354      | 54    | .90         | 4587      | 239   | 3.00        |
| 4068      | 133   | 19.50       | 4196      | 80    | .72         | 4364      | 75    | .04         | 4590      | 239   | .01         |
| 4069      | 133   | 22.00       | 4197      | 87    | 1.90        | 4374      | 87    | 1.50        | 4591      | 21    | .03         |
| 4070      | 133   | 7.50        | 4198      | 87    | 2.00        | 4375      | 87    | 1.32        | 4594      | 239   | .30         |
| 4071      | 133   | 11.00       | 4199      | 87    | 1.12        | 4378      | 27    | .02         | 4597      | 239   | 1.00        |
| 4072      | 133   | 14.00       | 4200      | 87    | .80         | 4379      | 27    | .02         | 4605      | 203   | 7.00        |
| 4073      | 133   | 5.90        | 4201      | 87    | 1.20        | 4383      | 281   | 5.00        | 4606      | 203   | .40         |
| 4074      | 133   | 8.70        | 4202      | 87    | 1.44        | 4386      | 27    | .60         | 4607      | 203   | 1.00        |
| 4075      | 133   | 11.00       | 4203      | 87    | 1.70        | 4412      | 281   | .06         | 4617      | 38    | 10.00       |
| 4076      | 133   | 8.00        | 4204      | 87    | 2.00        | 4415      | 27    | .30         | 4618      | 38    | 2.00        |
| 4077      | 134   | 11.50       | 4205      | 87    | 2.46        | 4420      | 281   | 7.00        | 4619      | 38    | .30         |
| 4078      | 134   | 14.90       | 4206      | 87    | 2.26        | 4425      | 91    | 1.70        | 4621      | 143   | 1.80        |
| 4079      | 134   | 6.50        | 4207      | 87    | 1.10        | 4432      | 131   | .80         | 4625      | 143   | 1.25        |
| 4080      | 134   | 9.20        | 4211      | 129   | 24.50       | 4436      | 33    | 139.50      | 4628      | 281   | 60.00       |
| 4081      | 134   | 12.00       | 4212      | 33    | 49.50       | 4447      | 33    | 58.50       | 4634      | 38    | .05         |
| 4082      | 134   | 4.00        | 4213      | 29    | .20         | 4450      | 38    | .20         | 4635      | 55    | 3.70        |
| 4083      | 134   | 7.50        | 4228      | 275   | 4.00        | 4459      | 65    | .20         | 4637      | 193   | 14.00       |
| 4084      | 134   | 11.00       | 4230      | 275   | .40         | 4460      | 267   | 3.50        | 4638      | 47    | .50         |
| 4085      | 134   | 3.10        | 4233      | 129   | ....        | 4461      | 73    | 8.00        | 4640      | 61    | 3.40        |
| 4086      | 134   | 5.90        | 4234      | 129   | .70         | 4468      | 236   | 12.00       | 4641      | 61    | 3.40        |
| 4087      | 134   | 8.80        | 4235      | 129   | 3.70        | 4470      | 33    | 108.00      | 4643      | 51    | .30         |
| 4088      | 134   | 13.00       | 4236      | 129   | ....        | 4471      | 33    | 81.00       | 4649      | 143   | 8.68        |
| 4089      | 134   | 15.00       | 4237      | 129   | .36         | 4472      | 33    | 2.61        | 4650      | 143   | 7.50        |
| 4096      | 134   | .18         | 4238      | 129   | .50         | 4474      | 80    | .76         | 4651      | 143   | .30         |
| 4098      | 134   | .20         | 4239      | 230   | 5.00        | 4475      | 80    | .28         | 4652      | 147   | 1.16        |
| 4100      | 134   | 1.10        | 4240      | 230   | 6.00        | 4476      | 80    | .36         | 4653      | 147   | 1.00        |
| 4101      | 134   | .46         | 4245      | 230   | 2.00        | 4480      | 253   | 4.50        | 4654      | 147   | .16         |
| 4102      | 134   | .30         | 4247      | 155   | 1.40        | 4499      | 147   | .08         | 4656      | 147   | .70         |
| 4104      | 134   | .20         | 4249      | 230   | .01         | 4507      | 239   | 32.00       | 4659      | 231   | 30.00       |
| 4107      | 160   | 1.20        | 4250      | 230   | .40         | 4509      | 239   | 6.00        | 4660      | 51    | 5.50        |
| 4108      | 160   | .40         | 4251      | 230   | .60         | 4510      | 231   | .10         | 4661      | 51    | 9.00        |
| 4109      | 160   | .60         | 4252      | 193   | 4.00        | 4515      | 95    | .48         | 4662      | 51    | 13.00       |
| 4110      | 169   | 3.50        | 4253      | 193   | 9.00        | 4519      | 95    | .16         | 4666      | 33    | 112.50      |
| 4111      | 169   | 2.00        | 4254      | 193   | 6.00        | 4520      | 239   | 1.20        | 4667      | 147   | 1.40        |
| 4112      | 169   | .70         | 4255      | 193   | 12.00       | 4527      | 95    | .05         | 4668      | 147   | 1.10        |
| 4116      | 218   | 2.30        | 4256      | 193   | .04         | 4528      | 239   | .50         | 4670      | 281   | 2.00        |
| 4121      | 134   | .42         | 4257      | 193   | .30         | 4529      | 239   | .50         | 4671      | 281   | 2.00        |
| 4122      | 134   | .38         | 4262      | 87    | .11         | 4535      | 95    | 1.20        | 4673      | 281   | .80         |
| 4123      | 134   | .22         | 4270      | 267   | .10         | 4536      | 95    | 1.48        | 4679      | 210   | ....        |
| 4129      | 131   | 3.00        | 4295      | 61    | .10         | 4537      | 95    | 1.76        | 4682      | 210   | ....        |



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| 4688      | 207   | .26         | 4861      | 183   | .50         | 5081      | 279   | .10         | 5554      | 147   | 1.68        |
| 4689      | 207   | .42         | 4862      | 183   | .20         | 5082      | 218   | .80         | 5561      | 177   | 5.00        |
| 4690      | 155   | 1.48        | 4866      | 275   | ....        | 5090      | 143   | .12         | 5562      | 177   | .20         |
| 4691      | 155   | 1.20        | 4867      | 29    | .05         | 5091      | 43    | .60         | 5563      | 218   | .02         |
| 4695      | 231   | .20         | 4869      | 284   | 5.00        | 5098      | 179   | .40         | 5566      | 171   | 8.00        |
| 4696      | 239   | .20         | 4870      | 19    | .10         | 5099      | 179   | .40         | 5567      | 171   | 3.00        |
| 4698      | 239   | .24         | 4871      | 33    | .30         | 5100      | 243   | .12         | 5568      | 171   | 15.00       |
| 4699      | 239   | .40         | 4872      | 33    | .30         | 5101      | 179   | 3.00        | 5569      | 171   | 10.00       |
| 4701      | 239   | 2.50        | 4874      | 277   | .16         | 5166      | 210   | ....        | 5570      | 171   | 2.00        |
| 4702      | 51    | 6.20        | 4875      | 253   | 18.00       | 5167      | 218   | 2.00        | 5571      | 171   | 2.00        |
| 4703      | 51    | 10.50       | 4876      | 253   | 21.20       | 5187      | 218   | 4.00        | 5572      | 171   | .50         |
| 4713      | 281   | .20         | 4882      | 243   | 10.00       | 5188      | 218   | .04         | 5573      | 171   | 12.00       |
| 4714      | 281   | .24         | 4885      | 277   | ....        | 5191      | 221   | .06         | 5574      | 171   | 4.00        |
| 4715      | 281   | 5.00        | 4886      | 277   | ....        | 5203      | 33    | 36.00       | 5575      | 171   | 2.00        |
| 4716      | 267   | 4.00        | 4887      | 277   | ....        | 5215      | 243   | .70         | 5576      | 171   | 1.20        |
| 4718      | 80    | .80         | 4900      | 179   | 5.80        | 5217      | 243   | .70         | 5577      | 171   | 2.00        |
| 4719      | 267   | 5.00        | 4906      | 253   | .20         | 5218      | 243   | 1.40        | 5578      | 171   | 1.00        |
| 4720      | 267   | 9.50        | 4907      | 277   | 1.50        | 5219      | 243   | .70         | 5579      | 171   | .80         |
| 4725      | 239   | .80         | 4910      | 19    | .02         | 5224      | 171   | 70.00       | 5580      | 171   | .20         |
| 4727      | 193   | 2.50        | 4911      | 277   | ....        | 5227      | 129   | 25.00       | 5581      | 171   | .50         |
| 4728      | 194   | 2.00        | 4928      | 177   | 4.50        | 5229      | 194   | .06         | 5583      | 169   | .18         |
| 4729      | 194   | 3.00        | 4929      | 179   | .60         | 5233      | 253   | 2.00        | 5584      | 171   | .20         |
| 4730      | 194   | 1.00        | 4930      | 179   | .40         | 5235      | 129   | ....        | 5585      | 171   | .20         |
| 4731      | 194   | 1.50        | 4931      | 21    | 15.00       | 5236      | 129   | ....        | 5586      | 171   | .20         |
| 4732      | 194   | 2.00        | 4932      | 179   | .06         | 5239      | 129   | 3.70        | 5587      | 171   | .20         |
| 4734      | 75    | 1.32        | 4952      | 243   | .01         | 5246      | 255   | .10         | 5588      | 171   | .30         |
| 4735      | 51    | 2.00        | 4980      | 231   | 40.00       | 5247      | 281   | 1.00        | 5589      | 171   | 1.20        |
| 4737      | 99    | 1.80        | 4984      | 247   | 272.00      | 5248      | 281   | .10         | 5590      | 171   | 1.50        |
| 4738      | 267   | 4.50        | 4987      | 243   | 30.00       | ....      | ....  | ....        | 5591      | 172   | .40         |
| 4742      | 177   | 35.00       | 5007      | 243   | .20         | 5275      | 247   | 66.00       | 5593      | 172   | .30         |
| 4743      | 47    | 7.50        | 5018      | 41    | 160.00      | 5277      | 47    | 8.00        | 5594      | 172   | 12.00       |
| 4747      | 55    | 2.32        | 5019      | 41    | 160.00      | 5281      | 281   | 12.00       | 5596      | 65    | 2.80        |
| 4748      | 55    | .48         | 5020      | 43    | 37.00       | 5292      | 236   | 30.00       | 5597      | 65    | 5.50        |
| 4751      | 203   | 5.00        | 5021      | 43    | 37.00       | 5296      | 21    | 2.00        | 5598      | 169   | .20         |
| 4752      | 203   | 5.00        | 5035      | 239   | 1.00        | 5410      | 243   | .30         | 5599      | 169   | .22         |
| 4765      | 51    | 13.50       | 5046      | 29    | .01         | 5411      | 243   | 26.00       | 5630      | 91    | 1.74        |
| 4767      | 55    | 11.30       | 5047      | 29    | .03         | 5412      | 243   | 14.00       | 5631      | 91    | .80         |
| 4768      | 218   | 3.50        | 5049      | 239   | 2.00        | 5453      | 203   | 7.00        | 5646      | 91    | 1.32        |
| 4769      | 55    | 3.30        | 5057      | 243   | .20         | 5456      | 247   | 178.00      | 5647      | 91    | 2.80        |
| 4777      | 218   | 1.60        | 5058      | 243   | .04         | 5457      | 247   | 76.00       | 5648      | 91    | 5.30        |
| 4778      | 19    | 5.00        | 5059      | 243   | .30         | 5470      | 134   | .42         | 5649      | 91    | .40         |
| 4780      | 19    | .06         | 5060      | 243   | .50         | 5472      | 134   | .44         | 5650      | 91    | 1.60        |
| 4781      | 19    | .24         | 5061      | 243   | .50         | 5483      | 243   | 30.00       | 5657      | 207   | .20         |
| 4782      | 19    | .40         | 5062      | 243   | 2.50        | 5484      | 247   | 212.00      | 5674      | 91    | 1.46        |
| 4783      | 19    | .50         | 5063      | 243   | 2.00        | 5487      | 267   | 2.50        | 5693      | 83    | 1.28        |
| 4784      | 19    | 4.60        | 5064      | 243   | .20         | 5492      | 65    | 7.00        | 5694      | 83    | 1.28        |
| 4786      | 19    | 4.60        | 5065      | 243   | .30         | 5493      | 65    | 3.60        | 5696      | 83    | 1.96        |
| 4804      | 75    | .12         | 5066      | 243   | .80         | 5499      | 194   | .02         | 5697      | 83    | 1.96        |
| 4806      | 17    | 4.00        | 5067      | 243   | .40         | 5508      | 247   | 280.00      | 5700      | 33    | .30         |
| 4814      | 171   | .08         | 5068      | 243   | .30         | 5509      | 247   | 348.00      | 5701      | 33    | .30         |
| 4815      | 27    | 2.40        | 5069      | 243   | .30         | 5514      | 247   | 42.00       | 5703      | 201   | 2.40        |
| 4820      | 43    | 5.00        | 5070      | 243   | 3.00        | 5517      | 153   | .60         | 5717      | 179   | .02         |
| 4834      | 177   | 25.00       | 5071      | 243   | 10.00       | 5524      | 255   | .31         | 5718      | 47    | .20         |
| 4835      | 29    | 1.00        | 5075      | 29    | 1.20        | 5544      | 151   | 1.60        | 5725      | 179   | .20         |
| 4836      | 29    | .80         | 5076      | 29    | 1.00        | 5545      | 147   | 1.60        | 5730      | 255   | .10         |
| 4845      | 236   | 12.00       | 5077      | 30    | 2.20        | 5550      | 243   | 38.00       | 5731      | 255   | .07         |
| 4846      | 236   | 20.00       | 5079      | 218   | 30.00       | 5551      | 243   | 34.00       | 5733      | 275   | .04         |
| 4851      | 29    | .03         | 5080      | 279   | .10         | 5552      | 247   | 246.00      | 5763      | 205   | 1.50        |

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| 5764      | 205   | .50         | 6057      | 38   | 160.00      | 6386      | 41    | 1.50        | 6575      | 156   | 1.04        |
| 5768      | 179   | .03         | 6060      | 203  | 6.00        | 6387      | 41    | 2.50        | 6578      | 75    | .64         |
| 5776      | 131   | 28.00       | 6075      | 263  | 300.00      | 6388      | 41    | .20         | 6579      | 69    | ....        |
| 5777      | 131   | 32.00       | 6080      | 281  | .02         | 6389      | 41    | .80         | 6583      | 247   | 206.00      |
| 5779      | 131   | 38.00       | 6081      | 194  | .80         | 6412      | 153   | 1.00        | 6610      | 69    | ....        |
| 5780      | 131   | 42.00       | 6094      | 45   | 5.00        | 6413      | 153   | 1.00        | 6611      | 69    | ....        |
| 5787      | 51    | 11.50       | 6095      | 45   | .30         | 6433      | 61    | 1.60        | 6612      | 69    | ....        |
| 5794      | 201   | .16         | 6096      | 47   | 13.50       | 6434      | 61    | 1.60        | 6616      | 55    | 4.00        |
| 5795      | 201   | 3.00        | 6097      | 47   | 13.50       | 6439      | 45    | 5.00        | 6617      | 56    | 4.00        |
| 5861      | 95    | .15         | 6101      | 27   | 1.50        | 6440      | 45    | .70         | 6618      | 56    | 3.08        |
| 5862      | 95    | .09         | 6102      | 27   | 1.20        | 6443      | 45    | .30         | 6621      | 69    | ....        |
| 5863      | 95    | .03         | 6103      | 27   | 1.00        | 6445      | 51    | 9.50        | 6630      | 247   | 110.00      |
| 5868      | 95    | ....        | 6104      | 41   | 50.00       | 6447      | 45    | .08         | 6631      | 247   | 314.00      |
| 5914      | 203   | 8.00        | 6107      | 207  | 2.00        | 6458      | 207   | 6.00        | 6644      | 113   | 6.50        |
| 5915      | 203   | 8.00        | 6108      | 207  | 2.50        | 6459      | 189   | 170.00      | 6645      | 113   | 13.00       |
| 5922      | 55    | 2.00        | 6142      | 263  | 300.00      | 6460      | 45    | .24         | 6650      | 113   | 5.00        |
| 5923      | 155   | .28         | 6143      | 263  | 320.00      | 6465      | 65    | 1.16        | 6660      | 113   | 2.00        |
| 5924      | 155   | .33         | 6152      | 172  | .20         | 6466      | 65    | 3.80        | 6663      | 87    | ....        |
| 5925      | 155   | 1.30        | 6161      | 179  | 5.00        | 6478      | 113   | 1.00        | 6665      | 169   | 4.10        |
| 5926      | 155   | 1.30        | 6170      | 115  | .05         | 6479      | 61    | 1.08        | 6669      | 231   | 1.50        |
| 5927      | 155   | 1.34        | 6199      | 236  | 32.00       | 6480      | 61    | 1.08        | 6670      | 231   | 1.50        |
| 5928      | 156   | 1.40        | 6202      | 236  | 12.00       | 6481      | 65    | 7.90        | 6671      | 231   | 4.50        |
| 5929      | 65    | 2.00        | 6212      | 231  | .60         | 6482      | 65    | 2.68        | 6672      | 231   | .20         |
| 5930      | 65    | 2.00        | 6213      | 277  | ....        | 6483      | 194   | .12         | 6673      | 231   | .30         |
| 5935      | 163   | 7.50        | 6223      | 47   | 76.00       | 6484      | 194   | .10         | 6674      | 231   | 3.50        |
| 5936      | 163   | .50         | 6225      | 163  | .06         | 6485      | 131   | 18.00       | 6675      | 145   | 9.00        |
| 5946      | 153   | 1.76        | 6234      | 87   | 1.70        | 6486      | 65    | 4.00        | 6685      | 83    | 5.50        |
| 5947      | 153   | 1.76        | 6235      | 87   | 2.50        | 6487      | 51    | 1.30        | 6686      | 83    | 5.00        |
| 5948      | 51    | 12.00       | 6238      | 247  | 416.00      | 6489      | 45    | 2.50        | 6687      | 145   | 8.00        |
| 5951      | 153   | .50         | 6244      | 33   | 85.50       | 6490      | 55    | 6.25        | 6692      | 172   | .50         |
| 5954      | 253   | 1.10        | 6251      | 247  | 240.00      | 6506      | 151   | 4.00        | 6694      | 172   | .20         |
| 5955      | 253   | 1.20        | 6255      | 153  | .70         | 6507      | 151   | 1.80        | 6704      | 197   | .24         |
| 5959      | 51    | 1.60        | 6256      | 113  | 28.00       | 6508      | 151   | 1.52        | 6709      | 56    | 7.30        |
| 5961      | 131   | .20         | 6259      | 236  | 26.00       | 6513      | 80    | .12         | 6711      | 113   | 1.00        |
| 5962      | 131   | .20         | 6260      | 247  | 144.00      | 6516      | 33    | 166.50      | 6752      | 117   | 37.00       |
| 5969      | 253   | 4.50        | 6262      | 113  | 1.00        | 6520      | 239   | .80         | 6753      | 117   | 5.50        |
| 5971      | 253   | .60         | 6270      | 83   | 3.80        | 6521      | 239   | .60         | 6754      | 117   | 4.00        |
| 5973      | 203   | 6.00        | 6271      | 83   | 2.60        | 6522      | 239   | .40         | 6759      | 117   | .80         |
| 5974      | 236   | 12.00       | 6273      | 113  | 2.00        | 6523      | 239   | .60         | 6765      | 21    | 14.00       |
| 5975      | 236   | 11.00       | 6280      | 113  | .12         | 6524      | 239   | .16         | 6766      | 21    | 11.00       |
| 5976      | 236   | 2.50        | 6298      | 156  | 1.36        | 6525      | 239   | .40         | 6767      | 21    | 11.00       |
| 5977      | 236   | 6.00        | 6299      | 156  | 1.40        | 6526      | 239   | .80         | 6768      | 91    | .12         |
| 5997      | 69    | ....        | 6300      | 69   | ....        | 6527      | 239   | 1.00        | 6769      | 33    | 130.50      |
| 5998      | 69    | ....        | 6301      | 113  | 3.00        | 6528      | 51    | 8.00        | 6770      | 69    | ....        |
| 5999      | 69    | ....        | 6302      | 113  | 1.80        | 6529      | 51    | 7.50        | 6774      | 69    | ....        |
| 6000      | 69    | ....        | 6304      | 113  | 3.00        | 6533      | 45    | 50.00       | 6780      | 117   | 6.00        |
| 6001      | 69    | ....        | 6351      | 113  | .80         | 6534      | 160   | 140.00      | 6781      | 51    | 6.00        |
| 6002      | 69    | ....        | 6352      | 113  | .40         | 6535      | 160   | 140.00      | 6793      | 69    | ....        |
| 6012      | 131   | 7.50        | 6353      | 115  | .60         | 6545      | 189   | 160.00      | 6794      | 69    | ....        |
| 6017      | 236   | 2.50        | 6354      | 115  | .10         | 6547      | 177   | 45.00       | 6795      | 69    | ....        |
| 6033      | 255   | .10         | 6363      | 113  | 3.00        | 6552      | 239   | 5.50        | 6796      | 69    | ....        |
| 6034      | 255   | .36         | 6365      | 113  | 2.00        | 6553      | 231   | 5.50        | 6800      | 113   | 3.00        |
| 6045      | 249   | ....        | 6375      | 41   | 8.00        | 6565      | 194   | .08         | 6801      | 156   | 1.48        |
| 6046      | 249   | ....        | 6376      | 113  | .05         | 6567      | 80    | .80         | 6810      | 113   | .60         |
| 6047      | 249   | 2.10        | 6380      | 41   | .30         | 6568      | 156   | 1.30        | 6811      | 69    | ....        |
| 6048      | 249   | ....        | 6383      | 19   | .60         | 6569      | 156   | 30.00       | 6817      | 117   | 5.50        |
| 6049      | 249   | ....        | 6384      | 41   | 1.50        | 6570      | 113   | 10.00       | 6822      | 231   | 45.00       |
| 6050      | 249   | 1.82        | 6385      | 41   | 1.50        | 6571      | 115   | 7.00        | 6824      | 243   | .30         |

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| 6825      | 243   | .52         | 7071      | 189   | 58.00       | 7375      | 197   | 2.00        | 7561      | 115   | 240.00      |
| 6826      | 243   | 1.20        | 7072      | 201   | 2.40        | 7376      | 197   | 44.00       | 7562      | 115   | 240.00      |
| 6834      | 231   | 4.50        | 7073      | 201   | 2.40        | 7377      | 197   | 1.40        | 7563      | 113   | 260.00      |
| 6835      | 231   | 3.00        | 7066      | 210   | ....        | 7378      | 197   | 1.00        | 7564      | 113   | 260.00      |
| 6836      | 231   | 2.00        | 7082      | 189   | 1.00        | 7379      | 197   | .24         | 7567      | 172   | ....        |
| 6837      | 231   | .60         | 7083      | 205   | .90         | 7381      | 197   | .20         | 7568      | 172   | ....        |
| 6839      | 236   | 34.00       | 7084      | 189   | 3.00        | 7382      | 197   | .10         | 7569      | 172   | ....        |
| 6868      | 281   | 2.00        | 7085      | 189   | 3.00        | 7383      | 197   | 2.00        | 7574      | 51    | 14.50       |
| 6869      | 281   | .20         | 7087      | 189   | 1.10        | 7384      | 197   | 7.00        | 7582      | 263   | ....        |
| 6870      | 281   | 60.00       | 7088      | 189   | 320.00      | 7385      | 197   | 3.00        | 7583      | 263   | ....        |
| 6871      | 17    | 1.10        | 7089      | 205   | .06         | 7386      | 197   | .10         | 7584      | 263   | ....        |
| 6872      | 17    | 20.00       | 7090      | 194   | 3.20        | 7388      | 197   | .06         | 7585      | 263   | ....        |
| 6882      | 56    | 6.30        | 7091      | 194   | 2.60        | 7390      | 197   | .24         | 7586      | 263   | ....        |
| 6883      | 56    | 5.00        | 7108      | 213   | ....        | 7391      | 197   | .30         | 7589      | 263   | ....        |
| 6891      | 87    | .50         | 7109      | 213   | ....        | 7392      | 197   | .10         | 7590      | 267   | 4.00        |
| 6892      | 87    | 2.80        | 7137      | 231   | 40.00       | 7395      | 197   | .03         | 7591      | 267   | ....        |
| 6893      | 56    | .09         | 7196      | 134   | 16.50       | 7396      | 197   | .40         | 7592      | 267   | ....        |
| 6896      | 160   | 1.20        | 7204      | 183   | .70         | 7397      | 197   | 2.50        | 7594      | 267   | ....        |
| 6897      | 117   | .40         | 7212      | 83    | 7.00        | 7398      | 198   | 5.00        | 7595      | 267   | ....        |
| 6901      | 141   | 4.80        | 7213      | 183   | .90         | 7399      | 198   | .06         | 7608      | 267   | ....        |
| 6902      | 139   | .16         | 7214      | 183   | .12         | 7400      | 198   | .24         | 7611      | 267   | ....        |
| 6914      | 117   | 7.50        | 7233      | 172   | .20         | 7402      | 198   | .40         | 7612      | 263   | ....        |
| 6915      | 117   | .80         | 7236      | 183   | .20         | 7403      | 198   | .20         | 7613      | 267   | ....        |
| 6916      | 117   | 5.40        | 7237      | 183   | .50         | 7407      | 207   | .40         | 7614      | 267   | ....        |
| 6917      | 117   | 1.40        | 7238      | 183   | .80         | 7408      | 207   | 1.10        | 7615      | 267   | ....        |
| 6919      | 134   | 3.00        | 7241      | 172   | 1.50        | 7411      | 198   | .20         | 7622      | 267   | ....        |
| 6922      | 243   | 25.00       | 7242      | 172   | 70.00       | 7414      | 198   | 2.50        | 7632      | 263   | ....        |
| 6928      | 117   | .30         | 7244      | 197   | .10         | 7415      | 198   | 1.00        | 7635      | 263   | ....        |
| 6929      | 117   | .40         | 7246      | 231   | .60         | 7418      | 198   | 5.00        | 7638      | 263   | ....        |
| 6930      | 117   | 2.50        | 7247      | 231   | 2.00        | 7419      | 198   | 1.00        | 7639      | 267   | ....        |
| 6931      | 117   | 2.50        | 7261      | 183   | .50         | 7421      | 201   | 2.00        | 7640      | 263   | ....        |
| 6937      | 113   | 3.00        | 7269      | 43    | .50         | 7422      | 205   | .90         | 7644      | 263   | ....        |
| 6942      | 139   | .30         | 7276      | 56    | 4.30        | 7423      | 201   | .16         | 7645      | 263   | ....        |
| 6943      | 166   | ....        | 7293      | 131   | 18.00       | 7424      | 205   | .10         | 7647      | 263   | ....        |
| 6944      | 113   | .10         | 7318      | 134   | 4.80        | 7425      | 198   | .02         | 7648      | 263   | 644.00      |
| 6946      | 166   | .20         | 7321      | 231   | 1.50        | 7426      | 87    | 2.30        | 7649      | 263   | ....        |
| 6948      | 117   | .12         | 7323      | 231   | 1.50        | 7428      | 87    | .44         | 7650      | 263   | ....        |
| 6957      | 179   | .20         | 7326      | 51    | 2.20        | 7432      | 129   | 1.40        | 7662      | 17    | .05         |
| 6967      | 201   | 1.80        | 7334      | 99    | 2.04        | 7433      | 129   | .90         | 7665      | 51    | .24         |
| 6968      | 201   | 1.60        | 7335      | 99    | .70         | 7434      | 129   | 1.70        | 7670      | 83    | .02         |
| 6976      | 113   | 3.00        | 7339      | 253   | 176.40      | 7435      | 129   | .50         | 7684      | 247   | 142.00      |
| 6977      | 113   | 3.00        | 7340      | 153   | 1.76        | 7436      | 129   | .50         | 7697      | 61    | .12         |
| 6993      | 131   | .50         | 7341      | 153   | 1.76        | 7437      | 131   | 1.20        | 7708      | 21    | 8.00        |
| 6994      | 131   | .90         | 7342      | 153   | 1.00        | 7471      | 21    | .40         | 7709      | 21    | 5.00        |
| 6997      | 117   | 60.00       | 7343      | 244   | 8.00        | 7472      | 21    | .40         | 7710      | 198   | .20         |
| 7015      | 56    | 8.00        | 7345      | 69    | ....        | 7475      | 231   | 2.00        | 7711      | 198   | .20         |
| 7017      | 56    | 10.30       | 7346      | 69    | ....        | 7476      | 65    | 1.04        | 7718      | 17    | 72.00       |
| 7019      | 51    | 9.50        | 7347      | 69    | ....        | 7477      | 65    | 4.90        | 7719      | 30    | .16         |
| 7020      | 51    | 9.50        | 7348      | 69    | ....        | 7478      | 205   | .50         | 7720      | 30    | .20         |
| 7031      | 172   | .20         | 7349      | 69    | ....        | 7479      | 205   | .64         | 7721      | 27    | 2.50        |
| 7032      | 172   | ....        | 7351      | 247   | 518.00      | 7486      | 134   | 2.80        | 7722      | 30    | .12         |
| 7033      | 172   | ....        | 7352      | 244   | 50.00       | 7495      | 236   | 5.00        | 7723      | 30    | .14         |
| 7057      | 253   | 53.20       | 7359      | 244   | .06         | 7496      | 236   | 2.80        | 7724      | 33    | 76.50       |
| 7059      | 253   | 30.80       | 7365      | 240   | 4.00        | 7512      | 236   | 8.00        | 7725      | 33    | 94.50       |
| 7061      | 203   | 5.00        | 7370      | 197   | 170.00      | 7557      | 113   | 320.00      | 7726      | 33    | 117.00      |
| 7062      | 203   | 7.00        | 7371      | 197   | .50         | 7558      | 113   | 320.00      | 7727      | 33    | 121.50      |
| 7064      | 210   | ....        | 7372      | 197   | .50         | 7559      | 113   | 360.00      | 7728      | 33    | 135.00      |
| 7067      | 56    | 10.30       | 7374      | 197   | 10.00       | 7560      | 113   | 360.00      | 7729      | 33    | 144.00      |

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| 7730      | 33    | 148.50      | 7929      | 30    | .20         | 8137      | 172   | ....        | 8313      | 102   | 12.00       |
| 7731      | 33    | 153.00      | 7933      | 253   | 107.60      | 8138      | 172   | ....        | 8314      | 102   | 3.80        |
| 7732      | 33    | 157.50      | 7934      | 30    | .30         | 8139      | 172   | ....        | 8315      | 102   | .30         |
| 7733      | 33    | 162.00      | 7964      | 117   | .50         | 8141      | 172   | ....        | 8316      | 102   | 4.00        |
| 7734      | 33    | 175.50      | 7994      | 51    | ....        | 8142      | 172   | ....        | 8317      | 102   | .30         |
| 7735      | 33    | 180.00      | 8002      | 51    | 10.00       | 8143      | 172   | ....        | 8318      | 102   | .30         |
| 7736      | 33    | 184.50      | 8003      | 51    | 10.00       | 8144      | 172   | ....        | 8319      | 102   | 8.00        |
| 7737      | 33    | 189.00      | 8004      | 51    | 6.50        | 8145      | 172   | ....        | 8320      | 102   | .20         |
| 7738      | 33    | 193.50      | 8005      | 51    | 6.50        | 8206      | 83    | 1.44        | 8321      | 80    | .02         |
| 7739      | 33    | 202.50      | 8010      | 131   | .40         | 8207      | 83    | 1.20        | 8322      | 80    | .02         |
| 7740      | 33    | 207.00      | 8016      | 65    | 2.90        | 8208      | 83    | .22         | 8323      | 102   | 24.00       |
| 7741      | 33    | 211.50      | 8017      | 65    | 2.20        | 8209      | 83    | 1.80        | 8324      | 102   | 7.80        |
| 7742      | 33    | 216.00      | 8018      | 65    | 2.80        | 8210      | 83    | 1.48        | 8325      | 102   | 12.00       |
| 7743      | 33    | 225.00      | 8019      | 65    | 3.00        | 8231      | 275   | .80         | 8326      | 102   | 8.00        |
| 7744      | 33    | 234.00      | 8020      | 65    | 3.30        | 8232      | 275   | .80         | 8327      | 102   | 14.00       |
| 7745      | 33    | 243.00      | 8021      | 65    | 14.80       | 8237      | 156   | .07         | 8328      | 102   | 6.00        |
| 7746      | 33    | 270.00      | 8022      | 65    | 7.30        | 8243      | 75    | .10         | 8329      | 102   | 8.00        |
| 7764      | 134   | 2.00        | 8023      | 65    | 2.50        | 8246      | 61    | 2.12        | 8333      | 102   | .18         |
| 7766      | 30    | 6.00        | 8024      | 65    | 1.50        | 8247      | 61    | 2.12        | 8334      | 102   | 14.00       |
| 7767      | 21    | .06         | 8055      | 51    | 1.70        | 8248      | 61    | 2.64        | 8335      | 102   | 8.00        |
| 7774      | 27    | .60         | 8056      | 51    | 7.20        | 8249      | 61    | 2.64        | 8336      | 56    | 3.08        |
| 7779      | 156   | .60         | 8068      | 65    | 2.40        | 8250      | 61    | 3.80        | 8337      | 56    | 3.16        |
| 7795      | 41    | 7.70        | 8069      | 65    | 1.50        | 8251      | 61    | 3.80        | 8338      | 56    | 4.00        |
| 7803      | 253   | 88.00       | 8070      | 65    | 4.15        | 8252      | 61    | 3.96        | 8339      | 56    | 3.35        |
| 7815      | 153   | 1.76        | 8071      | 65    | 5.20        | 8253      | 61    | 3.96        | 8346      | 87    | .41         |
| 7816      | 153   | 1.76        | 8072      | 65    | 1.60        | 8254      | 61    | 3.40        | 8347      | 56    | 3.70        |
| 7817      | 47    | 13.70       | 8073      | 65    | 4.00        | 8255      | 61    | 3.40        | 8348      | 56    | 3.92        |
| 7818      | 47    | 13.70       | 8081      | 56    | 6.40        | 8256      | 61    | 1.72        | 8349      | 87    | 2.76        |
| 7820      | 43    | .60         | 8082      | 56    | .90         | 8257      | 61    | 1.80        | 8350      | 87    | 2.50        |
| 7821      | 43    | 1.60        | 8083      | 56    | 4.00        | 8258      | 61    | 3.60        | 8351      | 87    | .68         |
| 7822      | 43    | .40         | 8084      | 56    | 6.84        | 8259      | 61    | 3.60        | 8352      | 87    | 1.00        |
| 7825      | 41    | 18.80       | 8085      | 56    | 6.20        | 8260      | 61    | 3.50        | 8355      | 87    | .14         |
| 7833      | 172   | 14.00       | 8087      | 56    | 7.75        | 8261      | 61    | 3.50        | 8356      | 87    | 2.50        |
| 7835      | 194   | 44.00       | 8088      | 56    | 2.00        | 8262      | 61    | 3.10        | 8357      | 87    | ....        |
| 7852      | 244   | 18.00       | 8089      | 56    | 1.70        | 8263      | 61    | 3.10        | 8358      | 87    | 2.00        |
| 7853      | 244   | 22.00       | 8090      | 56    | .64         | 8264      | 61    | 2.30        | 8359      | 88    | 1.90        |
| 7854      | 244   | 42.00       | 8091      | 56    | 2.00        | 8265      | 61    | .84         | 8360      | 88    | 1.90        |
| 7855      | 244   | 46.00       | 8092      | 56    | 1.40        | 8266      | 61    | .84         | 8361      | 88    | 1.80        |
| 7856      | 83    | 4.40        | 8093      | 56    | .24         | 8267      | 61    | 1.70        | 8362      | 56    | 1.20        |
| 7858      | 247   | 382.00      | 8094      | 56    | 4.50        | 8268      | 61    | 1.70        | 8363      | 88    | 1.94        |
| 7859      | 247   | 450.00      | 8095      | 56    | 3.80        | 8269      | 61    | 1.00        | 8364      | 88    | 1.66        |
| 7860      | 247   | 484.00      | 8096      | 56    | 4.00        | 8270      | 61    | 2.30        | 8365      | 88    | 1.28        |
| 7862      | 141   | 6.80        | 8102      | 75    | ....        | 8271      | 61    | 2.20        | 8366      | 88    | 1.04        |
| 7863      | 147   | 1.20        | 8104      | 75    | ....        | 8272      | 62    | .84         | 8367      | 88    | 1.90        |
| 7864      | 147   | 1.10        | 8105      | 75    | ....        | 8273      | 62    | 1.50        | 8368      | 88    | 1.26        |
| 7865      | 147   | .10         | 8106      | 75    | ....        | 8274      | 62    | .10         | 8369      | 88    | 1.84        |
| 7870      | 277   | ....        | 8110      | 113   | 20.00       | 8275      | 62    | .10         | 8370      | 88    | 1.20        |
| 7902      | 113   | 80.00       | 8120      | 172   | 50.00       | 8276      | 62    | .10         | 8371      | 88    | 1.44        |
| 7911      | 166   | 30.00       | 8121      | 172   | ....        | 8277      | 62    | .12         | 8372      | 88    | 2.50        |
| 7913      | 166   | 11.00       | 8122      | 172   | ....        | 8278      | 62    | .07         | 8373      | 88    | 2.00        |
| 7916      | 14    | 124.00      | 8124      | 172   | ....        | 8279      | 62    | .09         | 8388      | 163   | 41.00       |
| 7917      | 15    | 80.00       | 8125      | 172   | ....        | 8280      | 62    | .08         | 8389      | 163   | 47.00       |
| 7919      | 15    | 60.00       | 8127      | 172   | ....        | 8281      | 62    | .10         | 8414      | 113   | 14.00       |
| 7920      | 15    | 64.00       | 8128      | 172   | ....        | 8282      | 62    | 1.35        | 8415      | 113   | 15.00       |
| 7921      | 15    | 156.00      | 8131      | 172   | ....        | 8288      | 75    | .56         | 8448      | 244   | 34.00       |
| 7924      | 172   | 1.20        | 8132      | 172   | ....        | 8310      | 134   | 11.20       | 8462      | 240   | 30.00       |
| 7925      | 172   | 1.50        | 8135      | 172   | ....        | 8311      | 102   | 24.00       | 8463      | 240   | 36.00       |
| 7927      | 236   | 27.00       | 8136      | 172   | ....        | 8312      | 102   | 7.80        | 8465      | 91    | 1.44        |

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| 8466      | 91    | .90         | 8581      | 84    | 2.30        | 8686      | 56    | 6.00        | 8762      | 80    | .12         |
| 8479      | 172   | ....        | 8582      | 84    | 3.58        | 8687      | 56    | 6.70        | 8764      | 80    | .36         |
| 8481      | 91    | 1.80        | 8583      | 84    | 2.08        | 8688      | 51    | 3.00        | 8765      | 80    | .08         |
| 8482      | 91    | 3.40        | 8584      | 84    | 2.58        | 8697      | 95    | .14         | 8766      | 80    | .16         |
| 8483      | 91    | 4.80        | 8585      | 84    | 2.58        | 8698      | 95    | .45         | 8767      | 80    | 1.20        |
| 8484      | 91    | 6.00        | 8586      | 84    | 3.90        | 8699      | 95    | .96         | 8768      | 80    | .40         |
| 8485      | 91    | .40         | 8587      | 84    | 1.48        | 8700      | 95    | .45         | 8769      | 80    | .12         |
| 8486      | 91    | 1.32        | 8588      | 84    | 4.50        | 8701      | 95    | .31         | 8770      | 80    | .22         |
| 8487      | 91    | 2.80        | 8589      | 69    | ....        | 8702      | 95    | 1.02        | 8771      | 80    | .22         |
| 8488      | 91    | 4.10        | 8590      | 69    | ....        | 8704      | 95    | .31         | 8772      | 80    | .22         |
| 8489      | 91    | 5.30        | 8591      | 69    | ....        | 8705      | 95    | .45         | 8773      | 80    | .22         |
| 8490      | 91    | 4.10        | 8592      | 69    | ....        | 8706      | 95    | .19         | 8774      | 80    | .22         |
| 8510      | 91    | .60         | 8593      | 69    | ....        | 8707      | 95    | .14         | 8775      | 80    | .22         |
| 8512      | 156   | .40         | 8594      | 69    | ....        | 8708      | 95    | .31         | 8776      | 80    | .22         |
| 8513      | 156   | .24         | 8595      | 69    | ....        | 8709      | 95    | .45         | 8777      | 80    | .22         |
| 8515      | 91    | 1.90        | 8596      | 69    | ....        | 8710      | 95    | .31         | 8780      | 80    | .76         |
| 8516      | 91    | .92         | 8597      | 69    | ....        | 8711      | 95    | .86         | 8781      | 80    | .16         |
| 8517      | 91    | 1.70        | 8598      | 69    | ....        | 8712      | 95    | .05         | 8782      | 80    | 1.36        |
| 8518      | 92    | 1.30        | 8599      | 69    | ....        | 8713      | 95    | .26         | 8783      | 80    | .54         |
| 8519      | 92    | .10         | 8600      | 69    | ....        | 8714      | 95    | .05         | 8784      | 80    | .80         |
| 8520      | 92    | 2.00        | 8601      | 69    | ....        | 8716      | 95    | .24         | 8785      | 80    | .80         |
| 8521      | 92    | 2.50        | 8602      | 84    | .22         | 8717      | 96    | .29         | 8788      | 75    | .12         |
| 8522      | 92    | 1.90        | 8603      | 92    | 2.80        | 8718      | 96    | .29         | 8790      | 75    | 1.56        |
| 8523      | 92    | 1.44        | 8604      | 92    | 5.40        | 8719      | 96    | .21         | 8791      | 75    | 1.80        |
| 8526      | 92    | 2.28        | 8605      | 92    | 7.80        | 8721      | 96    | ....        | 8792      | 75    | 1.80        |
| 8527      | 92    | 1.60        | 8606      | 92    | 10.00       | 8722      | 96    | ....        | 8793      | 75    | .36         |
| 8528      | 92    | 1.05        | 8607      | 92    | 1.80        | 8723      | 96    | ....        | 8794      | 75    | .36         |
| 8531      | 92    | 1.60        | 8608      | 92    | 3.70        | 8724      | 96    | ....        | 8795      | 75    | .36         |
| 8532      | 92    | 5.50        | 8609      | 92    | 5.50        | 8725      | 96    | .57         | 8798      | 76    | .40         |
| 8533      | 92    | 1.50        | 8610      | 92    | 7.14        | 8726      | 96    | .91         | 8799      | 76    | .40         |
| 8534      | 92    | 1.20        | 8617      | 92    | 2.60        | 8727      | 96    | 1.58        | 8800      | 76    | .40         |
| 8535      | 92    | 2.80        | 8618      | 92    | 2.70        | 8728      | 96    | 1.88        | 8801      | 76    | .40         |
| 8536      | 92    | 3.56        | 8619      | 92    | 1.50        | 8729      | 96    | 2.14        | 8804      | 80    | .56         |
| 8537      | 92    | 2.50        | 8620      | 92    | 1.80        | 8730      | 96    | 2.50        | 8836      | 76    | .72         |
| 8538      | 92    | 2.94        | 8621      | 92    | 3.70        | 8731      | 96    | 2.76        | 8837      | 76    | 1.30        |
| 8539      | 92    | 1.56        | 8622      | 92    | 5.50        | 8732      | 96    | 1.82        | 8838      | 76    | 1.30        |
| 8540      | 92    | 2.80        | 8623      | 92    | 7.14        | 8733      | 96    | 1.10        | 8847      | 76    | 1.20        |
| 8560      | 83    | .27         | 8624      | 92    | 5.00        | 8734      | 96    | .64         | 8848      | 76    | .70         |
| 8561      | 83    | 2.00        | 8625      | 102   | 14.10       | 8735      | 96    | .34         | 8849      | 76    | .12         |
| 8562      | 83    | 1.60        | 8626      | 102   | .17         | 8741      | 99    | 2.04        | 8851      | 76    | .36         |
| 8563      | 83    | .34         | 8627      | 102   | 28.80       | 8742      | 99    | 2.10        | 8852      | 76    | .36         |
| 8564      | 83    | 1.36        | 8630      | 92    | 2.80        | 8743      | 99    | 2.22        | 8853      | 76    | .36         |
| 8565      | 83    | 1.36        | 8631      | 156   | .22         | 8744      | 99    | 2.28        | 8854      | 76    | .36         |
| 8566      | 83    | 4.50        | 8635      | 102   | 13.70       | 8745      | 99    | 2.04        | 8855      | 76    | .36         |
| 8567      | 83    | 2.84        | 8645      | 163   | 30.00       | 8746      | 99    | 1.64        | 8856      | 76    | .36         |
| 8568      | 83    | 2.84        | 8655      | 56    | 4.80        | 8747      | 99    | 2.10        | 8857      | 76    | .36         |
| 8569      | 83    | 2.84        | 8658      | 65    | 2.80        | 8748      | 99    | 2.22        | 8858      | 76    | 1.75        |
| 8570      | 83    | 2.84        | 8659      | 65    | 5.30        | 8749      | 99    | .60         | 8859      | 76    | .12         |
| 8571      | 84    | 1.50        | 8668      | 88    | .70         | 8750      | 99    | .17         | 8860      | 76    | .12         |
| 8572      | 84    | 1.20        | 8670      | 247   | 306.00      | 8751      | 99    | .08         | 8861      | 76    | .12         |
| 8573      | 84    | 1.12        | 8674      | 17    | 30.00       | 8752      | 99    | .68         | 8862      | 76    | .12         |
| 8574      | 84    | 2.56        | 8675      | 65    | 2.50        | 8753      | 99    | 3.80        | 8863      | 76    | 1.50        |
| 8575      | 84    | 1.24        | 8676      | 66    | 4.00        | 8754      | 99    | 2.60        | 8864      | 76    | 1.60        |
| 8576      | 84    | 2.56        | 8677      | 66    | 6.50        | 8755      | 99    | 2.50        | 8865      | 76    | 1.96        |
| 8577      | 84    | 1.12        | 8678      | 56    | 7.00        | 8756      | 99    | 2.30        | 8866      | 76    | 1.00        |
| 8578      | 84    | 2.56        | 8679      | 56    | 5.50        | 8757      | 99    | 7.10        | 8867      | 76    | .84         |
| 8579      | 84    | 2.56        | 8680      | 56    | 7.70        | 8760      | 75    | .12         | 8871      | 221   | 14.00       |
| 8580      | 84    | 1.53        | 8681      | 66    | 2.90        | 8761      | 75    | .12         | 8872      | 221   | 2.50        |

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| 8876      | 221   | 2.50        | 9019      | 198   | 1.00        | 9264      | 156   | 1.04        | 9379      | 169   | 3.30        |
| 8878      | 221   | 2.00        | 9020      | 198   | 5.00        | 9265      | 156   | 1.20        | 9382      | 151   | 4.00        |
| 8879      | 221   | 10.00       | 9025      | 76    | ....        | 9266      | 156   | .64         | 9383      | 151   | 4.00        |
| 8880      | 221   | 2.00        | 9026      | 76    | ....        | 9267      | 156   | .72         | 9384      | 151   | 4.00        |
| 8885      | 221   | .50         | 9041      | 151   | 1.08        | 9268      | 156   | .48         | 9386      | 151   | 2.60        |
| 8886      | 221   | 2.00        | 9042      | 151   | .96         | 9269      | 156   | .55         | 9387      | 151   | 2.60        |
| 8888      | 221   | 2.50        | 9043      | 151   | .12         | 9270      | 156   | .50         | 9388      | 151   | 2.60        |
| 8890      | 221   | 1.00        | 9045      | 76    | 1.84        | 9271      | 156   | .77         | 9391      | 151   | 1.00        |
| 8891      | 221   | .20         | 9047      | 76    | ....        | 9272      | 156   | .60         | 9393      | 169   | 3.20        |
| 8895      | 221   | .10         | 9056      | 198   | .30         | 9273      | 156   | 1.24        | 9397      | 117   | 2.50        |
| 8897      | 76    | .40         | 9060      | 137   | .12         | 9274      | 156   | 1.50        | 9402      | 221   | 74.00       |
| 8898      | 76    | .40         | 9061      | 137   | .20         | 9275      | 156   | .70         | 9446      | 117   | 2.50        |
| 8899      | 76    | .40         | 9073      | 221   | .10         | 9276      | 156   | 1.20        | 9447      | 117   | 2.50        |
| 8900      | 76    | .40         | 9078      | 198   | 3.00        | 9277      | 156   | .26         | 9450      | 249   | ....        |
| 8909      | 221   | 4.50        | 9079      | 198   | 3.00        | 9278      | 156   | 1.50        | 9461      | 249   | 26.30       |
| 8910      | 76    | .064        | 9080      | 21    | 15.00       | 9279      | 156   | 1.08        | 9462      | 249   | ....        |
| 8917      | 33    | 5.00        | 9126      | 115   | 240.00      | 9280      | 156   | .60         | 9463      | 249   | ....        |
| 8919      | 69    | ....        | 9127      | 113   | 320.00      | 9281      | 156   | .33         | 9464      | 249   | 54.00       |
| 8920      | 69    | ....        | 9129      | 169   | 1.24        | 9282      | 156   | .16         | 9465      | 249   | ....        |
| 8921      | 76    | .40         | 9130      | 169   | .80         | 9283      | 156   | .42         | 9466      | 249   | ....        |
| 8926      | 66    | .40         | 9169      | 156   | .07         | 9284      | 156   | .16         | 9469      | 249   | ....        |
| 8947      | 69    | ....        | 9197      | 205   | .60         | 9285      | 156   | .48         | 9470      | 151   | 1.30        |
| 8948      | 69    | ....        | 9198      | 205   | .07         | 9286      | 156   | .64         | 9557      | 76    | ....        |
| 8949      | 69    | ....        | 9199      | 205   | .70         | 9287      | 156   | 1.04        | 9560      | 221   | 140.00      |
| 8953      | 76    | 1.00        | 9201      | 156   | .07         | 9288      | 156   | .76         | 9561      | 221   | 86.00       |
| 8954      | 76    | .36         | 9215      | 249   | 30.50       | 9289      | 156   | 1.04        | 9562      | 221   | 54.00       |
| 8955      | 73    | 7.20        | 9220      | 179   | .80         | 9290      | 156   | 2.80        | 9565      | 131   | 9.00        |
| 8956      | 73    | 9.20        | 9223      | 88    | .09         | 9292      | 156   | 2.40        | 9622      | 267   | ....        |
| 8957      | 73    | 7.20        | 9224      | 88    | .12         | 9294      | 156   | 2.40        | 9623      | 267   | ....        |
| 8958      | 73    | 9.20        | 9226      | 210   | ....        | 9300      | 156   | 2.90        | 9624      | 267   | ....        |
| 8959      | 73    | 7.20        | 9227      | 210   | ....        | 9302      | 156   | 2.90        | 9625      | 267   | ....        |
| 8960      | 73    | 9.20        | 9228      | 210   | ....        | 9304      | 156   | 3.48        | 9629      | 275   | .40         |
| 8961      | 73    | 7.20        | 9229      | 210   | ....        | 9306      | 156   | 3.48        | 9630      | 275   | .02         |
| 8962      | 73    | 8.00        | 9230      | 210   | ....        | 9341      | 134   | 1.30        | 9632      | 117   | .50         |
| 8963      | 73    | 9.20        | 9231      | 210   | ....        | 9342      | 134   | 1.36        | 9633      | 117   | 6.00        |
| 8964      | 73    | 2.40        | 9232      | 210   | ....        | 9343      | 134   | 1.44        | 9634      | 141   | 5.00        |
| 8965      | 73    | 3.60        | 9233      | 210   | ....        | 9344      | 134   | 1.50        | 9635      | 141   | 4.80        |
| 8966      | 73    | 3.00        | 9234      | 210   | ....        | 9345      | 134   | 2.10        | 9636      | 141   | 4.80        |
| 8967      | 73    | 4.60        | 9235      | 210   | ....        | 9346      | 134   | 2.40        | 9637      | 143   | 8.40        |
| 8969      | 73    | .36         | 9236      | 210   | ....        | 9347      | 163   | 4.00        | 9638      | 143   | 7.80        |
| 8970      | 73    | .48         | 9237      | 210   | ....        | 9348      | 163   | 4.00        | 9639      | 143   | 5.60        |
| 8978      | 76    | .36         | 9238      | 210   | ....        | 9349      | 163   | 6.00        | 9640      | 145   | 4.80        |
| 8979      | 76    | .36         | 9239      | 210   | ....        | 9350      | 163   | 6.00        | 9650      | 221   | 190.00      |
| 8981      | 76    | .36         | 9240      | 210   | ....        | 9351      | 117   | 5.70        | 9651      | 221   | 116.00      |
| 8982      | 76    | .36         | 9241      | 210   | ....        | 9352      | 117   | 6.00        | 9652      | 221   | 7.00        |
| 8989      | 76    | .36         | 9242      | 210   | ....        | 9353      | 117   | 1.20        | 9653      | 221   | 18.00       |
| 8994      | 76    | .12         | 9243      | 210   | ....        | 9355      | 177   | 45.00       | 9654      | 221   | 6.00        |
| 9008      | 134   | 1.40        | 9244      | 210   | ....        | 9361      | 179   | 5.00        | 9655      | 221   | 3.00        |
| 9009      | 134   | 3.30        | 9245      | 210   | ....        | 9362      | 180   | 5.80        | 9656      | 221   | 2.00        |
| 9010      | 198   | 160.00      | 9246      | 210   | ....        | 9363      | 180   | 3.50        | 9657      | 221   | .40         |
| 9011      | 198   | 2.50        | 9247      | 210   | ....        | 9364      | 180   | 5.00        | 9658      | 221   | 3.00        |
| 9012      | 198   | 1.00        | 9248      | 210   | ....        | 9365      | 180   | 3.00        | 9659      | 221   | 1.00        |
| 9013      | 201   | 2.00        | 9249      | 210   | ....        | 9366      | 180   | .20         | 9660      | 145   | 6.00        |
| 9014      | 205   | .90         | 9250      | 156   | .70         | 9367      | 180   | .50         | 9671      | 137   | 4.10        |
| 9015      | 201   | .20         | 9259      | 156   | .36         | 9368      | 180   | .50         | 9672      | 137   | 4.10        |
| 9016      | 205   | .10         | 9261      | 156   | .90         | 9369      | 180   | 4.00        | 9673      | 137   | 3.70        |
| 9017      | 198   | 2.50        | 9262      | 156   | .70         | 9376      | 183   | .80         | 9674      | 137   | 4.80        |
| 9018      | 198   | 5.00        | 9263      | 156   | .90         | 9378      | 117   | 5.70        | 9675      | 137   | 4.80        |

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| 9676      | 137   | 5.80        | 9749      | 147   | 1.60        | 10235     | 117   | 5.50        | 12345     | 108   | 595.00      |
| 9677      | 137   | 5.80        | 9750      | 147   | 1.68        | 10236     | 117   | 5.40        | 12346     | 108   | 395.00      |
| 9678      | 139   | 4.40        | 9751      | 147   | 1.60        | 10247     | 273   | 5.00        | 12347     | 108   | 515.00      |
| 9679      | 139   | 4.40        | 9752      | 147   | 1.70        | 10248     | 273   | 3.00        | 12348     | 172   | 1.50        |
| 9680      | 139   | 6.60        | 9753      | 147   | 1.30        | 10261     | 88    | 1.00        | 12349     | 251   | ....        |
| 9681      | 139   | 4.20        | 9754      | 147   | 1.40        | 10278     | 117   | 5.50        | 12350     | 251   | ....        |
| 9682      | 145   | 4.60        | 9755      | 147   | 1.40        | 10279     | 117   | 5.40        | 12351     | 251   | ....        |
| 9683      | 145   | 8.00        | 9756      | 147   | 1.68        | 10311     | 148   | 1.00        | 12352     | 251   | ....        |
| 9684      | 145   | 4.80        | 9757      | 147   | .20         | 10312     | 148   | 1.16        | 12353     | 251   | ....        |
| 9685      | 145   | 5.60        | 9758      | 151   | 4.00        | 10313     | 148   | 1.30        | 12354     | 251   | ....        |
| 9700      | 137   | 5.40        | 9759      | 151   | 2.60        | 10314     | 148   | 1.44        | 12357     | 131   | 68.00       |
| 9701      | 247   | 372.00      | 9760      | 147   | 1.68        | 10315     | 148   | .20         | 12358     | 131   | 70.00       |
| 9702      | 137   | 4.10        | 9761      | 148   | 1.60        | 10316     | 148   | .06         | 12359     | 131   | 92.00       |
| 9703      | 137   | 4.50        | 9762      | 151   | 4.00        | 10317     | 153   | 1.00        | 12360     | 131   | 84.00       |
| 9704      | 137   | 4.50        | 9763      | 151   | 2.60        | 10318     | 153   | .12         | 12361     | 131   | 17.00       |
| 9705      | 137   | 5.40        | 9764      | 148   | 1.00        | 10319     | 153   | .30         | 12379     | 117   | 5.40        |
| 9706      | 137   | 6.50        | 9765      | 148   | 1.16        | 10320     | 153   | .50         | 12380     | 117   | 5.50        |
| 9707      | 137   | 6.60        | 9766      | 151   | 1.20        | 10321     | 153   | .50         | 12383     | 145   | 6.00        |
| 9708      | 139   | 6.40        | 9767      | 151   | 1.40        | 10322     | 137   | .20         | 12384     | 145   | 5.40        |
| 9709      | 139   | 6.40        | 9768      | 151   | 1.20        | 10323     | 137   | .20         | 12388     | 148   | 1.00        |
| 9710      | 139   | 7.60        | 9769      | 151   | 3.00        | 10324     | 137   | .20         | 12389     | 148   | 1.16        |
| 9711      | 139   | 6.20        | 9770      | 151   | 1.50        | 10325     | 137   | .20         | 12390     | 198   | 1.00        |
| 9712      | 141   | 8.00        | 9781      | 151   | .70         | 10326     | 137   | .30         | 12391     | 251   | ....        |
| 9713      | 141   | 5.40        | 9782      | 148   | 1.32        | 10327     | 139   | .60         | 12392     | 251   | ....        |
| 9714      | 141   | 5.40        | 9783      | 148   | ....        | 10328     | 139   | .16         | 12393     | 251   | ....        |
| 9715      | 143   | 9.00        | 9784      | 148   | ....        | 10329     | 139   | .30         | 12394     | 251   | ....        |
| 9716      | 143   | 8.60        | 9785      | 148   | ....        | 10330     | 139   | .16         | 12395     | 251   | ....        |
| 9717      | 143   | 6.60        | 9786      | 151   | 1.30        | 10331     | 139   | .30         | 12396     | 251   | ....        |
| 9718      | 145   | 5.20        | 9787      | 148   | 1.00        | 10332     | 139   | .60         | 12400     | 172   | 57.50       |
| 9719      | 145   | 6.70        | 9788      | 148   | 1.16        | 10333     | 139   | 1.00        | 12407     | 172   | 7.50        |
| 9720      | 145   | 5.00        | 9789      | 148   | 1.00        | 10334     | 141   | .24         | 12408     | 172   | 7.50        |
| 9721      | 145   | 8.50        | 9790      | 148   | 1.16        | 10335     | 143   | .30         | 12431     | 244   | ....        |
| 9722      | 145   | 5.40        | 9791      | 148   | 1.00        | 10336     | 141   | 1.00        | 12449     | 198   | ....        |
| 9724      | 139   | 4.20        | 9792      | 148   | 1.16        | 10337     | 141   | .30         | 12450     | 198   | ....        |
| 9725      | 139   | 6.40        | 9793      | 153   | 1.76        | 10338     | 141   | .70         | 12470     | 253   | .18         |
| 9726      | 139   | 4.00        | 9794      | 153   | 1.76        | 10339     | 141   | .14         | 12502     | 172   | ....        |
| 9727      | 139   | 6.00        | 9795      | 153   | 1.76        | 10340     | 141   | .80         | 12503     | 172   | 7.50        |
| 9728      | 143   | 5.60        | 9796      | 153   | 1.76        | 10341     | 139   | .60         | 12504     | 172   | ....        |
| 9729      | 143   | 6.15        | 9797      | 153   | 1.76        | 10342     | 143   | .16         | 12506     | 172   | ....        |
| 9730      | 141   | 4.80        | 9798      | 153   | 1.76        | 10343     | 145   | 2.00        | 12507     | 172   | ....        |
| 9731      | 141   | 5.40        | 9802      | 117   | 2.00        | 10344     | 153   | 1.50        | 12508     | 172   | ....        |
| 9732      | 143   | 6.60        | 9830      | 172   | 6.00        | 10345     | 153   | .32         | 12705     | 120   | 260.00      |
| 9733      | 143   | 7.50        | 9856      | 153   | 1.76        | 10346     | 108   | 375.00      | 12706     | 120   | 270.00      |
| 9734      | 141   | 4.80        | 9857      | 153   | 1.76        | 10347     | 108   | 495.00      | 12707     | 120   | 350.00      |
| 9735      | 141   | 6.00        | 9866      | 148   | 1.60        | 10348     | 108   | 360.00      | 12708     | 120   | 370.00      |
| 9736      | 143   | 2.00        | 9867      | 148   | 1.68        | 10349     | 108   | 480.00      | 12709     | 120   | 480.00      |
| 9737      | 143   | 1.28        | 10090     | 117   | 5.50        | 10350     | 251   | ....        | 12710     | 120   | 250.00      |
| 9738      | 145   | 10.50       | 10122     | 172   | 1.50        | 11299     | 148   | 1.60        | 12711     | 120   | 260.00      |
| 9739      | 145   | 14.00       | 10126     | 172   | 1.50        | 11341     | 153   | 1.60        | 12712     | 120   | 340.00      |
| 9740      | 137   | 3.70        | 10179     | 113   | 2.00        | 11403     | 213   | ....        | 12713     | 120   | 360.00      |
| 9741      | 137   | 4.10        | 10201     | 108   | 370.00      | 11435     | 143   | .30         | 12714     | 120   | 470.00      |
| 9742      | 151   | 4.40        | 10202     | 108   | 490.00      | 11436     | 143   | .30         | 12715     | 120   | 250.00      |
| 9743      | 151   | 1.50        | 10203     | 108   | 600.00      | 11485     | 148   | 1.00        | 12716     | 120   | 260.00      |
| 9744      | 151   | 2.40        | 10204     | 108   | 355.00      | 12339     | 131   | 60.00       | 12717     | 120   | 340.00      |
| 9745      | 151   | 4.00        | 10205     | 108   | 475.00      | 12341     | 108   | 360.00      | 12718     | 120   | 360.00      |
| 9746      | 151   | 2.60        | 10206     | 108   | 585.00      | 12342     | 108   | 365.00      | 12719     | 148   | 1.16        |
| 9747      | 147   | 1.60        | 10218     | 273   | .30         | 12343     | 108   | 480.00      | 12720     | 148   | 1.50        |
| 9748      | 147   | 1.68        | 10219     | 273   | .30         | 12344     | 108   | 485.00      | 12721     | 120   | 470.00      |

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| 12723     | 120   | 350.00      | 13021     | 233   | ....        | 13912     | 264   | 13.00       | 17867     | 213   | ....        |
| 12724     | 120   | 250.00      | 13022     | 233   | ....        | 13913     | 264   | 12.50       | 17868     | 213   | ....        |
| 12725     | 120   | 170.00      | 13023     | 233   | ....        | 13914     | 264   | 16.00       | 17869     | 213   | ....        |
| 12726     | 120   | 300.00      | 13024     | 233   | ....        | 13915     | 264   | 80.00       | 17870     | 213   | ....        |
| 12727     | 120   | 310.00      | 13896     | 264   | ....        | 13916     | 264   | 80.00       | 17871     | 213   | ....        |
| 12728     | 120   | 400.00      | 13897     | 264   | 200.00      | 13917     | 264   | 90.00       | 17940     | 209   | 170.00      |
| 12729     | 120   | 420.00      | 13898     | 264   | 210.00      | 13918     | 264   | 90.00       | 17941     | 209   | ....        |
| 12730     | 120   | 540.00      | 13899     | 264   | 240.00      | 13919     | 264   | ....        | 17942     | 209   | ....        |
| 12731     | 120   | 300.00      | 13900     | 264   | 256.00      | 13920     | 264   | ....        | 17943     | 209   | ....        |
| 12732     | 120   | 310.00      | 13903     | 264   | 420.00      | 17356     | 92    | .12         | 17944     | 209   | ....        |
| 12733     | 120   | 400.00      | 13904     | 264   | 430.00      | 17389     | 209   | .04         | 17947     | 209   | ....        |
| 12734     | 120   | 420.00      | 13905     | 264   | 460.00      | 17590     | 76    | .064        | 17948     | 209   | ....        |
| 12735     | 120   | 540.00      | 13906     | 264   | 480.00      | 17591     | 76    | .064        | 18000     | 233   | ....        |
| 12736     | 120   | 330.00      | 13907     | 264   | 500.00      | 17860     | 213   | ....        | 18001     | 233   | ....        |
| 12737     | 120   | 430.00      | 13908     | 264   | 516.00      | 17861     | 213   | ....        | 18002     | 233   | ....        |
| 12738     | 120   | 15.00       | 13909     | 264   | 564.00      | 17864     | 213   | ....        | 18003     | 233   | ....        |
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| 1570        | 5861      | 1894        | 7073      | 2234        | 8325      | 2377        | 10122     |
| 1571        | 5862      | 1900        | 7083      | 2235        | 8314      | 2378        | 10126     |
| 1575        | 6045      | 1946        | 7230      | 2236        | 8312      | 2392        | 9462      |
| 1576        | 6046      | 1974        | 7261      | 2237        | 8313      | 2399        | 9197      |
| 1577        | 6048      | 1976        | 7293      | 2239        | 8328      | 2407        | 9595      |
| 1645        | 6660      | 1989        | 7334      | 2040        | 8329      | 2437        | 8465      |
| 1648        | 6810      | 1990        | 7374      | 2041        | 8335      | 2438        | 8485      |
| 1656        | 6752      | 1991        | 7376      | 2246        | 8513      | 2439        | 8534      |
| 1667        | 6754      | 1992        | 7377      | 2256        | 8513      | 2440        | 8700      |
| 1669        | 6753      | 1993        | 7383      | 2257        | 8631      | 2441        | 8701      |
| 1672        | 6271      | 1994        | 7384      | 2274        | 8674      | 2442        | 12384     |
| 1676        | 6780      | 1999        | 7421      | 2280        | 8871      | 2443        | 12390     |
| 1678        | 6930      | 2000        | 7422      | 2281        | 8872      | 2446        | 8978      |
| 1679        | 6931      | 2001        | 7423      | 2285        | 8876      | 2447        | 12388     |
| 1680        | 6817      | 2002        | 7424      | 2287        | 8878      | 2448        | 9679      |
| 1681        | 6929      | 2003        | 7478      | 2288        | 8879      | 2455        | 8523      |
| 1685        | 6897      | 2037        | 7495      | 2289        | 8674      | 2456        | 8954      |
| 1687        | 6993      | 2038        | 7496      | 2302        | 9013      | 2457        | 8989      |
| 1688        | 6383      | 2061        | 7437      | 2303        | 9014      | 2458        | 8798      |
| 1689        | 6389      | 2062        | 7433      | 2304        | 9042      | 2459        | 8799      |
| 1690        | 6914      | 2063        | 7434      | 2313        | 9733      | 2460        | 8897      |
| 1691        | 6433      | 2064        | 7436      | 2318        | 9351      | 2461        | 8899      |
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| 1750        | 6508      | 2212        | 8123      | 2324        | 9387      | 2466        | 8982      |
| 1751        | 6513      | 2212        | 8479      | 2325        | 9388      | 2473        | 9726      |
| 1786        | 6597      | 2213        | 8124      | 2327        | 9391      | 2488        | 8288      |
| 1795        | 6687      | 2215        | 8131      | 2333        | 9446      | 2489        | 9026      |
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| 1828        | 6834      | 2217        | 8139      | 2335        | 9447      | 2601        | 17942     |
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