



THIRTEENTH BIENNIAL REPORT
 OF THE
 IOWA INSTITUTION
 FOR THE EDUCATION OF THE
 DEAF AND DUMB

AT
 COUNCIL BLUFFS,

TO THE
 GOVERNOR OF THE STATE,

FOR 1878 AND 1879.

[PRINTED BY ORDER OF THE GENERAL ASSEMBLY.]

DES MOINES:
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 1880.

TRUSTEES AND OFFICERS.

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C. H. W. BROWN.

REPORT OF THE TRUSTEES

OF THE

IOWA INSTITUTION FOR THE DEAF AND DUMB.

To THE HON. JOHN H. GEAR, *Governor of Iowa:*

The Board of Trustees for the Deaf and Dumb Institution submit the following report:

Assuming control in May, 1878, they at once reorganized the management in accordance with the expressed policy of the General Assembly at their last session. Fears were professedly entertained by some, that the economies made necessary by legislative action, might embarrass the support of the institution and hinder it somewhat in the performance of its charitable work. These fears, however, proved to be groundless. The Support Fund reduced from \$40 to \$30 per quarter, has proved to be more than sufficient to meet the cost of all needed supplies without diminishing quantity or impairing quality. An advance in prices may make a difference hereafter. The fund for teachers and official incumbents, formerly \$12,000, but now reduced to \$8,000, has been sufficient until the recent large increase in the number of scholars, requiring an increase of teachers. It may be necessary to restore this item for teachers, etc., to the original amount of \$12,000, as the school already is nearly doubled. It is believed by the members of the Board, that (though not experts themselves) the educational department is equal in point of efficiency, to that of any other institution of the kind. Teachers are zealous and faithful, scholars earnest and attentive. Industrial pursuits have not been neglected, believing that knowledge and training in that direction are quite as valuable as a knowledge of letters and figures. Potatoes enough for the supply of the tables, and broom-corn enough for broom manufacture are some of the results of their labor.

The General Assembly appropriated \$40,000 to re-construct the main building. Materials were purchased and the work was done by the day. The result appears to have justified this course, as the total cost of building, including plumbing, heating, etc., amounted to \$34,500, of which \$33,000 was drawn during the last fiscal year. The remaining \$1,500 will be needed to meet outstanding bills, leaving a balance unexpended of \$5,500. The trustees would recommend that this balance, or so much thereof as may be needed, be expended in completing the building designed and commenced some years ago, as a coal, engine, and wash house, but not finished for want of funds, and if anything be left, it be expended on the grounds. They also recommend an allowance of \$2,000 for bedding and furniture—increasing numbers will make this a necessity.

Concurrent testimony favors the introduction of type-setting and printing into institutions of this kind. We, therefore, recommend an appropriation of \$1,000 for this purpose. The new building has furnished ample room thus far for all applicants, but if they continue to increase as they have done of late, its maximum capacity will soon be reached. In view then of the large number of mutes in the State, and the reasonable probability that they will continue to seek admission as they are now doing, the question arises whether it would not be wisdom on the part of the General Assembly to provide seasonably for their accommodation, by making an appropriation for the reconstruction of the east wing. For most of the details in the management, we refer to the report of the Superintendent. A statement of building expenses is herewith submitted, vouchers for which are filed with the Auditor of State.

REBUILDING MAIN BUILDING.

Appropriation.....	\$40,000.00
Amount Auditor's warrants drawn.....	33,000.00
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Balance appropriated and undrawn.....	\$ 7,000.00
Outstanding orders.....	1,322.92
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Cost of rebuilding.....	\$34,322.92
Balance appropriated and not needed.....	5,677.08

EXPENSE OF REBUILDING—CLASSIFIED STATEMENT OF DISBURSEMENTS.

For excavating.....	\$ 407.51
Stone-cutting.....	223.00
Brick-laying.....	1,681.25
Carpenter work.....	4,274.90
Laborers.....	2,078.53
Teaming.....	83.60
Painting.....	1,162.00
Plastering.....	1,782.25
Heating and plumbing.....	4,664.13
Pavement.....	379.44
Paints and oils.....	509.69
Freights paid.....	4.50
Lumber.....	10,378.49
Sundries.....	32.75
Tools, rope, etc.....	75.42
Sand and hauling.....	103.41
Iron.....	136.88
Hardware and nails.....	613.88
Lime, hair and plaster.....	637.75
Brick.....	1,080.05
Discounts on warrants.....	207.65
Tin roof and spouting.....	1,188.33
Superintendence and expenses.....	1,040.15
Fire-escapes.....	43.36
Foreman.....	765.00
Sewer-pipe.....	69.00
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Total.....	\$34,322.92
Amount drawn from State treasury.....	33,000.00
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Balance due at close of fiscal term.....	\$ 1,322.92

Respectfully submitted.

FRED. TEALE.

A. HEBARD.

J. H. STUBENRAUCH.

REPORT OF THE SUPERINTENDENT.

To the HON. JOHN H. GEAR, Governor of Iowa:

I HEREWITH respectfully submit to you, for transmission to the 18th General Assembly, the Thirteenth Biennial report of the Iowa Institution for the Deaf and Dumb.

The period under review was one full of events to the Institution; witnessing the occupancy of the new west wing; a complete change in the Board of Trustees; the resignation of the Superintendent, four teachers, and the Steward; a reduction in the support funds; the rebuilding and occupancy of the main building; and the first death of a pupil at the Institution.

The school-year of 1878 opened in November, 1877, two months late, owing to the delay in finishing the wing, occasioned by the unroofing of the building by a storm in the preceding August. The new class of 1877 was excluded for want of room, and only two new pupils were received.

The following exhibit shows the arrangement of classes and the studies pursued, during the term:

FIRST CLASS—17 pupils, Mr. Kennedy, teacher.

Studies: Thalheimer's Universal History; Brown's Physiology; arithmetic; composition; and Sabbath lessons from Luke.

SECOND CLASS—19 pupils, Mrs. Gillespie, teacher.

Studies: Hooker's Childs' Book of Common Things; Peet's Course of Instruction, Part III; arithmetic; composition; and Sabbath lessons from Mark.

THIRD CLASS—18 pupils, Miss Israel, teacher.

Studies: Eclectic Geography No. 1; Peet's Course of Instruction, Part III; arithmetic; and The Story of the Bible.

FOURTH CLASS—20 pupils, Mrs. Zorbagh, teacher.

Studies: Eclectic Geography No. 1; arithmetic; and Peet's Scripture lessons.

FIFTH CLASS—17 pupils, Miss Brown, teacher.

Studies: Latham's Primary Reader; arithmetic; and Peet's Scripture lessons.

SIXTH CLASS—16 pupils, Mr. Southwick, teacher.

Studies: Same as fifth class.

ARTICULATION CLASS—Mr. Gillespie, teacher.

The Seventeenth General Assembly reduced the number of Trustees from five to three, and in accordance with the law making the change, the new Board, Messrs. Fred. Teale, Alfred Hebard and John H. Stubenrauch, assumed control in May, 1878. In July, Mr. Talbot, after thirteen years of faithful service as Superintendent, resigned; and the present incumbent was appointed. Other resignations followed: Mr. and Mrs. Gillespie and Misses Israel and Brown, teachers, and Mr. Taylor, Steward. The retirement of so many old and efficient employes was a matter to be regretted; and the Trustees were subjected to much anxiety in their efforts to fill the vacant positions.

The same General Assembly appropriated \$40,000 to rebuild the main building, the appropriation to be drawn in two installments, \$5,000 in April, 1878, and \$35,000 one year later. The Trustees, however, realizing the imperative necessity of increased accommodations, as shown by the constant accessions to the number of applicants for admission, yielded to the pressure, and, after making advantageous negotiations for material, ordered the work to be commenced. Active operations began in July, 1878, and by October, under the skillful management of Messrs. Thos. Teale and Lyman Foregrave, needed rooms in the new structure were ready for occupancy, and school opened on the 23d of that month, with an attendance of 120, a number which was increased to 143 before the close of the term. Work was generally suspended during the winter; but in the spring and summer of the current year the building was finished, as the law directed: "in a plain and substantial manner," leaving a handsome balance of \$5,500 undrawn in the State treasury. While the outside of the restored building possesses but few architectural graces, the inside finish is greatly superior to that of the old structure. Fire-escapes, accessible from each floor, have been added, and extra precautions taken against fire, by increasing the number of fire-plugs, furnished with sufficient hose to reach every part of the building. We believe this institution is the only one in the State furnished with fire-

escapes. An improvement was also made in the manner of heating the building, by direct radiation, instead of through ventilators. Gas fixtures enough were taken from the wing to furnish the main building.

School opened October 23d, 1878, with 120 pupils in attendance and four new teachers: Mr. James Simpson, a semi-mute gentleman of fine attainments, and a graduate of the New York Institution; Mrs. J. A. Kennedy, a speaking lady, well qualified for the position, having served the institution for several years as Assistant Matron; and Miss Margaret Palmer, of Chariton, and Miss Margaret Pollock, of Burlington, both young ladies of ability and peculiarly fitted by education and temperament for their positions. In December Mrs. M. B. Southwick, a semi-mute lady of experience, was added to the corps of teachers. In May, 1879, Miss Palmer, owing to poor health, was compelled to resign, a fact much to be regretted, as she seemed destined to take high rank in the profession. Her place was filled by the appointment of Mrs. C. S. Zorbaugh, a former deaf-mute teacher of acceptable record.

The following exhibit shows the arrangement of classes and the studies for the year:

FIRST CLASS—15 pupils; Mr. Kennedy, Principal.

Studies: Swinton's Primary U. S. History; Eclectic Geography, No. 1; Peet's Course of Instruction, Part III; arithmetic; composition; and Bible lessons in Matthew.

SECOND CLASS—18 pupils; Mrs. Kennedy, teacher.

Studies: Hooker's Child's Book of Common Things; Eclectic Geography, No. 1; Peet's Course of Instruction, Part III; stories; composition; arithmetic; and the Story of the Bible.

THIRD CLASS—16 pupils; Mr. Simpson, teacher.

Studies: Eclectic Geography, No. 1; Peet's Course of Instruction, Part III; arithmetic; composition; and Peet's Scripture lessons.

FOURTH CLASS—15 pupils; Miss Palmer, teacher.

Studies: Montieth's First Lesson's in Geography; Latham's Primary Reader; composition; arithmetic; and Peet's Scripture lessons.

FIFTH CLASS—18 pupils; Mr. Southwick, teacher.

Studies: Latham's Primary Reader; arithmetic; composition; and Peet's Scripture lessons.

SIXTH CLASS—21 pupils; Miss Pollock, teacher.

Studies: Latham's First Lessons; exercises in arithmetic and composition; and Peet's Scripture lessons.

SEVENTH CLASS—21 pupils; Mr. Zorbaugh, teacher.

Studies: Same as Sixth Class.

EIGHTH CLASS—24 pupils; Mrs. Southwick, teacher.

Studies: Same as Sixth Class.

Fifty-two new pupils were admitted during the year, and the statistics concerning them are herewith added:

NATIVITY OF PUPILS.

Iowa.....	37	Norway.....	2
Indiana.....	2	New York.....	1
Tennessee.....	2	Ohio.....	1
Minnesota.....	1	Massachusetts.....	1
Nevada.....	1	Germany.....	1
Pennsylvania.....	1	Missouri.....	1
Kansas.....	1		

ALLEGED CAUSES OF DEAFNESS.

Congenital.....	10	Typhoid fever.....	3
Spinal fever.....	10	Gatherings in head.....	2
Cerebro-spinal menengitis.....	9	Spasms.....	1
Scarlet fever.....	8	Scrofula.....	1
Unknown.....	9	Fall on the head.....	1

The cerebro-spinal menengitis, spotted or spinal fever, was not known as a contagious or epidemic disease before 1840, yet since that time it has taken the place of scarlet fever, as the deadliest foe among children to the sense of hearing.

The health of pupils and employes has been remarkably good, and with the exception of some thirty cases of diptheria, a scourge which happily passed without fatal issue, a result consequent upon faithful nursing and attention by the matrons, the nurses, and the attending physician, Dr. A. B. McKune, no complaint, other than ordinary colds, has afflicted the inmates of the Institution. The term, however, did not pass without a fatality, coming in the accidental drowning, on June 7th, of little Willie Andrews, of Sabula, Jackson county, while bathing in Mosquito creek, a small stream near the Institution grounds. His was the first death among the pupils at the Institution since its

location at Council Bluffs in 1870, and the third since the school was founded; by a singular co-incidence two boys having met their death in a similar manner at Iowa City before removal.

That a certain percentage, estimated at from ten to thirty, of deaf mutes can be taught to articulate is an established fact, and during the coming term a teacher will be employed to fill the vacancy caused by the resignation of Mr. Gillespie. Our pupils who retain to any extent the art of speech are placed, as far as possible, with hearing and speaking teachers, and encouraged to use whatever voice they may have, in their various recitations. Those unacquainted with the subject have no idea of the obstacles in the way of the deaf-mute learner of articulate sound. With unused and unmanageable vocal organs, no knowledge of sounds or words, and no ear to guide the pronunciation, his task of acquiring speech is one of great difficulty, and results of any importance come only after long and persistent effort on the part of an active mind. It is a question in a majority of cases whether articulation can be of lasting benefit. It is a well-known fact that speaking persons who lose their hearing, even at an adult age, after having had full knowledge and possession of speech, gradually lose the power to articulate. If this is true of speaking persons, how can the mechanically acquired speech of the deaf endure?

The industrial department of the Institution has been productive of good, qualifying quite a number of boys in the trades of shoe-making and broom-making. A small outlay of money for tools and material, and a right use of the knowledge gained in the shops here, will establish any boy of spirit and ambition in a business for himself. Printing is a trade practiced in nearly every similar institution, and newspapers published, except in Iowa. Printing has an advantage over other industries, inasmuch as the pupil, while learning a trade, gets additional training in the use of language. The domestic classes—sewing, ironing, dish-washing, and sweeping—under the direction of the Matrons, assist materially in the household work. While the labor is not arduous, it gives the girls needed exercise, and at the same time a knowledge of domestic duties. Cooking, washing and scrubbing might be added to the course of domestic instruction to the decided future advantage of the recipient.

From records on file in the Institution, the number of uneducated deaf-mutes, between the ages of 6 and 20, is given by counties, in the following table:

Adams	1	Jackson	11
Allamakee	10	Jasper	3
Appanoose	7	Jefferson	1
Benton	5	Johnson	7
Black Hawk	4	Jones	2
Boone	1	Keokuk	2
Bremer	2	Lee	2
Buchanan	1	Linn	6
Butler	5	Louisa	2
Calhoun	1	Lucas	2
Carroll	1	Madison	1
Cass	3	Mahaska	1
Cedar	1	Marion	1
Cerro Gordo	2	Marshall	5
Chickasaw	1	Mitchell	4
Clarke	1	Monroe	2
Clayton	5	Muscatine	1
Clinton	5	Plymouth	2
Dallas	4	Polk	5
Davis	2	Pottawattamie	3
Decatur	1	Poweshiek	1
Delaware	2	Ringgold	4
Des Moines	4	Scott	12
Dickinson	1	Story	2
Dubuque	18	Tama	8
Fayette	8	Taylor	1
Floyd	1	Van Buren	2
Fremont	2	Wapello	1
Greene	1	Warren	2
Grundy	1	Washington	2
Guthrie	1	Wayne	4
Hardin	3	Webster	3
Harrison	4	Winnebago	3
Henry	1	Winneshiek	6
Howard	2	Woodbury	2
Humboldt	1	Worth	1
Iowa	1	Wright	1

This compilation shows in seventy-four counties a total number of 242 children, of whom the greater part should be in school. A compulsory law would bring out 400 pupils. The welfare of the mutes of the State would be promoted by a removal of the limits of age, and allow them to remain as long as their progress and conduct would warrant. The time, seven years allowed by the law of the State, is too short to accomplish a work of any great value, particularly in combining the two methods: mechanical speech and mental development through signs. Ohio gives ten years, New York twelve, and other states like periods, to deaf-mute pupils. The hearing and speaking child when just ready to go to school often has a greater command

of language than the deaf-mute when compelled to leave the Institution by the expiration of the allotted time.

The following table shows the average number of pupils present each term, and the cost of support, since the opening of the Institution :

YEARS.	PUPILS.	SUPPORT.
1855-6.....	40.....	\$ 8,991.67
1857	45.....	9,803.82
1858-9.....	50.....	16,014.21
1860-1.....	55.....	14,847.87
1862-3.....	58.....	16,794.73
1864-5.....	65.....	19,872.27
1866-7.....	75.....	24,587.30
1868-9.....	90.....	29,887.82
1870-1.....	95.....	42,914.13
1872-3.....	115.....	56,221.81
1874-5.....	130.....	65,572.39
1876-7.....	135.....	65,783.44
1878	99.....	28,101.64
1879	135.....	24,308.01
		\$ 52,409.65

It is doubtful if at any period one-half of the deaf-mute school population has enjoyed the benefits of the Institution. By reference to the table given elsewhere it will be seen that 242 children, of whom the large proportion should be at the Institution, are not availing themselves of the generosity of the State. The number present at the date of this report, November 1st, is 170, which leaves the record thus: of the school population present, two-fifths; absent, three-fifths. A like showing among the hearing and speaking youth of the State would place Iowa low among the states in the scale of illiteracy.

The Institution has been favored during the term by frequent gubernatorial visits, and pupils and employes express gratification at the interest taken by the chief executive of the State in the welfare of the school. The Institution was also favored by visits from Revs. T. H. Gallaudet and A. W. Mann, distinguished workers in the cause of deaf-mute religious education.

A convention of instructors was held at Columbus, Ohio, in August, 1878, at which this Institution was represented by Messrs. Kennedy and Zorbaugh, who reported the gathering to have been one of mutual interest to all present.

The list of pupils present during the term, with the required information, will be found in another place; also the detailed statement of receipts and expenditures, as required by law.

In an appendix will be found a cut of the manual alphabet, and several articles on the early home training and teaching of deaf-mute children; methods of instruction, and some facts concerning deafness.

The conduct of the pupils during the term has been excellent; their industry, in and out of school, praiseworthy, and their progress satisfactory. We acknowledge the services of a corps of teachers whose diligence and intelligence brought about these pleasing results.

ACKNOWLEDGMENTS.

The following papers have been sent to the Institution during the past term free of charge. The thanks of the institution are hereby tendered the publishers, and a continuance of their favors is solicited:

Adams County Union, J. C. Burch; Anamosa Eureka, E. Booth & Son; Albia Union, Val Mendel; Avoca Delta, J. C. Adams; Audubon County Sentinel, H. P. Albert; Atlantic Telegraph, Lafe Young; Buchanan County Bulletin, Wm. Toman; Burlington Gazette, Gazette Printing Co.; Cedar Rapids Times, Ayers & McClelland; Centerville Citizen, W. O. Crosby & Co.; Christian Cynosure, E. A. Cook & Co.; Clarksville Star, J. O. Stewart; Creston Democrat, Ed Russell; Clayton County Journal, Shannon & Co.; Council Bluffs Nonpareil, Nonpareil Printing Co.; Chariton Patriot, G. H. Ragsdale; Davenport Democrat, Richardson Bros.; Deaf Mute Advance, Frank Read; Deaf Mute Index, Colorado Institution; Deaf Mute Journal, H. C. Rider; Deaf Mute Mirror, Michigan Institution; Deaf Mute Record, Missouri Institution; Delmar Journal, F. R. Bennett; Dubuque Times, Woodruff & Perkins; De Witt Observer, S. H. Shoemaker; Educator, New York Institution; Gate City, Howell & Clark; Glenwood Opinion, Opinion Printing Co.; Goodson Gazette, Virginia Institution; Grinnell Herald, L. A. Cravath; Greene County Gazette, Neil Brown; Harrison County Courier, Alpheus Davison; Howard County Times, L. E. Smith; Indianola Herald, Graham & Knox; Iowa State Register, Clarkson Bros.; Iowa State Reporter, Parrott, Girton & Sherman; Iowa State Press, John P. Irish; Iowa State Leader, Leader Printing Co.; Jefferson Bee, Rhoads & Gray; Kentucky Deaf Mute, Kentucky Institution; Kansas Star, Kansas Institution; Laporte City Progress, Jesse Wasson; Lyons Mirror, Beers & Eaton; Marengo Republican, Spering & Crenshaw; Mute Journal of Nebraska, Nebraska Institution; Mutes' Companion, Minnesota Institution; Marysville Miner, C. T. McConnell;

Muscatine Journal, Mahin Brothers; Mutes' Chronicle, Ohio Institution; Ottumwa Courier, A. H. Hamilton; Pella Blade, S. S. King; The Tablet, West Virginia Institution; The Texas Ranger, Texas Institution; Villisca Review, Powers & Kennedy; Vinton Eagle, Rich & Murphy; Western Farm Journal, G. Sprague; Winterset Madisionian, Goodale & Miller; Wayne County Republican, Allen & Le Compte.

The following contributions have been made to the institution, for which thanks are tendered the donors:

Public documents from Hon. W. F. Sapp, Hon. W. B. Allison, Hon. J. Eaton, Jr., Hon. F. Watts, Gen. A. J. Meyer, and the Smithsonian Institute. Prof. Gustavus Hinrichs, of the State University, has favored us with his Iowa Weather Reports, for which he has our thanks.

Thanks are tendered the managers of the Chicago, Burlington and Quincy Railroad, the Chicago, Rock Island and Pacific Railroad, the Chicago and Northwestern Railway, the Sioux City and Pacific Railroad, and the Kansas City, St. Joseph and Council Bluffs Railroad, for their kindness in passing our pupils at reduced fares.

MOSES FOLSOM,

Supt. of the Iowa Institution for the Deaf and Dumb.

LIST OF PUPILS IN THE INSTITUTION DURING THE YEARS 1878 AND 1879.

MALES.

NAMES.	ADMISSION.	Age.	COUNTY.	NATIVITY.	CAUSE OF DEAFNESS.	SCHOOL YEAR.
Albert F. Adams	September, 1875	15	Dubuque	Iowa	Cerebro-spinal meningitis	Third.
Frank A. Aronson	April, 1873	11	Des Moines	Sweden	Fever	Sixth.
Elmer E. Ayers	September, 1875	13	Wapello	Iowa	Brain fever	Fourth.
Albert August	October, 1878	11	Jefferson	Iowa	Congenital	First.
William Andrews	October, 1878	9	Jackson	Iowa	Spinal fever	First.
Daniel Baron	October, 1876	10	Cass	England	Scarlet fever	Third.
John W. Barrett	September, 1874	13	O'Brien	Iowa	Sickness	Fifth.
John L. Bates	October, 1873	11	Marion	Iowa	Congenital	Sixth.
Julius Berg	September, 1871	14	Scott	Iowa	Scarlet fever	Seventh.
Charles Boone	October, 1876	10	Dallas	Iowa	Cold	Third.
Charles Brown	October, 1876	10	Wapello	Iowa	Congenital	Third.
Peter Burk	September, 1875	11	Black Hawk	Illinois	Unknown	Fourth.
Ole Bergeson	November, 1878	12	Dickinson	Iowa	Congenital	First.
Frank Beatty	October, 1878	18	Story	Indiana	Scrofula	First.
Leonard Benedict	October, 1878	11	Ida	Minnesota	Spasms	First.
George Cade	November, 1875	10	Union	Wisconsin	Cerebro-spinal meningitis	Fourth.
Ulysses G. Cope	September, 1873	10	Polk	Iowa	Fever	Fifth.
George L. Crosby	September, 1874	10	Black Hawk	Iowa	Paralysis	Fourth.
H. Clinton Crowl	November, 1870	9	Linn	Iowa	Spotted fever	Fourth.
Harry L. Culbertson	September, 1868	12	Scott	Pennsylvania	Measles	Eighth.
Wm. J. Clark	October, 1878	13	Benton	Iowa	Fall on head	First.
Chas. H. Covert	December, 1878	18	Jasper	Iowa	Cerebro-spinal meningitis	First.
Fremont Danks	October, 1876	14	Dallas	Iowa	Scarlet fever	Third.

* Age at admission.

LIST OF PUPILS—CONTINUED.

NAMES.	ADMISSION.	Age.*	COUNTY.	NATIVITY.	CAUSE OF DEAFNESS.	SCHOOL YEAR.
Wesley Dobson	September, 1872	10	Black Hawk	Iowa	Whooping cough	Seventh.
John Jacob Dold	September, 1874	9	Muscatine	Iowa	Bilious fever	Fifth.
William T. Douthart	September, 1869	12	Van Buren	Iowa	Grain in the ears	Eighth.
Rasmus Duea	October, 1878	11	Story	Iowa	Congenital	First.
Elmer Edgerton	September, 1873	13	Fremont	Iowa	Congenital	Sixth.
A. Jackson Evans	September, 1873	15	Wayne	Iowa	Congenital	Sixth.
Cyrus F. Farley	September, 1875	22	Wapello	Iowa	Congenital	Fourth.
William D. Farley	September, 1875	15	Wapello	Iowa	Congenital	Fourth.
Harvey L. Farmer	January, 1875	13	Decatur	Iowa	Measles	Fifth.
Judson S. Fleming	September, 1872	11	Linn	Iowa	Gathering in the ears	Sixth.
Joseph Fox	September, 1873	19	Johnson	Bohemia	Congenital	Sixth.
Franklin Gall	September, 1869	10	Cedar	Iowa	Fever	Sixth.
Jesse M. Gollaher	September, 1872	11	Appanoose	Iowa	Spotted fever	Sixth.
Charles Goodall	September, 1873	10	Crawford	Canada	Paralysis	Sixth.
Butler E. Goodrich	September, 1875	12	Clinton	Illinois	Scarlet fever	Fourth.
Franklin S. Greer	September, 1871	12	Wayne	Iowa	Gathering in the ears	Seventh.
Curney Garvey	February, 1879	14	Fayette	Iowa	Spinal fever	First.
Alfred A. George	December, 1878	17	Union	Iowa	Gathering in the ears	First.
Isom P. Haworth	September, 1875	10	Hardin	Iowa	Spotted fever	Third.
John Hays	October, 1872	11	Adams	Iowa	Congenital	Sixth.
Charles Hebig	October, 1876	9	Howard	New York	Spotted fever	Third.
Charles R. Hemstreet	October, 1874	10	Story	New York	Congenital	Fifth.
H. McP. Hofsteater	September, 1875	10	Washington	Iowa	Cold in the head	Fourth.
Henry Hocke	October, 1878	11	Greene	Iowa	Congenital	First.
Arthur Hummel	November, 1878	14	Clayton	Iowa	Sickness in infancy	First.
Jay G. Jackson	October, 1876	10	Greene	Iowa	Cerebro-spinal meningitis	Third.
James S. Johnston	September, 1874	10	Marshall	New York	Fever	Fifth.
Clarence P. Jones	March, 1879	10	Pottawattamie	Iowa	Spinal fever	First.
Simon F. Langbehn	September, 1875	12	Clinton	Germany	Scarlet fever	Third.
Charles A. Locke	September, 1875	10	Bremer	Canada	Congenital	Third.
Jasper Lotridge	October, 1878	16	Appanoose	Iowa	Spinal fever	First.
Matthew McCook	September, 1871	11	Howard	Iowa	Inflammation of the brain	Seventh.
Frank McCusker	November, 1870	14	Winneshiek	Illinois	Congenital	Seventh.
Herbert W. Merrill	September, 1873	10	Jones	Illinois	Scarlet fever	Fifth.
Perry Miles	September, 1869	10	Iowa	Iowa	Spotted fever	Eighth.
Martin A. Moore	September, 1875	19	Monroe	Iowa	Congenital	Fourth.
Burd McVay	October, 1878	12	Dubuque	Iowa	Scarlet fever	First.
John A. Meyer	October, 1878	11	Clayton	Iowa	Gatherings in the head	First.
Dwight A. Metz	October, 1878	12	Clayton	Nevada	Cerebro-spinal meningitis	First.
John W. Metz	November, 1878	10	Pottawattamie	Nevada	Scarlet fever	First.
Clarence K. McConnell	October, 1878	10	Jackson	Iowa	Cerebro-spinal meningitis	First.
John H. McCartney	November, 1878	9	Crawford	Pennsylvania	Unknown	First.
John O'Hene	October, 1878	10	Clinton	Iowa	Unknown	First.
Anton Elias Oleson	October, 1878	13	Worth	Iowa	Scarlet fever	First.
Patrick O'Brien						
Edwin J. Page	October, 1875	13	Fayette	Iowa	Congestive chills	Fourth.
Frank L. Perry	September, 1874	10	Mahaska	Iowa	Paralysis	Fifth.
John P. Phalen	September, 1875	12	Clayton	Iowa	Spinal meningitis	Fourth.
Edwin Pyle	October, 1878	10	Lee	Iowa	Unknown	First.
Charles Pattee	October, 1878	12	Cass	Indiana	Sickness when two years old	First.
Clayton Pringle	November, 1878	10	Fayette	Iowa	Cerebro-spinal meningitis	First.
George S. Petro	October, 1873	12	Pottawattamie	Illinois	Mumps	Second.
Jacob A. Reinier	November, 1868	15	Keokuk	Iowa	Congestion of the brain	Eighth.
David R. Rickabaugh	September, 1871	12	Mills	Ohio	Scarlet fever	Seventh.
Alfred J. Riser	September, 1875	10	Fayette	Switzerland	Congenital	Third.
Walter T. Ross	September, 1875	16	Clay, Dakota	Iowa	Sickness	Third.
David Ryan	October, 1878	11	Jasper	New York	Scarlet fever	First.
Joseph Rieger	October, 1878	10	Jones	Iowa	Spinal fever	First.
George Roush	October, 1878	23	Dallas	Ohio	Congenital	First.
John Schattle	September, 1871	10	Linn	Iowa	Scarlet fever and erysipelas	Seventh.
Zimrie Schilling	October, 1871	9	Lucas	Iowa	Scrofula	Seventh.
J. Frank Secor	October, 1873	14	Floyd	Iowa	Influenza	Sixth.
Walter M. Seelmeier	September, 1875	11	Jones	Illinois	Chronic diarrhea	Fourth.
Samuel H. Selman	October, 1876	12	Davis	Iowa	Pneumonia	Third.
John Staudacher	September, 1875	17	Delaware	Germany	Cramp	Fourth.

*Age at admission.

LIST OF PUPILS—CONTINUED.

NAMES.	ADMISSION.	Age.*	COUNTY.	NATIVITY.	CAUSE OF DEAFNESS.	SCHOOL YEAR.
J. Morris Sutton	September, 1875	17	Wayne	Ohio	Sickness and gatherings	Fifth.
O. Francis Sutton	September, 1873	15	Wayne	Iowa	Sickness and gatherings	Fifth.
Thomas Seay	October, 1878	12	Jasper	Iowa	Fever	First.
Alex. M. Saws	January, 1879	17	Lucas	Iowa	Typhoid fever	First.
Emil A. J. Schattle	September, 1868	10	Johnson	Canada	Brain fever	Eighth.
Daniel H. Taylor	September, 1874	13	Guthrie	Illinois	Fever	Fifth.
Daniel Tellier	September, 1874	9	Humboldt	Wisconsin	Typhoid fever	Fifth.
Albert W. Tetler	September, 1872	11	Scott	Texas	Typhoid fever	Sixth.
Zachariah B. Thompson	September, 1875	13	Story	Iowa	Congenital	Fourth.
Adelor Turgeon	October, 1876	13	Woodbury	Canada	Typhoid fever	Third.
Mons. O. Thompson	March, 1879	11	Allamakee	Iowa	Congenital	First.
Warren Walling	October, 1876	10	Mills	Utah	Gatherings in the ears	Third.
Elliott S. Waring	September, 1871	10	Polk	Iowa	Paralysis	Seventh.
Frisbie Weaver	September, 1873	10	Des Moines	Illinois	Congenital	Sixth.
D. Graham White	September, 1875	10	Dallas	Illinois	Inflammation of the brain	Third.
Gottlieb L. Willy	September, 1871	11	Scott	Iowa	Scarlet fever	Seventh.
Charles Wood	September, 1871	10	Mills	Iowa	Congenital	Seventh.
Newton E. Wymer	October, 1876	9	Muscatine	Iowa	Measles	Third.
Gibson A. Whitmer	December, 1878	9	Cedar	Iowa	Spinal fever	First.

FEMALES.

Lucinda Anderson	September, 1875	10	Marion	Iowa	Brain fever	Third.
May Armstrong	September, 1872	10	Madison	Iowa	Spotted fever	Seventh.
Ellen Baker	January, 1877	19	Muscatine	Ohio	Spinal fever	Second.
S. Bertha Banks	September, 1873	10	Lee	Iowa	Congestion of the brain	Sixth.
Mary E. Barker	September, 1873	15	Des Moines	Iowa	Scarlet fever	Sixth.

Emily M. Barnum	September, 1875	14	Fayette	Iowa	Spinal meningitis	Third.
Rachel Bergeson	October, 1876	13	Dickinson	Iowa	Congenital	Third.
Margaret D. Bray	February, 1875	10	Pottawattamie	Indiana	Cerebro-spinal meningitis	Fourth.
Choloe J. Brink	September, 1874	10	Cedar	Iowa	Congenital	Fifth.
Minnie Bowser	October, 1878	9	Wapello	Iowa	Spinal fever	First.
Rose Boden	November, 1878	10	Plymouth	Iowa	Cerebro-spinal meningitis	First.
Corra M. Burroughs	October, 1878	12	O'Brien	Iowa	Unknown	First.
Agnes M. Belanger	October, 1878	10	Harrison	Massachusetts	Scarlet fever	First.
S. Alice Chamberlain	September, 1872	10	Black Hawk	Iowa	Brain fever	Sixth.
Gertrude E. Chitty	October, 1875	14	Taylor	Illinois	Cold in the head	Third.
Jennie M. Chizum	September, 1874	10	Cass	Iowa	Spotted fever	Fifth.
S. Ella Clark	September, 1874	11	Madison	Iowa	Gatherings in the ears	Fifth.
Nannie Bell Clayton	December, 1870	10	Pottawattamie	Iowa	Measles	Eighth.
Ginnie Cusack	October, 1878	10	Allamakee	Iowa	Spinal meningitis	First.
Carrie Custer	October, 1878	12	Shelby	Kansas	Typhoid fever	First.
Ann Davies	September, 1873	11	Carroll	Wales	Congenital	Sixth.
Winnie E. Edgerton	September, 1875	10	Fremont	Iowa	Congenital	Fourth.
Phebe M. Ellsworth	September, 1875	13	Allamakee	Iowa	Unreported	Fourth.
Elizabeth Evans	September, 1874	15	Mills	Ohio	Typhoid fever	Fourth.
Miriane E. Emerson	December, 1878	10	Union	Iowa	Cerebro-spinal meningitis	First.
Caroline Foss	September, 1873	13	Winneshiek	Iowa	Congenital	Fifth.
Jennie Freeborn	September, 1869	12	Polk	Illinois	Spotted fever	Third.
Lizzie Fick	October, 1878	10	Jackson	Germany	Congenital	First.
Matilda A. Gallaway	September, 1874	11	Clinton	Iowa	Congenital	Fifth.
Mary Grubb	September, 1875	11	Polk	Iowa	Congenital	Fourth.
Maggie Gay	October, 1878	18	Scott	Missouri	Scarlet fever	First.
Mary Grady	December, 1878	11	Clayton	Iowa	Spinal fever	First.
Jennie Hemer	October, 1876	10	Black Hawk	Iowa	Congenital	Third.
Edith M. Hewitt	October, 1872	11	Butler	Iowa	Discharges from the ears	Fourth.
Annie E. Hocke	September, 1871	12	Greene	Iowa	Spotted fever	Seventh.
Nellie A. Hollingsworth	September, 1875	11	Appanoose	Iowa	Spotted fever	Fourth.
Celestia V. Harrison	October, 1878	10	Story	Iowa	Gatherings in the ears	First.
Grace Hanna	October, 1878	10	Linn	Iowa	Scarlet fever	First.
Dora Jurgens	January, 1871	13	Mills	Germany	Medical treatment	Seventh.
Annie E. Kenney	September, 1872	12	Clinton	Massachusetts	Congenital	Seventh.
Margaret Kenney	September, 1872	10	Clinton	Iowa	Congenital	Seventh.
Katie Kinkead	September, 1874	12	Lucas	Ohio	Cold in the head	Fifth.

* Age at admission.

LIST OF PUPILS—CONTINUED.

NAMES.	ADMISSION.	Age.*	COUNTY.	NATIVITY.	CAUSE OF DEAFNESS.	SCHOOL YEAR.
Elizabeth Kinhead.....	November, 1877	13	Lucas.....	Ohio.....	Lung fever.....	Second.
Sophia P. Klugh.....	October, 1876	12	Washington..	Indiana.....	Brain fever.....	Third.
Mary Ladue.....	September, 1875	12	Linn.....	Unreported...	Unreported.....	Fourth.
Nettie Lauder.....	September, 1873	10	Henry.....	Iowa.....	Congestion of the brain.....	Sixth.
Mary C. Lynch.....	September, 1872	12	Montgomery..	Indiana.....	Scarlet fever.....	Sixth.
Lillie Marble.....	September, 1873	10	Des Moines...	Iowa.....	Lung fever.....	Fifth.
Anna A. May.....	September, 1875	11	Wayne.....	Ohio.....	Congenital.....	Third.
Maria J. McNear.....	September, 1874	17	Woodbury.....	Iowa.....	Dirt put in the ears.....	Fifth.
Iva Middleton.....	October, 1876	11	Appanoose....	Iowa.....	Gatherings in the head.....	Third.
Rose G. Moore.....	September, 1872	13	Polk.....	Iowa.....	Scarlet fever.....	Sixth.
Adelaide S. Morrison.....	September, 1874	11	Floyd.....	Iowa.....	Typhus fever.....	Fifth.
Ina L. Murdock.....	October, 1876	10	Louisa.....	Iowa.....	Quinine.....	Third.
Margaret Murphy.....	September, 1874	22	Pottawattamie.	New York.....	Sores in ears.....	Fifth.
Anna K. Neiman.....	September, 1875	10	Cedar.....	Iowa.....	Whooping cough.....	Fourth.
Mary M. Parsons.....	September, 1872	9	Appanoose...	Iowa.....	Inflammation of the brain.....	Seventh.
Ida E. Powles.....	September, 1871	9	Henry.....	Illinois.....	Scarlet fever.....	Sixth.
Emily H. Proudfoot.....	September, 1872	11	Warren.....	Iowa.....	Spinal fever.....	Sixth.
Mary E. Roberts.....	October, 1871	12	Fremont.....	Illinois.....	Brain fever.....	Fourth.
Laura M. Rodman.....	September, 1874	10	Mills.....	Iowa.....	Brain fever.....	Fifth.
Fanny Roland.....	November, 1873	14	Des Moines...	Arkansas.....	Congenital.....	Sixth.
Edith Ross.....	September, 1875	9	Clay, Dakota..	Dakota.....	Unknown.....	Third.
Eva Ross.....	September, 1875	12	Clay, Dakota..	Dakota.....	Congenital.....	Third.
Maria Frances Rinehart.....	October, 1878	13	Boone.....	Iowa.....	Teething.....	First.
Charlotte M. Smith.....	November, 1870	10	Iowa.....	Iowa.....	Diphtheria.....	Eighth.
Adaline Snook.....	September, 1874	20	Pottawattamie.	Iowa.....	Scarlet fever.....	Fourth.
Emma O. Sovereign.....	October, 1872	11	Buchanan.....	Illinois.....	Scrofula.....	Seventh.
Mary M. Staley.....	September, 1869	12	Appanoose....	Iowa.....	Congenital.....	Seventh.
Eugenia L. Stickney.....	September, 1874	12	Mitchell.....	Iowa.....	Typhoid fever.....	Fifth.
Martha J. Surber.....	September, 1869	11	Keokuk.....	Iowa.....	Sarlet fever.....	Seventh.
Margaret Sadler.....	October, 1878	12	Jackson.....	Iowa.....	Cerebro-spinal meningitis.....	First.
Martha Sttoke.....	October, 1878	12	Winneshiek...	Norway.....	Congenital.....	First.
Eliza Sttoke.....	October, 1878	13	Winneshiek...	Norway.....	Congenital.....	First.
Margaret Sinclair.....	April, 1879	11	Monroe.....	Iowa.....	Spinal fever.....	Third.
Estella M. Trimble.....	October, 1876	11	Henry.....	Iowa.....	Typhoid pneumonia.....	Eighth.
Louisa Weber.....	November, 1870	14	Pottawattamie.	Wisconsin....	Sickness.....	Fifth.
Martha Woods.....	September, 1874	13	Iowa.....	Iowa.....	Scarlet fever.....	Seventh.
Laura Wright.....	September, 1872	10	Des Moines...	Iowa.....	Brain fever.....	First.
Ella B. Williams.....	October, 1878	10	Appanoose....	Iowa.....	Spinal fever.....	First.
Lizzie S. Welirman.....	October, 1878	11	Benton.....	Iowa.....	Scarlet fever.....	First.
Nancy E. Weaver.....	January, 1879	13	Page.....	Tennessee...	Congenital.....	First.
Ella D. Young.....	September, 1874	11	Wayne.....	Iowa.....	Scrofula.....	Fifth.

*Age at admission.

Total number in two years, 188; viz.: Males 106, Females 82.

RECEIPTS.

Cash on hand, October 1, 1877	\$ 4158 53
Cash from the State (regular appropriations and interest).....	52912 46
Cash from the State for furniture.....	2000 00
Cash from the State for clothing pupils	1146 72
Cash from the shop fund.....	904 01
Received from Dakota Territory, warrants and interest	381 00
Received from pupils, for clothing, shoes, etc.....	638 25
Received for board.....	442 71
Cash from sales from farm... ..	592 87
Cash for old metal and barrels.....	65 18
Cash for coal, gas and supplies	66 92
Cash for dry goods and sewing	31 09
Cash from shoe shop.....	125 55
Cash from sales in cabinet shop	33 83
Cash from broom shop	9 82
Cash for books and stationery.....	13 68
Cash for old wagon	20 00
Cash for paints, oils and brushes.....	16 00
Cash for sundries—pigeons, brick, etc.....	10 28
Total	\$ 63568 90
Less special appropriation for furniture, accounted for by Treasurer.....	2000 00
Total	\$ 61568 90

GROCERIES AND PROVISIONS.

Butchers' meat, 46,273 pounds	\$ 3480 70
Bread, crackers and breadstuffs.....	2387 27
Butter, 11,091 pounds	1734 93
Sugar, 12,907 pounds	1213 04
Syrup, 880½ gallons	456 63
Chickens and turkeys, 1,001½ pounds.....	99 55
Fish, fresh and salt (halibut, \$3.75).....	59 51
Flour, 6,084 pounds	194 45
Eggs, 939 dozen	77 22
Cheese, 969 pounds	112 24
Lard, 826 pounds.....	69 44
Prunes, 1,918 pounds	157 94
Currants, 327 pounds.....	20 43
Coffee, 2,454 pounds	563 32
Tea, 231½ pounds	125 10
Apples, 191 barrels.....	514 25
Salt, 9 barrels and 28 sacks	18 95
Vinegar, 343 gallons.....	73 29

Soap, 128 boxes	\$ 590 65
Potatoes, 227½ bushels.....	118 97
Apple butter, 796 pounds.....	72 96
Beans, 1,266 pounds	46 71
Dried fruits—peaches, apples and berries, 1,344½ pounds.....	115 39
Rice, 490 pounds	41 99
Cracked wheat and oat meal, 1,409 pounds.....	69 35
Chocolate, 4 pounds	1 90
Honey, 34½ pounds.....	6 62
Starch, 515 pounds	51 84
Hominy and corn meal, 960 pounds.....	12 10
Raisins and citron	16 90
Condiments, spices and flavors	73 40
Soda and baking powder and yeast cakes.....	48 60
Indigo, 10½ pounds	12 30
Dried corn, 151 pounds.....	12 18
Grapes, 1,758 pounds	72 94
Small fruits and berries, 58 bushels.....	136 55
Canned fruit, 9 cases.....	24 05
Oysters, 30 cans.....	9 80
Sal soda and concentrated lye.....	38 71
Vegetables.....	6 35
Pop corn.....	1 00
Toilet soap	3 10
Sassafras bark.....	1 55
Total	\$ 12944 17

FURNITURE.

Bedsteads, 102.....	\$ 260 52
Mattresses, 166.....	435 20
Woolen blankets, 105.....	441 25
Chairs, 314.....	257 70
Hotel range.....	150 00
Purchasing furniture.....	16 00
Feathers, 214 pounds.....	128 32
School desks, 85	295 25
Book cases.....	80 50
Curtain goods and fixtures	156 30
Gas fixtures.....	484 73
Mattress moss, 1,014 pounds.....	105 95
Ticking, 601 yards.....	93 96
Mattress twine.....	10 85
Wardrobes, material and labor.....	460 88
Making mattresses.....	40 00
Goods for quilts and sheets	671 64
Carpets, lining, oil cloth, binding and tacks.....	497 81

Chamber furniture.....	\$ 149 47
Tableware.....	152 91
Table linen.....	175 05
Table cutlery.....	35 95
Glassware.....	48 30
Crockery and stoneware.....	85 84
Woodenware.....	14 15
Willowware.....	12 60
Lamps, lanterns and fixtures.....	63 80
Tinware.....	93 55
Kitchenware.....	30 30
Tables.....	64 68
Crash, toweling and napkins.....	91 18
Marseilles quilts, 53.....	95 25
Mirrors.....	17 90
Stoves, repairs, pipes and fixtures.....	78 41
Scrub and dust brushes.....	17 55
Meat cutter.....	9 00
Wardrobe hooks, castors, and bed irons.....	23 95
Brooms, mops.....	19 50
Repairing, varnishing, and oiling furniture.....	44 11
Clocks (three).....	10 50
Well buckets and fixtures.....	3 80
Picture frame and nails.....	3 60
Knitting cotton.....	2 75
Wringers, machines, and fixtures for laundry.....	134 46
Tools and fixtures for gas house.....	7 20
Tools for pump house.....	1 35
Bath brick and whiting.....	2 20
Scissors.....	1 30
Thermometer.....	50
Total.....	\$ 6127 97
Less special appropriation 17th General Assembly, for disbursement of which see Treasurer's report.....	2000 00
Net amount paid from support fund.....	4127 97

DRY GOODS AND CLOTHING.

Boots and shoes, 58 pairs.....	\$ 113 70
Shoe laces, brushes, and blacking.....	8 45
Suits of clothes, 26.....	180 50
Coats, 34.....	116 10
Pantaloon, 43.....	86 10
Overalls, 2.....	1 00
Vests, 14.....	15 25

Shirts, 28.....	\$ 25 95
Trunks and satchels, 11.....	24 35
Hats, 72.....	23 77
Caps, 11.....	7 75
Underwear.....	7 65
Scarfs, 11.....	5 65
Combs.....	5 35
Suspenders, 11.....	2 57
Hose and socks, 74 pairs.....	15 40
Collars, 85 boxes.....	13 85
Handkerchiefs, 37.....	4 00
Braid.....	2 28
Knitting cotton.....	5 30
Thread.....	23 89
Needles and pins.....	7 66
Yarn.....	13 08
Buttons.....	6 61
Dress goods.....	33 69
Flannel, 58½ yards.....	10 18
Muslin, 150 yards.....	14 83
Thimbles.....	1 76
Jeans, 4 yards.....	1 00
Shawls, 2.....	2 50
Millinery, collars, cuffs, and gloves.....	14 49
Indelible ink.....	4 10
Total.....	\$ 798 74

FUEL AND LIGHTS.

Coal, 1,059½ tons.....	\$ 3647 47
Coal oil, 246 gallons.....	42 82
Coke, 2,850 bushels.....	379 38
Candles, 720 sets.....	106 10
Matches.....	10 85
Lime for gas house.....	15 60
Tools for gas house.....	4 40
Total.....	\$ 4206 62

SALARIES AND WAGES.

Salaries.....	\$ 13436 91
Wages.....	7863 96
Total.....	\$ 21300 87

SHOPS.

Leather and tools for shoe shop	\$ 436 55
Material and tools for cabinet shop	56 18
Machinn and material for broom shop	42 69
Total	\$ 535 42

FARM AND GARDEN.

Wagon and carriage repairs	\$ 47 85
New wagon	80 00
Horseshoeing	59 75
Implements and tools	62 61
Repairs to implements	18 25
Tools and fixtures for barn	11 75
Whips, cushions, and blankets	15 05
Harness and repairs	43 28
Hay, 37 tons	71 50
Corn and oats, 1,016 bushels	211 88
Bran and shorts	13 50
Bull, and freight	120 20
Grass seed, 25 bushels	48 30
Seed potatoes and corn	37 30
Garden seeds and sweet potato plants	65 98
Total	\$ 908 20

REPAIRS AND IMPROVEMENTS.

Cleaning and repairing reservoir and wells	\$ 26 00
Repairs on cottage	12 90
Glass and putty, and glazing	49 47
Tin and zinc for bread box	10 53
Repairs of steam pump and boiler	149 33
Lumber and fencing	127 10
Material and labor on laundry and bath rooms	539 28
Bath tubs and fixtures	213 50
Liquid slating	14 40
Retorts, and setting	366 52
Steam fixtures and plumbing	433 58
Sewing-machine repairs	2 00
Lubricating oil and tallow	40 80
Steam boiler, sinks, and fixtures for kitchen	81 15
Boxing coils and work on air-ducts	157 40
Painting and whitewashing	29 44
Repairs on chimney and roof	29 50
Work for laundry	23 00
Bricking and plastering frame building	241 50

Pumps and repairs	\$ 34 78
Hose and fittings	48 23
Repairs on sewers	114 00
Machinist tools	22 39
Nails, screws, locks, and builders' hardware	311 80
New well	50 00
Total	\$ 3138 00

MISCELLANEOUS.

Legislative Visiting Committee, hotel and livery	\$ 42 25
School books and supplies	376 88
Postage expenses	142 00
Printing and advertising	49 25
Books for library	153 45
Stationery	48 14
American Annals	95 00
Box rent	7 00
Coffin	13 00
Discount	328 12
Books and binding for office	24 50
Magazines, papers, and binding	20 75
Binding for library	2 50
Trustees' expenses	496 45
Rubber hose	84 56
Filling ice-house	105 00
Christmas candies	11 90
Pupils' traveling expenses	119 03
Fire-proof safe, and freight	167 80
Medicine and medical fixtures	154 06
Express and telegraph charges	5 85
Roll of honor (book)	7 00

RECAPITULATION.

Total receipts	\$ 61568 90
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TOTAL DISBURSEMENTS:

For groceries	\$ 12944 17
For furniture	6127 97
For dry goods and clothing	798 74
For fuel and lights	4206 62
For salaries and wages	21300 87
For material and tools for shops	535 42
For farm, garden, and stock	908 20

For repairs and improvements.....	\$ 3138 60
For miscellaneous items.....	2446 06
Total	\$ 50409 65
Balance	\$ 11159 25

CURRENT EXPENSE FUND.

In hand October 1, 1877.....	\$ 1791 68
Receipts during fiscal term.....	39410 37
Total	\$ 41202 05
Expenditures	31108 78
Balance October 1, 1879.....	\$ 10093 27

ORDINARY EXPENSE FUND.

In hand October 1, 1877.....	\$ 2366 85
Receipts during fiscal term.....	20000 00
Total	\$ 22366 85
Expenditures	21300 87
Balance October 1, 1879.....	\$ 1065 98

OFFICERS, EMPLOYES AND SALARIES.

Moses Folsom, Superintendent, yearly.....	\$800 00 and board.
J. A. Kennedy, teacher, nine months.....	650 00 and board.
C. S. Zorbaugh, teacher, nine months.....	675 00 and house rent.
Edwin Southwick, teacher, nine months.....	500 00 and board.
James Simpson, teacher, nine months.....	500 00 and board.
M. B. Southwick, teacher, nine months.....	300 00 and board.
Margaret Pollock, teacher, nine months.....	350 00 and board.
Sue Zorbaugh, teacher, nine months.....	375 00 and house rent.
F. C. Holloway, teacher, nine months.....	450 00 and board.
Helen White, teacher, nine months.....	180 00 and board.
F. C. Booth, teacher, nine months.....	450 00 and board.
S. E. Wright, matron, yearly.....	400 00 and board.
E. Willard, assistant matron, yearly.....	300 00 and board.
Peter West, boys' supervisor, monthly.....	30 00 and board.
A. Darnell, pumping engineer, monthly.....	25 00 and board.
A. Norin, watchman, monthly.....	25 00 and board.
J. Norin, heating engineer, monthly.....	40 00
Charles Hernzie, gas maker, monthly.....	30 00 and board.
W. B. Heath, shoemaker, foreman of shoe shop (mo'ly)	25 00 and board.
C. H. W. Brown, foreman of broom and carpenter shops, monthly.....	50 00
F. Gall, kitchen boy, monthly.....	10 00 and board.
R. C. Williams, barn man, monthly.....	25 00

M. S. Coe, seamstress, monthly.....	\$ 16 66 and board.
M. E. Parsons, nurse, monthly.....	16 66 and board.
Kate Harrington, pantry girl, monthly.....	15 00 and board.
Hattie Henderson, cook, monthly.....	20 00 and board.
Delia Hill, ironer, weekly.....	3 00 and board.
Hannah Devine, assistant cook, weekly.....	3 00 and board.
Nettie Olson, laundry, weekly.....	3 00 and board.
Christina Olson, laundry, weekly.....	3 00 and board.
Mary Starkey, laundry, weekly.....	3 00 and board.
Julia Hande, laundry, monthly.....	7 00 and board.
Emma Kirkendall, kitchen girl, weekly.....	2 00 and board.
Christina Christensen, hall girl, weekly.....	2 50 and board.
Nettie Lawson, hall girl, weekly.....	2 50 and board.
Anna Launing, hall girl, weekly.....	2 50 and board.
Lizzie Bathurst, dining-room girl, weekly.....	3 00 and board.
Matilda Anderson, dining-room girl, weekly.....	3 00 and board.

SALES FROM THE SHOPS.

Shoes, 71 pairs.....	\$ 200 25
Slippers, 12 pairs.....	19 25
Boots, 14 pairs.....	74 50
Halters, 2.....	1 50
Mending boots and shoes.....	486 15
Material from cabinet shop.....	33 83
Material from broom shop.....	9 82
Total.....	\$ 825 30

SALES FROM FARM.

Twenty-four calves.....	\$ 163 69
Live pork, 8040 pounds.....	261 70
Stock hogs and pigs.....	38 50
One bull.....	40 00
Two cows and heifers.....	74 00
Dead cow.....	2 00
Total.....	\$ 579 89

NOTICE TO APPLICANTS.

THE Iowa Institution for the Deaf and Dumb is open to all proper subjects between the ages of ten and twenty-five. Applicants must be free from immorality, and from contagious and offensive diseases. They must also be of sound mind.

Such persons are entitled to receive their board and instruction, at the expense of the Institution, for a period of seven years.

The annual sessions of the school commence on the third Wednesday of September, and close on the third Wednesday of June. *Pupils should come promptly at the beginning and remain until the end of the session.*

Pupils must be furnished, *by their friends*, with sufficient clothing, and not tax the institution in this respect; but legislative provision has been made to clothe those too poor to supply themselves, at the expense of their respective counties. Each pupil should have a trunk with a good lock and key, with at least the following articles:

MALES.—Three pairs of pantaloons; two white and two colored shirts; two thin and two thick coats; four pairs of stockings; two vests; one fine and one coarse comb; two towels; one pair of shoes or boots; and warm drawers and undershirts for winter.

FEMALES.—Four dresses, two of them suitable for winter; two pairs of shoes; four pairs of stockings; and other articles in proportion, with warm underclothing for cold weather.

Every article should be marked with the name of the owner, in indelible ink; and a list of the whole should be deposited in the trunk or sent with the pupil.

The older pupils will be instructed in such trades as are taught in the Institution. The time of the pupils is considered as belonging to the Institution, and no compensation is to be expected by them or their friends.

It is respectfully suggested that the pupils' shoes can be made here as well as the old ones mended. If the pupil comes with one good pair of shoes or boots it will be sufficient. The shoe-shop will be so

managed that it will be for the interest of parents and friends to patronize it.

Applications should be addressed to Moses Folsom, Institution for Deaf and Dumb, Council Bluffs, Iowa, and should contain answers to the following questions:

1. The full name of the applicant.
2. The year, month, and day of birth.
3. The place where the child was born.
4. The cause of deafness; if not born deaf, when and how the person became deaf.
5. Whether the deafness is total or partial; if the latter, the degree of hearing.
6. Whether any attempts have been made to remove the deafness, and with what results.
7. Whether there is any ability to articulate or read on the lips.
8. Whether any attempts have been made to communicate instruction.
9. Whether there was any relationship between the parents before marriage.
10. Whether there are any deaf and dumb relatives.
11. The names, occupation, and residence (post-office and county) of the parents.

SUGGESTIONS.

Letters or packages sent to the pupils should be sent in "care of D. & D. Inst." Pupils' friends are welcome to visit them at any time, and entertainment will be furnished to a reasonable extent. This offer, however, does not apply to the opening and closing weeks of school, nor to the weeks including the holidays.

REPORT OF THE TREASURER.

To HIS EXCELLENCY, JOHN H. GEAR, *Governor of Iowa:*

SIR—I herewith present an account of the receipts and disbursements of the Special appropriation made by the Seventeenth General Assembly (chapter 136.)

Rebuilding main building, amount appropriated, forty thousand dollars.

RECEIPTS AND DISBURSEMENTS.

The State of Iowa in account with John H. Stubenrauch, Treasurer—

CREDIT.

DATE.	ON WHAT ACCOUNT.	AMOUNT.
1878. Aug. 17	By warrants on State Treasurer.....	\$ 5000 00
1879. April 1	By warrants on State Treasurer.....	28000 00
Oct. 1	To balance due Treasurer.....	1322 92
	Total.....	\$ 34322 92

DEBIT.

DATE.	TO WHOM PAID, AND ON WHAT ACCOUNT.	AMOUNT.
1878. Oct. 12	Thos. Teale, foreman, pay-rolls and material.....	\$ 5950 00
Oct. 12	J. L. Taylor & Co., paints and oils.....	123 69
Oct. 12	Thos. Teale, foreman, sand.....	400 00
Oct. 12	Trustees, per diem and mileage.....	120 80
Oct. 13	Thos. Teale, pay-rolls and material.....	5325 00
Nov. 15	Trustees, per diem and mileage.....	79 80
1879. Jan. 15	Thos. Teale, foreman, pay-rolls and material.....	300 42
Jan. 15	E. R. Cassatt, president, discount on warrants.....	100 00
March 12	A. B. Ellis, carpenter.....	25 00
March 12	John L. Hambright, carpenter.....	25 00
April 3	A. B. Ellis, carpenter.....	41 34
April 3	John L. Hambright, carpenter.....	5 00
April 3	Chas. W. Williams, painting.....	27 95
April 3	Frank Veldema, laborer.....	13 50
April 3	J. H. Pierce, heating apparatus.....	1209 29
April 3	Miller & Co., hardware.....	362 21
April 3	Harle & McKune, paints and oils.....	45 30
April 3	Geo. Bebbington, lumber.....	1205 75
April 3	Council Bluffs Gas Co., material and fixtures.....	342 49
April 3	A. B. Ellis, carpenter.....	63 66
April 4	C. Straub, brick.....	23 10
April 4	Geo. Bebbington, lumber.....	2500 00
April 4	C. Straub, brick.....	478 10
April 4	Geo. Bebbington, lumber.....	1000 00
April 4	C. Straub, brick.....	574 35
April 4	I. L. Overton, lumber.....	351 32
April 4	I. L. Overton, lumber.....	1082 89
April 4	Groneweg & Schoentgen, nails.....	138 00
April 4	G. A. Hoagland, lime and cement.....	425 75
April 4	Geo. Bebbington, lumber.....	2500 00
April 4	John Epeneter, tin-roof.....	590 00

RECEIPTS AND DISBURSEMENTS—CONTINUED.

DATE.	TO WHOM PAID, AND ON WHAT ACCOUNT.	AMOUNT.
1879.		
April 4	Haxton Steam Heater Co., heating apparatus.....	\$ 2500 00
April 4	John Epeneter, tin roof.....	300 00
April 4	Trustees, May, June, July, September, 1878.....	458 75
April 4	Council Bluffs Gas Co., gas fittings.....	291 60
April 4	I. L. Overton, lumber.....	321 45
April 4	Geo. Bebbington, lumber.....	500 00
April 4	Geo. Bebbington, lumber.....	500 00
April 4	John Epeneter, tin roof.....	342 28
April 4	Thos. Teale, foreman, pay-roll and superintendence.....	500 00
April 4	Harle & McKune, paints and glass.....	186 26
April 4	S. A. Robertson, sewer pipes.....	69 00
April 4	Groneweg & Schoentgen, nails.....	60 70
April 4	Geo. A. Hoagland, lime and hair and cement.....	200 50
April 4	Thos. Teale, labor and superintendence.....	465 00
April 4	Trustees, per diem and mileage, August, 1878.....	87 50
May 7	John Jackson, rail fixtures.....	11 50
May 8	John L. Hambricht, carpenter.....	40 00
May 8	A. B. Ellis, carpenter.....	53 00
June 13	John L. Hambricht, carpenter.....	30 00
June 13	A. B. Ellis, carpenter.....	40 00
June 27	John L. Hambricht, carpenter.....	55 00
June 27	C. M. J. Reynolds, carpenter.....	55 00
June 27	Geo. Bebbington, lumber.....	200 00
August 16	John L. Hambricht, foreman—carpenter.....	109 40
August 16	J. B. Rue, plastering.....	33 75
August 16	Harry Frost, carpenter.....	22 00
August 16	James Simpson, painting.....	77 00
August 16	Chas. Williams, painting.....	117 50
August 16	T. O. Hill, painting.....	77 00
August 16	S. P. Hannan, painting.....	60 00
August 16	C. S. Torbaugh, painting.....	73 00
August 16	C. H. W. Brown, carpenter.....	59 25
August 16	Geo. Bebbington, lumber.....	13 50
August 16	Miller & Co., hardware.....	2 35
August 16	W. W. Wallace, charcoal.....	1 75
August 16	James Nolan, lumber.....	10 50
August 16	Miller & Co., hardware.....	35 66
August 16	Harle & McKune, paints and oils.....	138 12
August 16	Council Bluffs Gas Co., trap.....	5 25
August 16	A. L. Strang, valves.....	8 75
August 16	John Epeneter, tin roof on belfry.....	46 05
August 16	Geo. Bebbington, lumber.....	105 03
August 16	John Jackson, irons for railings.....	5 75
August 16	John Kelley, sand.....	2 66
August 16	C. M. J. Reynolds, carpenter.....	13 75
August 16	C. Straub, brick.....	4 50
Sept. 16	J. L. Hambricht, carpenter.....	50 00
Sept. 16	Chas. W. Williams, painting.....	45 00
Sept. 16	J. F. Sneethen, labor.....	9 00
Sept. 16	A. J. James, labor.....	9 00
Sept. 16	L. C. James, labor.....	11 62
Sept. 16	Harle & McKune, paints and oils.....	52 63
Sept. 16	John Hammer, lime and sand.....	2 00
Sept. 16	John L. Hambricht, carpenter.....	22 50
Sept. 16	Chas. W. Williams, painting.....	22 50

RECEIPTS AND DISBURSEMENTS—CONTINUED.

DATE.	TO WHOM PAID AND ON WHAT ACCOUNT.	AMOUNT.
1879.		
Sept. 16	J. B. Rue, mason.....	\$ 15 00
Sept. 16	Trustees, per diem and mileage.....	93 30
Sept. 16	W. Floyd, painter.....	31 50
Sept. 16	R. N. Fox, labor on fire-escape.....	28 00
Sept. 16	S. D. & S. J. Hopkins, material for fire-escape.....	15 36
Sept. 16	Jas. Varian, labor.....	8 09
Sept. 16	J. H. Stubenrauch, Apr. 2, Int. paid 1st Ntl. B., C. Bluffs.....	62 50
Sept. 16	J. H. Stubenrauch, April 1, Int. paid S. A. Merrill, Prest.....	45 15
Sept. 16	Thos. Teale, foreman, balance on pay rolls.....	80 00
	Total.....	\$ 34322 92
Oct. 1	To balance due Treasurer.....	\$ 1322 92

FURNITURE FUND.

Amount appropriated, two thousand dollars.

DATE.	TO WHOM PAID, AND ON WHAT ACCOUNT.	DEBIT.	CREDIT.
1878.			
Sept. 9	By warrant on State Treasurer.....		\$ 2000 00
Oct. 12	To Fred Teale, furniture purchased.....	\$ 846 75	
Oct. 12	To M. Folsom, freights paid.....	100 00	
Oct. 12	To Citizen' Nat. B'k, discount on warrant..	40 00	
1879.			
March 12	To W. L. Whitney, Jr., glassware.....	15 18	
April 4	To Jno. L. Hambricht, carpenter.....	74 00	
May 6	To Smith & Crittenden, dry goods for bed'ng	126 48	
May 6	To Bryant & Dowling, carpet.....	31 05	
June 13	To Sterling School Furniture Co., desks....	259 41	
June 13	To M. Folsom, freight.....	35 84	
August 16	To W. H. Goff, fencing.....	6 50	
Sept. 30	To S. S. Kellar, furniture.....	354 80	
	Balance on hand.....	109 99	
	Total.....	\$ 2000 00	\$ 2000 00
Oct. 1	By cash in hands of Treasurer.....		109 99

JOHN H. STUBENRAUCH,

Treasurer.

APPENDIX.

APPENDIX.

THE EARLY HOME TRAINING OF DEAF-MUTE CHILDREN.*

IN view of the annoyances and the injustice to which the deaf-mute child is exposed, and against which the most faithful guardianship and caution cannot always protect him, he should early be taught to be patient and unassuming, and accustomed "rather to suffer wrong than to do it." "Even in the deaf-mute child lies the capacity to form an idea of God, the Lord of heaven. It needs only promptings from without to awaken this idea. The religious emotion is first enkindled by the religious sentiments of the parents. Out of consideration for this deaf-mute child they should give their religious feelings visible expression. If he sees that his father or mother never sit down to eat without first folding their hands and raising their eyes heavenward; if he sees that evening and morning they look reverently up to heaven, and in all circumstances exhibit a sacred awe of One above, who is invisible; that they pray to Him, give thanks to Him, fear and love and trust Him, he will ask to take a part in all this himself, and so will be awakened in him involuntarily a holy awe of Him who sees us although we see Him not; who sends thunder and lightning, storm and rain; who regards the good graciously, but the bad, with disapproval; who threatens and will punish these, but receives those to Himself at their death." But all this, and in general the whole matter of the education of the deaf-mute child, must be pursued earnestly, and in the love of Him who said "Suffer little children to come unto Me." In reference to this Yayer says: "Only treat the deaf-mute child affectionately, and you will find that with him, too, love begets love. This should especially be the case in the home circle. Kind treatment on the part of his friends is the necessary condition of his instruction in morality and religion. Gratitude to his parents and other benefactors, and love for his brothers and sisters and youthful companions, must, with the deaf-mute child as with others, prepare the way for gratitude to God and charity to all."

How such love may affect the deaf-mute and be shown toward him, has been already pointed out in various ways. This may be mentioned in addition: It is undeniable that the deaf-mute child, in consequence of his infirmity, loses much which might contribute to his enjoyment of life; but if

* Translated for the American Annals from the Report of the Royal Wurtemberg Institution for the Deaf and Dumb.

love seeks to compensate him for this it can find a way. Where the deaf-mute child is not repulsed, but rather admitted to intimacy, there indeed his heart swells with delight. Therefore, he should not be allowed to feel his condition when it can be avoided; he should never have reason to suppose that his brothers and sisters are preferred before him; and both in his own family and in the place where he lives, he should receive, as far as possible, kind, forbearing treatment.

He should, also, often be unexpectedly delighted by little gifts, such as toys not easily broken, a picture book, or a slate; but with the playthings should always be furnished, if it is at all possible, a playfellow. Especially should hearing children be persuaded to admit the deaf-mute child to their play, and help him on all occasions to be pleasant to others. The deaf-mute child should be taken out to walk, and by leading him to see and observe nature his mind should be opened to notice the fulness of motion and beauty in it—a rich source of instruction and pleasure. He should be taken to every place where something useful is to be seen, from the country to the city, to the weekly and yearly fairs, to the different trades and other employments, to the shops and booths, to church, etc.

Although what has been said refers principally to the duties of the parents and the home training, yet it must not be thought that the co-operation of others is to be excluded. Since, especially in modern times, schools for little children are to be found everywhere, even in the country and in villages, the opportunity to send the deaf-mute child to them should not be neglected, especially by those parents whose business takes them from home the greater part of the day. But of especial importance is the relation into which the parents of deaf-mute children should enter with their pastors and teachers. From the moment when a doubt occurs to them with regard to the hearing or the power of speech of their child, careful and conscientious parents will turn where, especially in the country, they are accustomed to turn in all important matters.

One of the most important, certainly, is this which is here treated of, and they should confer with the pastor and teacher, who are generally the only ones who possess an understanding of the case. Parents who love their children will not hesitate to tell the minister and teacher of what agitates their hearts, to obtain competent advice from them and to act upon it. All the observations of the child, all the experiments and efforts with him which have been spoken of, should, we think, take place under their advice and control. They will readily answer the questions of the parents, and assist them in their often difficult duty. It will not be enough, where such a child is concerned, that the teacher should receive information of him, or be consulted once about him. He should himself, the oftener the better, look up the child at home, ascertain the proper treatment of the case both physically and intellectually, give the parents the advice they require, and, if necessary, speak to them conscientiously of the sad consequences of neglecting their child or treating him carelessly, and confer on the subject with the local school authorities. When the child comes to the usual school age he has a

still greater claim to the attention of the teacher and pastor, and they should share this duty with the parents. All deaf-mute children, where health will permit it, should attend school. Here pastor and teacher come under very important obligations; it is their duty, above all, to see that this is done, and that it is not done in vain. If they have already exerted an influence upon the educational training of the deaf-mute child at home, the work of the school will not be too difficult or without results.

The duty of the teacher to the deaf-mute in the common schools falls outside the limits of this paper, which ends where the school age begins. The following hints, however, are given. At first the teacher should only attempt to teach mechanical writing, drawing, and such other simple exercises as will naturally occur to his mind. So far as time and circumstances permit the teacher should use the sign-language as it has been employed at home, and should bring to the child's notice objects near and remote; for which purpose pictures instead of objects may be used. In the next place, signs should be so joined to written language that the written word may be translated by signs, and inversely the sign be given and he gradually be put into possession of a stock of words and ideas of written language. Then the idea of numbers will be necessary. Figures may be put together, which, progressing from the figures of the hand, may be extended by various means, such as little sticks, beans, buttons, etc., and especially by the Russian calculating machine.

Since, however, the technical peculiarity, what might be called the highest aim of deaf-mute instruction, depends upon the communication of spoken language, many teachers will wish to solve this problem for the children sent to them. Here, however, it must be taken into consideration that for this thorough preparation and tested skill are necessary, without which no important result can be reached, but much harm may be done, and latter instruction in an institution may be made more difficult. Teachers of deaf-mutes are generally agreed that the co-operation of the common schools in their education should not overstep the bounds of an effective preparation for the entrance into special schools for deaf-mute instruction; and this preparation, with rare exceptions, should not include instruction in articulation. On the contrary, it is now the duty of the ministers and teachers to show the children to whom they have devoted themselves with self-sacrificing toil, the greater favor of obtaining their admittance at the proper time into a deaf-mute institution. Good and sensible parents will consider it a sacred duty to use the surest means for the accomplishment of the work they have undertaken; they will readily lend a helping hand to commit their child to the care of an institution when it comes to the proper age. Where it is possible this should not be later than eight or nine years of age.

If, however, any parents should be deterred by prejudices and difficulties, then all the local authorities should co-operate to overcome them. It is said that very often the poverty of the parents and the community hinders their providing for the deaf-mute children. But in our country so much is done by the State to assist cases of poverty, that if the case is only taken in hand

earnestly, if the right means are only used, no insuperable difficulties will be found. If, on the other hand, wealthy parents are prevented, by avarice and selfishness, from doing anything for their child, it will not be difficult to show them the falsity of their ideas and the responsibility with which they charge their conscience before God and man. If some would excuse themselves by saying that they must provide for their other children, we would answer that the deaf-mute child causes expense even at home, and that his brothers and sisters will owe them little thanks if later in life his incapacity to care for himself proves burdensome to them.

So, also, the community makes a great mistake when, from motives of economy, it refuses to educate a poor deaf-mute child, who when grown, is all the greater burden upon its hands. If he had been educated in school and in some trade he could support himself.

A silly love and weakness on the part of the parents will often lead them to refuse to give the child into strange hands. But is it not possible to convince them that such love, so far as it withholds the best gifts from the child, is only egotistical and false? It is also a false shame that induces many parents to try to hide the fact that they have such a child in their family. Will it not afterward be a real disgrace and shame to them, when it can no longer be concealed, that they, through their own fault, have allowed a grown-up relative to remain among them in the condition of a brute? Many neglect it, also, from indifference and a want of education in themselves. If, then, remonstrance and admonition are of no avail, if they are not terrified by the thought of seeing their children deprived of the benefits of school and church, of the Word and sacraments, of confirmation and the Holy Communion, the means are yet at command by severity and rigor, viz: by a firm carrying out of the existing laws of morals and school police, to make an effectual impression upon parents who have no conscience.

When, after all, the relatives do not cease to expect the opening of the ears and the gaining of speech by the help of nature or the physician, and so run the risk of losing the only real, practical help, then the physician should certainly not be called upon in vain to put an end to such a delusion, and to induce them to attempt the improvement of their child in school and a deaf-mute institution. In all cases of resistance and delay the best effect will be produced if the parent can be made to see what the deaf and dumb are capable of doing when educated, by inducing them to visit deaf-mute institutions. It is true, after all, that human stubbornness and obstinacy are conquered by force. But it seems to us that if the means at command are only rightly and properly used, in by far the most cases such children may be saved.

A deaf-mute cannot be expected to gain the mastery of a language so complicated as ours by the efforts of the teacher alone. The teacher may, indeed, give him a knowledge of any branch of study, which, like mathematics, proceeds by rule and method; but, let him work ever so assiduously, he never can implant in the undeveloped intellect of a deaf mute that fine perception, that delicate sense of propriety, which would enable him always

to put a noun, a verb, and their modifiers, in the right place. Neither is it possible for the instructor to explain the subtle differences of meaning between one and the same word used in different connections. These various shades of meaning, as well as the numberless synonyms which our mother-tongue has inherited from several languages, are to be understood only after a long continued course of reading. To a deaf-mute there is no difference between a wood house and a wooden house; both mean the same to him. He is apt to take words too literally; as, for instance, when we say this lecture drew a full house, or that politician is running for Congress, he will believe that the lecture actually drew the house along in some way or other, and that the politician is footing it to the national capitol. Such is his ignorance of the meaning which a word assumes in different positions that he will invert the meaning of compound words without being aware of the difference in the two expressions. "Prize-fight" is a case in point, for I have seen it spelled "fight-prize."

For the same reason a joke is lost upon him, he being unable to see the flash of wit in a combination of words having a double meaning. It seems to me, the only way to remedy these deficiencies is that of constant and careful reading; for, by meeting a word again and again in different positions, he will gain a clearer idea of its meaning. There are not a few deaf-mutes to-day who have educated themselves in this way, without ever having used a dictionary. It is a wonder that teachers, knowing as they must the importance of reading as an aid in the education of the deaf and dumb, have not taken a more active interest in providing reading for their pupils outside of the narrow precincts of the school-room; for many are content to do their daily routine of duties, and when these duties are ended for the time being, they are too easily satisfied with having done their part; forgetting that the English language can never be taught, but must be learned.

The deaf-mute expresses himself oftener in signs than in words; and, as a consequence, he is liable to lose whatever command of language he has. The teacher cannot re-stock the mind of the pupil with words, phrases and idioms; that he must leave to constant practice in reading.

More care should be taken in the selection of books for the library than is generally done in institutions for the deaf and dumb; the quality and merit of the books themselves being now commonly considered rather than the tastes or wishes of the pupils.

I should think such works as those of Trowbridge, Aldrich, and Jacob Abbott, would do more toward creating a thirst for knowledge than those of Scott, Dickens, Irving, Thackeray, and George Eliot, delightful as these are to older people.

"Reading maketh a full man," says Bacon, and deaf-mutes need to read much to be full men.

HOME EDUCATION FOR THE DEAF AND DUMB.*

Education, to be complete, must begin and end at home. The foundation must be laid in the plastic mold of infancy; in thoughts, principles and habits, with which the child opens upon life; and over the structure built up by many hands, must be thrown, for its final completeness, the grace and refining influences of home. Man is so constituted that the influences of home are stronger than all others, and his destiny, so far as it is not directly controlled by himself and by his Creator, is marked out by his home. In that implicit faith which, in the arrangement of Providence, the child places in its parent, is a wonderful power to shape and determine its character. Here, unnoticed by most, is the silent bedding and nurture of those habits of morality, habits of intellect, and habits of conduct, which germinate, grow and bear fruit in the future development of life. Education is not simply the teaching of the schools; it is the silent teaching of example in the intimate and trusting communion of life; it is a word spoken in season; it is hope for the discouraged, and aid to the weak; and over all and above all, it is the powerful stimulus of love and virtue, working in their outward manifestation the development of the spirit of man. As the plant whose shoots just spring out of the ground may be made, by care, to assume a shape of symmetry and grace into which it will grow, so, under the same general law, the character will be shaped and established in the circumstances which affect it. And also, as the gnarled and unthrifty stock indicates that its early life was bruised and trodden down by neglect, so does a dishonored life testify against the home in which it was reared.

We have entitled our subject, *Home Education for the Deaf and Dumb*. Our design will be to show in what manner parents may commence the intellectual training of their children, before they are of suitable age to be sent to any of the institutions for the deaf and dumb now in existence; to offer some hints and suggestions in respect to the best means of unfolding and cultivating their moral character, and to make such remarks as may occur, in respect to the proper method of guarding against practices growing into habits, which are overlooked in them in consequence of their peculiar infirmity. Much that we shall have to say would be needless, were cases of deafness so common that a stock of experience might be cherished up and communicated from family to family; but so rare are the cases, that the practical knowledge and skill acquired in the education or rearing of a deaf-mute dies out in the family and neighborhood before a like case occurs to revive and establish the new ideas they had acquired. We believe that parents of deaf and dumb children are able to do much more for them than the most sanguine imagine, and with an effort, too, so small, that few who have the good of their children at all at heart will be unwilling to undertake it.

The first and obvious want of every deaf and dumb person is a vehicle of

* By J. A. Ayers, in the American Annals of the Deaf and Dumb.

communication. Knowledge is not innate in the mind. Thought does not grow and ripen there as the fruit on the tree, vegetating and coming to maturity by material law. Knowledge must be communicated; thought must be mingled with thought, that it may be in any way better than dreams; the mind must be stimulated by curiosity with the hope of some intelligent and rational satisfaction of its inquiry. The parent, then, who would in any way and to any desirable extent, profit his child and raise him above a simple animal existence, must seek for him a language, and such a language as he cannot devise for himself. The natural language of signs, uncultivated and intuitive, is but a single advance from the irrational call of brute life. It is true, even this small ability of communication is valuable, if no greater can be secured; but every parent, with the smallest share of leisure to devote to his children—and no parent has a right to be without this—can command a better language. Any person of ordinary intelligence and skill can learn the finger alphabet of the deaf and dumb, by devoting to it one or two hours' study. When once acquired, it is in itself a perfect language. With it he can converse upon all subjects upon which men can speak. He can use it in the house and by the way, in his work and at leisure. It is, in brief, only talking by spelling words instead of pronouncing them, and is as rapid a method, to say the least, as oral spelling. This, it is true, is not equal to speech, but it is a great advance upon no language, or upon the rude, ill-defined and indefinite language of natural signs. Let the parent, then, who would educate his deaf and dumb child, and throw about its opening infancy the intelligent instruction, the fond endearments and the sacred influences of home, devote a short time to the acquisition of a language which will cheer and comfort its solitary hours. Let the household all learn it, and then the young immortal, started so roughly along his journey, will find himself no longer alone in the midst of company, but mingling with it, in the enjoyment and social intercourse of life.

But no one will suppose, because a parent, by the labor of a few hours, has acquired a language addressed to the eye, that therefore he is ready to enter at once into pleasant and easy intercourse with one whose life up to this time has been an intellectual waste. No child is born to the use of language any more than it is born to a familiar acquaintance with the systems of philosophy. The acquisition of language is to every child a slow, difficult and labored undertaking. The beginnings are always small, and patience has to wait long before it is permitted to see any considerable fruit. But the parent, with this language, is prepared to teach it to his child, and to make it a medium for the communication of thought, just as he would teach and use it by speech to his more favored offspring. The progress will be slower and the results farther off, yet they will be none the less sure. Nor does it matter that the parent may be at first slow and unskillful in the use of this new language. His ability to use it will, at all events, be in advance of that of the child whom he instructs, and practice will soon make that which seems at first awkward and difficult, to become both graceful and easy. Like the

exercise of any other mechanical skill, practice will perfect in execution what knowledge devises.

But we know that to many persons, well informed upon other matters, the whole subject of the instruction of the deaf and dumb is a mystery, and above all, the commencement, the earliest efforts to enlighten the mind so strangely enclouded, is a work of peculiar perplexity and confusion. We remember the time when our own condition was much the same, and when our faith, unenlightened by information or experience, was slow to confide in the accuracy, rapidity or value of a language which was not speech. We will endeavor to give in detail and with a plainness that all can apprehend, the course necessary to be pursued by a parent who would thus bring his deaf and dumb child into the communion of his home and enable him to possess, so far as possible, all its advantages and enjoyments.

All parents understand the language of natural signs. No one ever misapprehends the nod of encouragement or affirmation, the approving smile, or the stern frown of disapprobation and rebuke. They are the evident manifestations of the spirit in the outward man which all are born to appreciate. This language of signs—and we shall not be understood to speak here of the systematized language of signs used in our asylums for the deaf and dumb, or as they are called by the French, signs of reduction—is the foundation of all language. It is just as necessary to the child who hears, as to the child who is deaf. It is the first vehicle of thought, the first means of intellectual or soul communion. Imperfect and feeble as it is, it is yet perfect in itself. But its range is limited, its capacity small, and its use but for a brief period. Upon this stock is engrafted, in the case of the child who can hear, language or speech. He grows into it by use. Signs which he understands are accompanied by language which they explain, and in a short time he is able to pass from his feeble and narrow modes of expression, to the more full and convenient forms of speech. Yet the first lessons in language, provided by nature, are the same for the deaf and dumb child, and the child who enjoys the faculty of hearing. Each understands and appreciates signs and expression; they rejoice in the smile, and fear the frown, alike. Only in one thing, up to the commencement of speech, does the deaf and dumb child feel its disadvantage. In emphasis and intonation of the voice, it loses a part of that instruction which is peculiar to infancy. Yet these are but duplicates of the expression of the countenance, and care and attention on the part of the parent are able almost wholly to counterbalance the loss. But when we come to that period when language properly begins to be used, the deaf and dumb child falls at once far and sadly behind his companion. The language of infancy is not the language of childhood or manhood. Consequently he stands still while the other passes onward into a new world. It is at this point that the deaf and dumb child is commonly left, until he is of age to be sent to an institution for systematic instruction. It is here that we propose to take him up and show parents and all interested how, with a little care, they may unfold to him the mystery of speech at home, slowly it

is true, and by feeble steps at first, yet with results as sure and as regular as those seen in other children.

The first step which the parent should take toward commencing the education of his deaf and dumb child, is, to make himself acquainted with the manual alphabet, by which words are spelled upon the hand. It is, in brief, words addressed to the eye instead of the ear. He can become acquainted with this alphabet either by studying the printed sheet which shows the form and position of the hand for the several letters, or by personal instruction from some one acquainted with its use. The latter method, if convenient, is to be preferred, inasmuch as one learning the alphabet merely from a printed impression, is apt to form a part of the letters in a stiff and awkward manner. Having taken this, his first and only necessary lesson, he teaches it to his child. He shows it how to form on its little hand the first letter of the alphabet; he does not speak it, he does not write it, but he simply teaches the child to place its hand in the proper position and it represents, and is to his mind, the letter *a*, with an idea just as clear, just as intelligent and just as well defined, as though he had heard it spoken or seen it written down. In like manner he proceeds through the alphabet, showing the child the position of the hand for the letters, and by repetition enabling him to remember them. When the child has committed them to memory, he has taken his first step in absolute knowledge. He has learned something which signifies nothing in itself and yet is to be the interpreter of all knowledge. He has commenced with a new language and is prepared to begin its use. And although he may not commence as early as though he possessed his perfect faculties, inasmuch as the way in which he is to walk is more rugged and arduous, yet he is not long delayed. As early as a hearing child is ready to undertake any course of systematic instruction, the deaf and dumb child is prepared to begin his task, not in the way of formal lessons, but just as his little companions have already learned to speak. The mother, with her child upon her knee, teaches it to lisp after her its first words of speech, not by systematic instruction, but by a moment at a time, and by every little means she can devise to awaken its curiosity and stimulate its effort. In precisely the same manner may the deaf and dumb child be taught. The mother, holding up before its sight a cup, spells the three letters which form the word and the little fingers follow slowly and uncertainly in their first effort. But now it has mastered the achievement, and as it runs about in its play, it stops to spell over on its fingers the mysterious word or runs back to its mother for the smile of approbation at the display of its accomplishment. Every word learned is a lever to work upon the future. Like the processes of geometrical progression, knowledge multiplies itself. In a very brief space indeed, and at an early age, the child properly cared for and instructed begins to seek knowledge of itself, and its little vocabulary, swelling by degrees, will soon embrace the names of all familiar objects in its vicinity. It commences talking in words only, at first, as all other children do. At the age of three years and even younger, the child may begin thus its study of language. We have seen such instances and witnessed,

with no little curiosity and pleasure, the same interest and desire to repeat to itself and exhibit to others its little stock of knowledge, which we witness in children in their first efforts at speech, and in their thousand repetitions of words and sentences, unimportant in themselves, to which their minds continually recur and about which they linger, as it were by an instinctive effort of memory.

In the natural order of things, the deaf and dumb child learns the names of things and persons first, and many who see their way clear to this point, will be apt to falter here and think that this surely is the extent of his progress at home. On the contrary, he is but at the threshold and more ready and able to advance than he was to commence. Supposing a mother to repeat to her deaf and dumb child, *shut the door*, if he knows the word *door*, he will guess the rest, and having guessed right, he will know it in future. If she says to him, when detected in some wrong-doing, *you are naughty*, he will understand it by intuition. Children never learn language by beginning with that which is difficult first. The progress is ever from that which is easy to that which is arduous, and in this way the deaf and dumb child may proceed from simple words to the understanding of all common language, as steadily and as surely as the child who hears. The two processes are perfectly, and step by step, analogous. But the progress of the deaf and dumb child must be slower, because his method of communication is slower. The great secret of success is practice. Teach the child to talk at all times. Talk to him and talk with him. Let all the household do the same. It is not by lessons; it is not by systematic instruction, that any child learns language well. It is by conversation, here a little and there a little, as his necessities, his inclinations, or his circumstances prompt. And there is this great advantage in thus teaching a deaf and dumb child at home; the language which he acquires is his mother tongue; he thinks in it and he converses in it; whereas, the language used at all institutions for the deaf and dumb is the systematic language of signs; and although this is a beautiful language and, where understood, the language which the deaf and dumb will not fail to use to a certain extent, yet being necessarily an unwritten language, and far from copious, it should always occupy a place secondary in importance. If, therefore, the deaf and dumb child learns to use written language first, it will always be to him more natural, more peculiarly his own, than if he learned it as a translation from signs.

Books, with pictorial representations of the text, will be an important aid in the early efforts to instruct the deaf and dumb child at home. They will instruct all the better, because they amuse, and to a child toiling after language under circumstances so perplexing and difficult, it is peculiarly important that no reasonable and proper incitement to curiosity be wanting. Having thus made the deaf and dumb child to speak, having made him acquainted with language as it exists and is used about him, the way is prepared to teach him as you teach any child. Any one familiar with the manual alphabet may take him as a scholar. He can be provided with a teacher at any time at a few hours' notice, and the process and appliances of instruc-

tion will be the same with him as with the child who hears. If the lesson is in geography the questions are asked, the information communicated, and the illustrations made as in oral teaching. There is no difference, only that while the voice is silent the fingers speak, yet with the same words, the same significance, and the same results.

But the education of the soul of the child and the habit of its spirit, must move on harmoniously with its intellectual progress. Docility, kindness, diligence, self-restraint, all proper obedience, trust, and love, must be the daily instructions of home. There can be no greater unkindness to a child, compelled by his situation to bear up against a peculiar misfortune through life, than to unnerve and unfit him for the struggle by inconsiderate and unreasonable indulgence in the outset. Steady and judicious government is as necessary for the deaf and dumb child as for any other. The peculiar tenderness with which one laboring under so great a calamity is commonly regarded at home, is not unfrequently allowed to rule out, in his favor, that firm and unflinching discipline which is practiced toward the other members of the family. Yet such indulgence only makes the virtuous life of the child afterward a harder struggle against early habit. Many suppose that the proper and efficient government of a deaf and dumb child is peculiarly difficult, and until there be some rational channel of communication opened, it doubtless is. Restraint, force, or punishment, without any reason given, or without an understanding of its justice and design, is perhaps worse than indulgence. It certainly is no government. Until such time, then, as the parent can converse intelligibly with his child, it will need all his skill and ingenuity so to train him up, that he shall not feel abused and oppressed, while at the same time, he shall be taught, fully, filial obedience and subjection. When, however, this point in instruction is reached, and the mind of the child is no longer in darkness in respect to the reason of things done, no child is more easily governed; indeed we may say, no child is governed so easily; for inasmuch as not a little of the corrupting influence of unworthy associates is impotent in effect upon one unable to hear, his mind turns with a purer affection and a more confiding obedience toward the parent whose love is the solace of his life.

Not a little solicitude is felt by many parents in respect to the spiritual condition of their children previous to their receiving an education. They see, in their outward lives, painful evidence of jar and disorder in the inner being. Whatever else their privation may have shut out, it, at least, has not shut out the seed of corruption, and they feel, often with painful intensity the necessity of implanting the germs of virtue, of morality, and of religion. To such parents we can offer no encouragement except in the vigorous prosecution of the intellectual course we have recommended. It is generally conceded among those conversant with the instruction of the deaf and dumb, that with persons born deaf, there is no proper idea of God or of the soul, until the commencement of systematic instruction; such instruction as is given in schools for the deaf mute. But let the parent teach his child language, even in a rude and very imperfect way, and he may then teach him

all things, even as he teaches his other children, by conversation, by direct instruction, and by books.

It may be asked, perhaps, why the parent should not learn the cultivated language of signs and thus be able to communicate with his deaf and dumb child. There are two reasons against it, either one of which would be conclusive. To learn the language of signs, requires a practice and effort equal to that necessary to learn a foreign spoken language; besides, it cannot be learned from books; it must, in all cases, be taught by the living teacher. Of course its acquisition would be an impossibility in most families. In the next place, signs, however highly cultivated, are only a secondary language. They cannot be written. They are not an end or aim in deaf-mute instruction, but only a help, an aid in the acquisition of a more perfect channel of thought. But the little child, beginning to learn words at home and almost in his infancy, can dispense with these. He has many years before him and can afford to come into language in the natural way. It will be said by some, perhaps, that we disparage the language of signs, but we think not. We believe that we appreciate signs; that we are attached to their use we know. They are invaluable to the deaf and dumb. They are the charm of conversation, the gist of a story, the essence of pleasantry and mirth; they are beautiful in narration and fervent in prayer; and especially to a large class of deaf-mutes, whose intellects, being slow, are never able fully to appreciate written language, are they a treasure beyond price. Were we deprived of hearing and speech we would not part with them for the wealth of the world. Yet their very beauty and facility of acquisition may dispose the mind to linger about them and be satisfied with them, when the whole faculties should be bent to the acquisition of a language in which the intellect may expand to the full extent of its capacity.

We cannot, then, avoid the conclusion that the deaf and dumb child, commencing his education at home, possesses these two great advantages; first, that he comes naturally into the possession of written language. It is his first language. It is not a translation from signs. He learns it, as we all do, by use, proceeding from step to step in the ordinary progress of childhood. Words possess a significance to him which only a long course of experience can give, where language is learned through signs. And in the second place, childhood is not to him a blank period. To the child who commences learning at the age of ten or twelve years, there is a portion of his life which has passed into oblivion. He begins to live intellectually at a disparity with his body. His thoughts and feelings, his inquiries and errors are such as we look for in a child of a few years, and contrast strangely with the maturity of his physical frame. Something from his past history is gone; an experience he cannot recall. From infancy to maturity there is only a confused remembrance, and he feels, often painfully, that a part of his life is wanting to him.

If it be asked, why may not a parent, then, educate his deaf and dumb child at home, without the aid of a public institution, we reply that he may; but as few parents have either the time or the ability to perfect the educa-

tion of their hearing children at home, still fewer will be found who can successfully carry on and complete the education of a deaf and dumb child. It is not of this we have spoken, but of the ability and obligation resting on all parents to teach their children who are deprived of hearing to use the language of daily life in their early years, and under the genial and fostering care of home.

To those who may have children destitute of the sense of hearing, we would earnestly recommend the attempt thus to teach them. Even if they fail in part, or if the progress be slow, it will yet avail much. Every advance secured will make the succeeding efforts easier, and even a very small acquaintance with language, obtained in infancy, will aid greatly in the after mental development. When placed in a public institution for systematic training and instruction, it will be a vantage ground from which to start, and other circumstances being equal, their future progress will more than maintain their relative superiority.

THE METHODS OF DEAF-MUTE EDUCATION.*

The methods employed in teaching mutes are especial only as they relate to the teaching and use of language. Mental discipline and the acquisition of knowledge, so largely the objects of general education, are secured by mutes by methods the same as those pursued in ordinary schools. The prominent use of object lessons, so frequently remarked by visitors, is an apparent characteristic resulting from the use of pantomime which, as far as it goes, represents ideas far more vividly than any mere word description. Mental discipline is gained indirectly by the exercise of the faculties upon the successive branches of study which constitute the course, and which extend from the primer to the most advanced studies of the high school, the study of language having a prominent place throughout.

Disciplined mental power can be readily developed by the training of a series of years. Elementary knowledge upon the various subjects embraced in the course of study can also be readily imparted, if the instructor is a skillful user of pantomime. But, this done, if no more has been done, the graduate, diploma in hand, is worth less to himself and to the community than many a six-year-old urchin first crossing the threshold of the primary school. The ability to read and write, and perhaps to speak the English language, while by no means a measure of the discipline and learning of the mute, is yet the real measure of his value in human affairs.

The different opinions held by the educators of deaf mutes, and all the discussions, more or less heated, of the last fifty years, have centered around the question, how best to teach language in its spoken or written forms.

*By Supt. G. O. Fay, in the 46th Annual Report of the Ohio Institution.

These are the living questions of to-day. They are embraced in the following category:

- 1st. Why not use and require of the pupil oral speech?
- 2d. Why not use and require spelled or written speech?
- 3d. Why not use and require syllabic or word signs made in the order of the English sentence?
- 4th. Why not use pantomime?

The discussion of these questions will develop the principles and methods which underlie the subject of deaf-mute education, and which in their logical results determine the details of the daily school-room routine.

- 1st. Why not use and require of the pupil oral speech.

In a hearing school, the very first morning, there gathers around the teacher a group of children who, every one of them, can hardly restrain the disposition to talk and whisper long enough for him, in a few well chosen words, to draw his first lines of order. Why not pursue the same way, only more patiently, with a class of keen-eyed mutes? The fact is, the teacher of the hearing school, his first morning, can use language with a certainty of being understood, and will listen to statements expressed with a correctness which the best talkers and lip-readers among mutes have never equalled in any school upon their graduation day. By experiment the teacher of the mute class will ascertain that one or two of the twenty can hear words shouted near to one or both ears. He may also discover one or two more, who did not lose their hearing until after they had learned to talk, and from these, by pronouncing familiar words composed largely of labial sounds, slowly and with frequent repetitions, he may occasionally secure a response, assuring him that he is understood. The teacher is glad to find two or three even who escape the designation of "mute." But how with the sixteen or seventeen remaining who can neither understand the teacher nor talk to him, but who yet constitute the body of the class and give it its character? They are children who, for ten years, the most plastic years of life, have been surrounded by talkers whose social interest in them has been chiefly expended in efforts to induce them to talk, or at least to understand what is said to them. Baffled and disappointed in this, the parents have brought their child, always the pet of the household, to the institution to be educated. Withdrawn from his home life, the social influence of which has failed to draw him from his profound isolation, he is now added to a community of hundreds similarly afflicted with deafness. Fond parents, who have perhaps expended hundreds of dollars in efforts to restore the hearing of their child—efforts only to be abandoned as abortive—still cling to the possibility that their particular child may be able to acquire the art of articulation and lip-reading, and so be restored to general society. Poor mute child! What hast thou not suffered at the surgeon's hand, guided by the sympathy, it may be the pride, of the parental heart! What art thou yet to suffer in laborious efforts to get what, in a large majority of cases, can never be obtained! Theorizers, and, it may be, teachers, have told the parent that all is easy, and that the good day is coming, is even now dawning, when the name

"mute" will cease to be applied to any intelligent youth, except as a stigma. The answer to these fond parental expectations, and these positive professional claims, is found in the experience of the best European schools, where, after two generations of experiment, it is admitted that but a small fraction of the pupils taught are ever able to hold easy oral conversation with their fellow men. The intelligent gentleman or lady, as the case may be, whom somebody has met somewhere, who understood all that was said in private and in public, and who conversed readily upon all subjects without exciting the suspicion of his deafness, is a mythical personage, finding a place naturally in the poetical department of the literature of deaf-mute education. With the greater number of deaf mutes, as they exist in our communities, efforts to carry forward their education by oral speech will fail to give speech to any useful extent, and, which is a very serious evil, will also consume the time needed to acquire the elements of a good English education by an easier way. It is probable that with a large majority of deaf mutes the improved method, as it is called, if applied and persisted in, will prove to be merely a mangling process. Pains should be taken to restore to the use of oral speech those who are partially deaf, and those who retain something of the speech which they had acquired before they became deaf. A few other mutes, congenitally so, will also be discovered possessing sufficient ambition, adaptation, and skill to undertake the difficult art. Excepting the partially deaf, who properly are excluded from the category of deaf mutes, these latter should pursue the art, at institutions at least, as a separate branch of study. The results of this study, growing from year to year, should be utilized by the conscientious teacher in the exercises of the school-room, where all who can talk or read lips with any facility or satisfaction should be encouraged and required to do so to the extent of their proficiency. How large a fraction of the school these will constitute, the experience and increasing skill of the future must determine. At present, in our state institutions, it comprises a little above one-tenth of the whole number.

- 2d. Why not use the required written or spelled speech?

Granting that oral speech, except with a small fraction, is impracticable, and that for the mass of deaf mutes some other method of approach must be pursued, may not the teacher maintain the second line proposed, namely, that of using himself, and of requiring the pupil to use written speech or language spelled with the manual-alphabet?

Excepting the semi-mutes described above, at the outset of the course, at least, this is impossible. The teacher has yet to give the pupil the first forms of words, and to do it most effectively, numberless illustrations and associated ideas should be introduced. Pictures can be used, and they are relied upon, as far as available, but their scope and adaptation are very limited. The necessities of the situation, in all schools, articulating schools included, force the teacher to avail himself for a time of the mute's own language, pantomime, a language characterized sometimes as a most dangerous thing. The emergency, however, calls for desperate expedients, and the lan-

guage is used and the chasm bridged over. With advancing education, however, acquaintance with written speech advances quite rapidly, and comes to be used in place of the dangerous dialect of pantomime, licensed temporarily under protest. The permanence and clearness of a written statement give it as a method of communication a high value, and one recognized largely in the best hearing schools. But in school exercises, continued throughout a whole day, and day after day, a serious drawback arises from the great amount of time consumed in the merely mechanical labor of writing. Writing at the usual rate, as compared with ordinary oral speech, has been found to require a time about nine times as long. To obviate this evil the manual alphabet has been invented, and is now universally employed in the education of mutes. Finger spelling, confusing though it appears to a novice, really cuts down the mechanical element of time to one-third, or to only three times the time occupied by oral communication. Still, even with the assistance of the manual alphabet, written or spelled speech is to a mute exceedingly tedious. His mind chafes to escape from its mechanical fetters. No mute, however well educated, employs the manual alphabet to any considerable extent, much less written speech, in his familiar intercourse with his mute friends. The same is true also of those who spoke fluently up to a certain age, when, becoming deaf, they came to the institution for education. This irrepressible liking for another language does not, however, exclude the ready use of written speech, and, as a method, written speech, supplemented by spelled speech, should be employed in all cases where it is readily understood, and for a time as prolonged as may be, without wearying the pupil, or destroying his interest in the immediate object of recitation or attention. Its use will steadily increase until at length, in the more advanced classes, it will be used almost entirely.

3d. Why not use and require syllabic or word signs, made in the order of the English sentence?

The part of this question referring to syllabic signs has been already answered, for syllables have no value until the words which they compose are understood. Words learned, a syllabic alphabet, if clear, would be as much superior to the manual alphabet as it should prove to be more rapid. Of the various syllabic alphabets as yet offered to the mute, all have been rejected for their obscurity and ambiguity.

Word signs are ordinarily free from both ambiguity and obscurity, and win a ready acceptance. They are rapid, more rapid even than oral utterance. Now, why cannot a teacher, driven to the temporary use of pantomime before his pupils have gained a knowledge of written language, use it in a modified form, so constructing, dividing, and arranging a series of word signs as really to use the order of the English sentence, each word being represented by its own characteristic sign? Would not such a method tend to restrict the exuberant disorderly mental operations of the pupil to the order of the English sentence, and so, while escaping the detrimental influence of pantomime, prepare him, unconsciously, for the acquisition of a correct order

whenever, in his advancement, his word signs have become translated into their spelled, written, or, it may be, oral equivalents?

We do not claim for the English language an order the most natural, and yet we experience no particular difficulty in carrying forward our mental commerce along its channels. We are familiar with the fundamental connection existing between our mental order of thought and our written style. When we attempt to compose in a foreign tongue the influence of our vernacular speech in corrupting the necessary order of the sentence we know. And how often do we observe the same influence at work corrupting the English style of a foreigner. This corrupting influence of a vernacular language constitutes the central objection to the use of pantomime. From this element comes whatever of injurious influence it exerts upon the mute. Now, what difficulty is there in constructing a sign language to order, one from which the corrupting element of a faulty order has been eliminated?

Such has been the reasoning of the educators of deaf mutes for fifty years. The desirability of so important a result has been universally admitted, and to secure it, the sign making of institutions has been reduced rigorously to the order of the English sentence, and that for a generation. And in other institutions, with the same ultimate purpose, the same course has been pursued more or less, especially with the younger classes. And yet in every class of every institution in the land, the moment the pupil passes the threshold which separates the proprieties of the school-room from the freedom of ordinary social intercourse, every muscle, and feature, and limb of the pupil combine to enact a panorama of pantomime, in which many of the teacher's signs are used indeed, but no more resembling them than the finished garment resembles the fragments upon a tailor's table. All attempts to control the order of the mute's pantomime have utterly failed. The language has a genius and laws of its own which he who uses it must respect. Shall a teacher persist in using a language of his own, theoretically valuable, when every one of his pupils continually uses, and prefers to use another? With their remarkable ingenuity in comprehending signs, it is probable that they will catch the teacher's meaning with his English order, but not one of them will ever adopt it for himself, nor will the teacher himself use it outside of the school-room. Why not, then, when necessary, use the pupil's own language, inverted as it is, but no jargon, and so secure greater vividness of impression, and at the same time, by patient toil, educate the pupil away from the faulty order induced by his vernacular?

4th. Why use pantomime?

Or rather, why not use pantomime? What else can the teacher use in earlier stages of the course? And at every stage explanations will occasionally be needed, where nothing can be substituted for it. It is the natural language of every deaf person, whether born so or made so subsequently. Amid influences favoring the development and use of pantomime and uncounteracted, it will surely come, and the speech previously possessed will gradually disappear. This powerful proclivity of the deaf to pantomime is not always allowed its due weight. Because a mute boy, upon entering

school, has but a few uncouth motions, it is sometimes said that he learns his signs at school, which is largely true, and the wonder is expressed, why so much pains has been taken to teach what has so little value compared with the English language itself. And sometimes it is even suggested that the instructor has been delinquent in allowing the mental ground of the pupil to be so preoccupied. But the fact is, the teacher cannot exclude signs from use if he would. The language is the outgrowth of the mute's social instincts, and is as natural to him as oral speech is to the hearing. He came to the institution with few signs, because his circumstances had been unfavorable for their development.

How many articulate sounds, if indeed a single sentence, would a hearing child utter, if from infancy it had been confined to the society of mutes? Give the hearing infant a speaking parent, and it acquires oral language, and we say it is its natural language. So give a mute child a mute parent, and it will come to school at ten years of age with a sign language of considerable value. The rude sounds of the isolated hearing child and the uncouth motions of the isolated mute are both indications of a natural desire and adaptation for a better language. Two hearing children isolated would rapidly construct an oral language; and so two mutes associated will soon construct a stock of signs mutually understood. It matters not whether they are significant or conventional; they are signs, and are accepted by the users as representative of ideas. It needs no instruction to give a circle of mutes a sign language. A teacher can undoubtedly help them to one much more expressive and exact than the one which they unaided will adopt. He is familiar with the efforts of many years and, it may be, of generations. He has given to the language the study and the criticism of a cultivated taste. He can and, therefore, should do all in his power to improve their language, but he cannot prevent them from having one. The most stringent rules of articulating schools have never been able to repress it. Crushed to earth, it will spring up again upon the first shower of feeling. Semi-mutes even, who already possess a correct use of language and have a cultivated literary taste, take up the sign language, in spite of all the exhortations of their teachers, with great avidity, and prefer to use it ever after, when with hearing people even, if the latter will allow them to do so.

The mind of a deaf person craves a language addressed to a living sense. Any other language is to him an artificial one in the most real sense of the term. This natural tendency of the mute to the use of pantomime, and his actual use of it upon every conceivable subject, affords to the instructor an exact and rapid method of communicating with his pupils, if he chooses to use it. However educated the pupil may come to be in subsequent years, the time will never arrive in his history when he will not prefer it in conversation, if his companion is equally skillful in its use. Supplemented by manual spelling for technical expressions, it is fully equal to all the necessities of the school-room, the lecture-room and the pulpit. By using it, the teacher, the first morning of school, may communicate ideas and offer illustrations, which could not be introduced by the forms of oral or written lan-

guage for years thereafter. However slow the pupil may be to remember his written or printed lesson, he forgets no pantomime. The teacher, however, knows that, potent and sufficient as pantomime really is as an educating influence and as a vehicle of ideas, yet the pupil must eventually come to the correct and free use of the ordinary forms of expression if he is to be, in any substantial sense, restored to society, and to have for himself the full benefit of books and newspapers. The judicious teacher will, therefore, use pantomime only when the slender stock of words understood by the pupil requires it. Used freely at first, it will gradually give way to better forms of thought, the teacher keeping his eye the while steadily upon that highest and best achievement of mute education—the ability to use the English language correctly.

Or, comprehensively, the true methods of deaf-mute education are—to use and require oral speech, if possible; or, if that cannot be, to use and require written speech, as far as it can be done intelligibly and without weariness, leaving for all those processes of education where neither is available the use of the mute's own pantomime, remembering ever that it is but a scaffolding, employed by the safe builder until the main structure—language—is completed, and then laid aside. The mute will, indeed, always return to it with the affection felt by every person for his own vernacular tongue; but living, as he does, surrounded by speaking persons, he will, however reluctantly, conform to their chosen medium of ideas, looking forward with earnest hope to that great unfolding where the many tongues of earth, discordant now, will blend in one universal language.

METHOD OF INSTRUCTING DEAF-MUTE CHILDREN AT HOME.*

For the benefit of those who desire to do all they can to instruct their own children before sending them to an Institution, the following description has been prepared of the method to be pursued. It is hoped that all having mute children will spare no pains in their home instruction, and however little progress may be secured, it will still be of value to the child. In some cases, it may be weeks, or months, before the child is able to write a single word, but if the plan here explained is perseveringly carried out, success is certain.

The method here presented is not a new one; it has been in vogue more than half a century, and is still used with great success by some of the best instructors. Possibly the section on Arithmetic, which grew out of a method used by the writer in teaching the elements of the science to new pupils, may have some new features. The method of teaching language, here presented, has not been published in a popular form, except by two writers.

*By James H. Logan, Principal of the Western Pennsylvania Institution.

The first of these, John R. Keep, Esq., of the Hartford Institution for Deaf-Mutes, published several years since a little book based upon a method essentially the same. More lately the system has been still further developed, and some novel modifications introduced by Dr. Isaac L. Peet, the well known and esteemed Principal of the New York Institution, in his "Language Lessons for Deaf-Mutes." To the latter the writer is indebted for some useful hints in the preparation of this article.

In addition to writing words and sentences, let the child also spell them by means of the manual alphabet, of which an engraving is given in this report. In memorizing this alphabet, the best way is to learn thoroughly each horizontal row of characters before commencing the next one below. If this is done, the alphabet will be perfectly mastered in less than an hour.

It is also well to use every means to preserve the vocal utterance of the child, for, though hearing cannot be recovered, speech may, in many cases, be retained, if the child is constantly practiced in the use of its voice.

The child may be taught as early as the age of three or four to write a few words. From that age, until six or seven, he should be practiced by the method here given, and then sent to some institution, where his progress will be very rapid if this preparatory home training has been well performed.

I.

Begin by writing in a plain round hand the name of some common object. Show to the child first the object and then the name, pointing from one to the other until he sees that the name stands for the object. Get him to copy the word, and when he has mastered it, teach him another in the same way. Always write *the* before the names of objects. As above explained teach the following list of words containing all the letters of the alphabet:

the box.	the cup.	the mug.	the jar.
the key.	the quill.	the fender.	the razor.
	the watch.	the shovel.	

Besides these, the names father, mother, the child's own name, and those of his brothers and sisters, should be taught.

II.

As soon as the child can write the names of five or six objects, sentences may be taught. To do this a short direction to do something, as, *Touch the box*, is shown to the pupil. Then the teacher himself touches the box and gets the child to imitate him. After several repetitions the child is made to copy the sentence, *I touched the box*, as the proper way of expressing what he has done. He is then directed in writing to touch some other object of which he knows the name, and, if he does not understand, the teacher again explains as before. This is repeated frequently until the pupil, on being shown a direction to touch a familiar object, will at once go and do so. This process of writing a short direction, showing the child what it means by simply performing the action indicated, and then having him copy the proper

form of sentence to express what he has done, is to be always carried out. Proceed in the same manner with many examples like the following:

Touch the key.	Touch the table.
Touch the cup.	Touch the chair.
Touch the mug.	Touch father.
Touch the jar.	Touch mother.
Touch the razor.	Touch John.
Touch the watch.	Touch Mary.

The teacher must also touch objects himself, and get the child to describe what he has done, by using *you* in place of *I*, thus:

You touched the fender.	You touched the fork.
You touched the shovel.	You touched the glove.

A third person should also be asked to do something in the presence of the child, and the latter taught to describe it, as:

Father touched the slate.	John touched the fan.
Mother touched the pail.	Mary touched the jug.
John touched Mary.	Mary touched John.

When the pupil has become expert in these exercises, direct him to touch two or more objects, which must at first be placed together before him. Vary all of the foregoing exercises, as in the examples given below:

I touched the hat and the key.
I touched the chair and the table.
You touched the fender and the shovel.
You touched the pencil and the slate.
Father touched the door and the mantel.
John touched the knife and the fork.

The same exercises should now be continued, with the following words in place of *touch*. Each word must be used quite often and thoroughly mastered before a new one is given:

bring,	open,	shut,	kick,	strike,	throw,
hit,	push,	pull,	gather,	break,	pare,
tear,	cut,	lift,	bite,	wash,	wipe,
sweep,	eat,	drink,	smell,	taste,	slap,
clean,	whip,	raise,	pat,	rub,	drop,
bind,	shake,	roll,	pinch,	lock,	unlock,
cover,	uncover,	toss,	fill,	empty,	scrape,
feed,	light,	punch,	tickle,	comb,	scratch,
		tie,	untie,	&c.	

The following phrases, it will be seen, are as easily explained as any of the single words above given, by merely performing the act indicated. These should be used very often, and with as many objects as are appropriate to them:

sit on,	stand on,	walk on,	lie on,	kneel on,	write on,
play on,	run on,	jump on,	roll on,	stand in,	stand
under,	walk to,	come to,	go into,	walk into,	run into,
go out of,	walk out of,	run out of,	put on,	take off,	
jump over,	stand before,	stand behind,	stand beside,		
stand near,	walk around,	walk across,	stand between,		
	point to,	bow to,	shake hands with,		

The following examples will show how the above phrases are to be used:

I sat on the chair.	I stood in the tub.
I stood on the box.	I blew out the match.
I went to the table.	I walked to the gate.
You ran on the grass.	You went into the house.
You turned off the gas.	You jumped over the stool.
You walked around the chair.	You sat near the fire.
John walked across the room.	Mary ran from the dog.
John stood before father.	Mary stood behind mother.
Mr. Smith put on the coat.	The cat jumped from the chair.

I stood between the chair and the table.
I stood between the door and the window.
John sat between father and mother.
Father stood between John and Mary.
You walked from the chair to the table.
You ran from the door to the gate.

III.

The process of teaching color, size, form, possession, and number will now be considered. In explaining these, some object having the qualities described by the words used must always be placed before the child; otherwise the meaning cannot be made clear to him. He must always learn by seeing, handling, smelling, and tasting the objects.

To explain color, make a number of balls of yarn of different colors. These should be of black, white, brown, gray, purple, red, orange, yellow, green, blue, indigo, violet. Pieces of ribbon, cloth, or sticks painted of these colors, will answer as well. At the printer's, cards of most of the above colors can be had for a trifling sum.

Place one of the balls, say black, before the child, and write the direction—*Touch the black ball*, and proceed as before explained. Continue this with all the colors in turn. Then have all the balls together, or placed in different parts of the room, and keep on until the child, when directed to touch or bring a ball of any color will at once do so and write out what he has done. The exercise may then be continued with a variety of other objects having color, as flower, fruits, etc. Vary these exercises in all the ways before described.

Also, explain the following words of opposite meaning, with suitable objects. The contrast in meaning is a great help toward understanding them; and for this reason first one and then the other should be used:

hot, cold; hard, soft; wet, dry; clean, dirty; sweet, sour;
thick, thin; fat, lean; sharp, dull; new, old; high, low;
full, empty; smooth, rough; straight, crooked; wide,
narrow; sound, rotten; fragrant, fetid; light, heavy; etc.

Size will now be considered. Get two objects of the same kind, but differing much in size, as stones, potatoes, apples, books, etc., and with these teach the meaning of the words *large* and *small*. Place both before the pupil and direct him to touch one, and give him the proper form of sentence to describe what he has been doing. Do the same with the other, and repeat until the words are understood.

Get two sticks, one long and the other short, and in the same way teach the meaning of *long* and *short*. Go on as before with other objects, such as pencils, strings, and cords.

Have the child learn to describe things belonging to himself and others. Let him touch something of his own, and write, as the case may be:

I touched my book.
I touched my knife.

Then let him touch something belonging to the teacher and write:

I touched your hat.
I touched your overcoat.

Next let him touch or bring things belonging to his parents and others of the family, and get him to write such sentences as the following:

I touched father's hat.
I touched John's hand.
I brought father's new slippers.
I brought mother's red shawl.
I brought Mary's little book.
I brought John's large book.

IV.

In teaching number, get stones, sticks, beans, or acorns to count with. Then give the following directions, and show the child how to carry them out and express what he has done:

Put one bean on the table.
Put two beans on the table.
Put three beans on the table.

This exercise may be continued until all the numbers up to one hundred have been learned. Let the child learn both the names and the characters used to represent the numbers. Let the teacher himself, as well as other persons, put objects in different places, and teach the child to describe what they do. In this exercise, language as well as number is being learned at the same time, as the examples here given will show:

I put four books on the table.
I put nine stones in the pail.
I put fifteen beans under the chair.
You put one stone and seven sticks in the hat.
You gave two apples and three nuts to Mary.
You put ten eggs in the basket, and five tumblers on the table.
Father gave two figs and three apples to John.
Mary ate six figs and four raisins.
Mother dropped three knives and two forks on the floor.

Addition, subtraction, multiplication, division and fractions may be taught with very little real difficulty. Nothing more is required than to carry out with patience and judgment the directions here given. Until all the tables are mastered, objects must, in every case, be used to perform the operations with.

To teach addition, put down two beans before the child, and pointing from

one to the other, give him the sentence, *One and one are two*, to copy. When this is mastered place one bean at his left hand and two at his right, and let him write, *One and two are three*. Then, with one and three beans, placed in the same way, teach him to write, *One and three are four*. Go on in this way up to *One and ten are eleven*. Keep on until the child can write out this part of the table correctly.

Then, in order to test the child's understanding of them, write the above sentences in a different order, and leave blanks for him to fill up himself, thus:

One and three are —.
 One and five are —.
 One and one are —.
 One and seven are —.

When the child is able to fill up the blanks with the correct number, no matter how the places of the sentences are changed, we know certainly that he understands. Should he forget, always demonstrate to him what the sum is by the aid of the beans or other objects used. Encourage him to use them himself in finding out the sums of other numbers. After a while he will be able to do without them; but at first they are indispensable. The other parts of the tables in addition may be learned in the same way.

When we come to subtraction we have simply to place a row of beans before the child, and taking away one or more, give him the proper form in which to express the operation.

Begin by placing two beans before him, and then taking away one, write *One from two leaves one*. So proceed up to *One from eleven leaves ten*. When this is mastered, change the places of the sentences and let the child fill up the blank spaces thus:

One from six leaves —.
 One from two leaves —.
 One from nine leaves —.

Proceed in this manner until the tables in subtraction are thoroughly mastered.

In multiplication the beans are to be arranged in groups containing an equal number. First place one bean before the child, and another a little way from it, and have him write, *Two times one are two*. Then place two beans in each group, and write *Two times two are four*. Next put three beans in each group, and write *Two times three are six*. In this way proceed to *Two times ten are twenty*. As before, finish by changing the places of the sentences and leaving a blank for the pupil to fill up. Teach the remaining tables in the same way.

In division there may be a little more difficulty, but patience will overcome all. Here the process consists in arranging a row of beans before the child, and then separating it into groups containing the same number.

Place two beans before the pupil. With both hands separate them and draw each a little to one side. Then write *One is in two twice*. Now separate in the same way a row of four beans, and write *Two is in four twice*.

In this manner continue till *Ten is in twenty twice*, has been reached. Change the places of the sentences, and proceed as before described. Finish all the tables in division in this way.

The teaching of fractions is far less difficult than may at first sight appear.

Let there be some apples in the room, and give the child the direction, *Bring me one apple*. Take the apple, and in his sight divide it into two equal parts. Then write the direction, *Bring me one-half the apple*, explaining the phrase *one-half of the apple*, by pointing to it and then to the object. Then write, *Bring me two halves of the apple*. As in the previous exercises, let the child be practiced frequently, until he has mastered this. Show him that *one-half* and $\frac{1}{2}$ mean the same thing. Now divide another apple into three equal parts, and direct him to bring one-third, two-thirds, and three-thirds of the apple. Next, divide one into four parts, and afterward divide others into five, six, seven, eight, nine and ten equal parts.

Get some sticks of equal length, and have them divided by pencil marks into equal parts. Then write out such direction as:

Cover one-half of the stick.
 Cover two-thirds of the stick.
 Cover four-fifths of the stick.

Let the parts indicated be covered over with a newspaper or anything convenient for the purpose. Repeat these exercises often and vary them in different ways, as the following examples will show:

Give one-half of the apple to Mary.
 Give one-third of the apple to mother and two-thirds to John.
 Put one-fourth of the apple on the plate and three-fourths on the window sill.
 Eat one-fifth of the apple and give three-fifths to father.
 Put four-tenths of the apple on the chair and five-tenths under the table.

V.

Good pictures will be of great use, especially colored pictures of animals and other objects. By the aid of these the names of a great many things can be taught. Place a picture before the child and encourage him to describe what he sees, thus:

I see the cow.
 I see the horse and the wagon.
 I see two dogs and three pigs.
 I see the ship.

Also, direct the child to point to or touch objects in the picture, and also to show them to others. It is also well to teach the following expressions, while the events are actually taking place. By judicious management and constant repetition it will be possible to get the child to understand many

expressions of this kind. The teacher can make use of gestures on many occasions to assist in making the meaning clear:

It is raining.	The sun is rising.
It is snowing.	The sun is setting.
The leaves are falling.	The moon is not shining.
The dog is running.	The cat is sleeping.
John is walking.	Mary is jumping a rope.
Mary and John are dancing.	
Father is reading the newspaper.	
Mother is washing the dishes.	
Father and John are playing checkers.	
The hens are eating the corn.	

The following examples are given to illustrate the use of phrases which may be taught as readily as single words. These should all be learned by the pupil, besides many others which will readily occur to any one. The action indicated must always be performed first, and immediately after the child must write out in proper form what himself or others have done. The idea is to get the child to associate things taking place with their proper expressions, and this can only be done by frequent repetition. The exercises here given should, therefore, never be discontinued until from instruction received both at home and at school, a ready command of language has been acquired:

Touch the knob of the door.
 Touch the panel of the door.
 Touch the lid of the box.
 Touch the side of the box.
 Touch the edge of the box.
 Touch the corner of the box.
 Touch the bottom of the box.
 Touch the end of the stick.
 Touch the middle of the stick.
 Open the door of the room.
 Shut the door of the closet.
 Stand in the corner of the room.
 Stand in the middle of the room.
 Bring a pail of water.
 Bring a bucket of coal.
 Bring an armful of wood.
 Put the bottle of ink on the table.
 Put the paper of tacks on the mantel.
 Put the ear of corn under the chair.
 Put a lump of coal in the fire.
 Put the book in the drawer of the bureau.
 Put an apple in father's coat pocket.
 Strike the door with your hand.
 Strike the chair with the long stick.
 Touch the dog with the cane.
 Hit the tree with the small stone.
 Hit the box with the red ball.
 Bring the stick with a notch in it.
 Bring the stick with two nails in it.
 Bring the stick with a notch in the middle of it.
 Bring the stick with a nail in the end of it.
 Bring the hat with the red feather in it.
 Put the book with a blue ribbon in it under the table.
 Put the stick with a red mark in it between the table and the chair.

Put the cup with a crack in it on the window sill.
 Put the cup with a broken handle in the basket.
 Place the blue stick across the red stick.
 Draw a square on your slate.
 Draw a large square on the sheet of paper.
 Draw four small squares on your slate.
 Draw two large circles on your slate.
 Draw a straight line on your slate.
 Draw a crooked line on your slate.
 Draw a large square in the middle of your slate.
 Draw a triangle above the square.
 Draw three small circles under the square.
 Draw a row of circles on your slate.
 Draw a row of triangles on the sheet of paper.
 Draw a horizontal line on your slate.
 Draw a vertical line on your slate.
 Draw an oblique line on your slate.
 Give a glass of water to John.
 Carry the basket of potatoes to mother.
 Touch the knob of the door and the lid of the box.
 Give the hammer and the box of nails to John.
 Take the spool of black thread and the paper of pins to mother.
 Give the red apple to Mary and the yellow apple to John.
 Go up stairs and bring the ball of red yarn and the piece of blue cloth on the bureau.
 Go down to the cellar and bring six eggs.
 Go to the bureau drawer and bring the box of paper collars to father.
 Take off your coat and sit down near the fire.
 Put on your overcoat and hat and go to the post-office with John.
 Go to church with Mary.
 Make a bow to Miss Smith.
 Shake hands with Miss Jones.
 Play a game of checkers with George.
 Play a game of blind-man's buff with the boys and girls.
 Go to the grocery store and buy three pounds of sugar.
 Help John carry the pail.
 Take a walk in the garden with Mary.

These examples will suffice, and others on the same model will readily present themselves to the teacher. In teaching the names of things made up of two or more words, do not attempt to explain each word singly, but get the child to comprehend the meaning as a whole. This is usually best done by showing the thing, and then giving the phrase which signifies the thing and drawing a line under it like the following:

<u>the piece of bread.</u>	<u>the spool of thread.</u>
<u>the ear of the cat.</u>	<u>the ear of the dog.</u>
<u>the piece of brown calico.</u>	<u>the pile of books.</u>
<u>the plate of nuts.</u>	<u>the piece of red ribbon.</u>
<u>the plate of cakes.</u>	<u>the piece of blue ribbon.</u>
<u>the plate of apples.</u>	<u>the piece of black ribbon.</u>

It is very important to accustom the child to the use of such phrases. If the action indicated in the directions given to the child is performed over and over again, he will finally understand. Of course, in carrying out the

programme here laid down, tact and judgment must be used, and the more difficult sentences introduced gradually, as the pupil becomes able to master them. Praise the child, and encourage him in every possible way. It is quite easy to make children take a lively interest in these exercises, as the writer can testify from actual experience.

METHOD AND PROCESS OF TEACHING MECHANICAL ARTICULATION AND READING ON THE LIPS.*

The employment of articulation and reading on the lips as instruments of instruction is peculiar to the German school on account of the regular orthography in respect to pronunciation being favorable in the way of success, while the many inflections of the French and English languages interpose insurmountable obstacles to those who cannot call into requisition the aid of the ear.

The following methods and processes are given in full from the pen of Rev. Dr. Day, who was specially commissioned to enquire into all sources of information bearing upon the education of the deaf and dumb in Germany, with the view to refute the arguments of Horace Mann, Esq., Chief Superintendent of Education, U. S., who, in one of his annual reports, speaks in glowing terms of the success which crowns the efforts of the German masters in teaching articulation.

METHOD OF INSTRUCTION.

Before describing the manner in which speaking is taught, without the aid of hearing, it seems necessary to observe that *deaf mutes in general possess perfect organs of speech!* They make involuntary and frequently also voluntary sounds, and could they only hear what sounds are made by others in speaking, would be able to imitate them, or in other words to talk. As total deafness debars from all such knowledge, they necessarily remain silent or mute; in other words, they are dumb solely in consequence of deafness. Even where a child has already learned to talk, but subsequently at a tender age becomes deaf, he gradually loses one word after another, from no longer hearing them spoken, and finally relapses into silence.

The end proposed in teaching articulation is, by means of the eye, aided by the sense of touch, to supply to the deaf mute the lost sense of hearing. As different sounds represent themselves, each in a different manner, on the lips, or in the position and play of the vocal organs, although frequently with very slight variations, the effort is made to accustom the deaf mute to notice and recognize these positions and variations on the one hand, and on the other, to imitate them himself, with the addition of those emissions of

*By J. B. McGaun, Head Master of the Deaf and Dumb Institution at Hamilton, C. W.

sound of which he is naturally capable. In this process nearly every teacher has certain peculiarities of his own, although in the main they do and must agree. In the following description Mr. Hill's course has been generally preferred, as being on the whole as successful as any, with occasional reference, also, to other teachers and published works.

1. *Qualifications required in an instructor.* In order to be a successful teacher of articulation, according to the German measure of success, it is necessary to have, *first*, well formed and perfect organs of speech, and correct pronunciation; *secondly*, an accurate knowledge of the vocal organs, and of their positions and motions in the production of different sounds; *thirdly*, skill in making the deaf mute perceive the different motions of the mouth, and teaching him to imitate them himself; and *finally*, "infinite patience." "The difficulty," says one, "consists more in the expenditure of strength, which the exertion of teaching the deaf and dumb to articulate requires, than in the understanding of what is to be done, which demands no special genius."

2. *General description of the method of teaching.* In order to make the pupil acquainted with the position of the organs necessary for the production of the sounds of language, the teacher places his own organs in the necessary position, makes the scholar by sight and feeling notice these positions; encourages him to do the same himself; and finally, proceeds from simple to composite sounds, that is, to syllables and words, and from these to sentences.

As *apparatus*, a looking-glass, in which the pupil may view the position of his own mouth, as compared with that of the teacher's, and a paper-folder, used to direct the motions of the pupil's tongue, are generally employed. Such contrivances as India rubber tongues, the expediency of which has sometimes been suggested, are in fact never resorted to. Some teachers, instead of a paper-folder, put their fingers into the scholar's mouth. This Mr. Hill discountenances, on the ground, among others, that "sometimes unwittingly and sometimes on purpose, the scholar is in danger of biting it."*

One of the earliest requisites in such a course is evidently the power on the part of the deaf mute of making voluntary sounds. When the hearing is only partially lost, or the child has become deaf after having once learned to talk, and in certain other cases, there is no peculiar difficulty. Sometimes, on the other hand, considerable time and labor are spent in making the pupil understand what is required of him. At Leipzig I saw a little girl who had been under instruction a couple of weeks, but without making any progress. Day after day she had been called up, and the teacher had pronounced the

*I shall never forget the unpleasant impression made upon me, in watching the efforts of a little deaf mute who had been at school not quite three months, and to whom the instructor was laboring to teach the articulation of the letter *s*. The child did not bring his tongue far enough forward, and the only sound he made was that of *sch* (*sh*). A quarter of an hour the teacher spent in endeavoring to remedy the mistake, frequently running his paper-folder into the child's mouth, and pressing down his tongue, but without success. The exercise, it was evident, was laborious to the teacher, and toward the end especially most painful to the scholar. Indeed, at last the child lost all courage, and appeared the perfect image of despair. Although compulsion is sometimes obliged to be used, yet, on the whole, nothing connected with articulation appears so really surprising as the degree of patience exercised by the pupils.

usual sound *a* (a as in father), with the customary devices of prolongation and percussion, placing her little hand before his mouth and under his chin, to show her that the breath must be strongly expired, and a jar be made in the vocal organs, but all to no effect. She placed her hand, as she was directed, before her own mouth and under her chin, breathing strongly enough, but making no sound. As I saw her from time to time, on my visits to the school, with her mouth wide open, but in complete ignorance of the manner of producing the jar she noticed in her teacher, I became interested in the case, and requested the teacher to inform me as soon as she succeeded. In the course of the week he brought me word that she had overcome the difficulty. When his own patience was nearly exhausted another deaf and dumb girl had undertaken the matter, and instantly succeeded. Very possibly the teacher himself would have attained the same result had he continued his efforts a moment longer. The child, it appears, had first succeeded in making a sound when her hand was under her chin; and in consequence such an association between the vibration and the position of the hand was established in her mind, that in no other way was she able for some days to make any sound at all. The instant her hand was removed the sound ceased.

The process of instruction is exceedingly slow and elementary, and requires that only one scholar be taught at a time. Seating himself beside a window, so that the light shall fall fully upon his face, placing his head in an easy position, and bringing the scholar before him in such a manner that the pupil's eye shall be on a level with the teacher's mouth, the latter commences with a single sound, and then gradually passes on to others, until all are exhausted. It deserves to be noticed, although it cannot be said that one has borrowed the improvement from the other, that in Germany, both in the schools for hearing children and the deaf and dumb, the *sounds* of letters of the alphabet are taught instead of the names. For deaf mutes, indeed, no other course would be practicable.

The best *order* in which to teach the sound of the alphabet varies somewhat with different pupils; and hence it is the practice of the best teachers, as early as possible, to try all the sounds of the alphabet, in order both to test the pupil's capability, and ascertain to what points their attention must be specially directed. Generally, however, experience has shown the following order to be as successful as any, viz: *h*; *a* (*ah*), *u* (*oo*), *i* (*ee*), *p*, *t*, *k*, or *b*, *d*, *g*; *o*, *e* (*a* in fate); *au* (*ou*), *ai* (*i* in lion); *f*, *s*, *ch* (the last a peculiar sound; *w* nearly (*v*), *f*, *j* (*y*); *ü* (or *ae*); *b*, *d*, *g*, or *p*, *t*, *k*; *sch* (*sh*)! *m*, *n*, *ng*; *l*; *r*; *ö* *ü* (the two last have a peculiar sound). Care must be taken not to practice the pupil too long on the consonants alone, but, as soon as possible, to bring *k* and *t*, for instance, into connection with the vowels, in the formation of simple syllables. This is the first stage. With some variations in the order of the letters and syllables, relieved also by exercises in learning to make the written characters, the pupil is practiced in these elementary sounds during several weeks.

Next follow the consonants placed *after* the vowels, and forming of significant words, as *af*, *af*, *Ruf*, *Ohr*, etc. "The main object here is rather

mechanical readiness in speaking, than acquaintance with the meaning of words." Afterward, syllables are united into words and these into sentences.

What infinite patience is required in the course of instruction thus briefly sketched, in which the teacher's mouth, the looking-glass, and constant watching and feeling of the position of the tongue, must be relied on to supply the loss of hearing, a few of the mistakes into which the pupils are most apt to fall, will be sufficient to show. We may commence with the letter *h*. It is a mere emission of breath, but yet must be made in a certain fixed manner. In attempting to imitate the teacher the pupil not unfrequently makes a sound, instead of an aspiration, or sends the air through his nose. The remedy consists, for the first mistake, in placing the pupil's hand under his own chin, and then under the teacher's, and making him perceive that there must be no vibration; for the second, in pressing the tongue into the right position by means of a paper-folder; and for the third, in pressing the pupil's nose, and preventing the passage of the air in this direction. This must be repeated, until the pupil has acquired the habit of instantly recollecting the proper position, on the one hand, and the mechanical expertness necessary to secure it on the other.

In passing next to vocal sounds, as the deaf mute has no ear to guide him, either in respect to pitch or intonation, he can be expected in many cases to utter only those which are rude and unpleasant. Sometimes these sounds are so high as to be almost a scream; sometimes extremely nasal. To remedy these defects, even very imperfectly, is a work, as all confess, of time and labor.

The sound of the vowel *a* (*ah*) is generally attended with less difficulty than any other to the deaf mute. Still, if he opens his mouth too wide, or lifts his tongue too high, he is sure to make an incorrect sound. Such cases occur; and here the looking-glass, the folder and the teacher's mouth must again be brought into active requisition.

The vowel *i* (*ee*) not unfrequently makes a great deal of trouble, but "one must not lose courage if he does not at once succeed." The letters *p*, *t*, *k*, are often difficult for the less competent deaf mutes. Such mistakes as *mpe* instead of *pe*, *me* instead of *pe*, *t*, *ch*, and *ng* instead of *k*, are of frequent occurrence. *R* is for many the most difficult sound. Indeed, there is not a sound in the whole alphabet which has not to the deaf and dumb its peculiar difficulties, and does not subject them to the danger of mistake. In respect to the sounds peculiar to the German language, represented by *ö* and *ü*, the attempt to teach their correct pronunciation is seldom if ever made. Contenting themselves with the remark that these sounds are often confounded, by those who hear, with *e* and *i*, the teachers wisely allow their pupils to say *Mehre* for *Mohre*, *Bücher* for *Bücher*, etc.

The union of different letters in one word, and the modifications in sound which hence result, constitute a still further difficulty. A long time is usually requisite, in order to bring the slow-moving organs of the deaf and

dumb to the necessary quickness in pronouncing the *short vowels*. Sometimes they pronounce *i* (*ee*) and *o* like *ä* and *u* (*oo*). Sometimes they actually drop them. A very frequent mistake is the too great prominence given to the consonants, e. g.—*w, m, n, l, r*, when connected with the short vowels, which “of course renders the sound very unpleasant and unintelligible.” The union of consonants, without an intervening vowel, which demands for their pronunciation much exercise and flexibility of the vocal organs, constitutes a special difficulty for the unpracticed organs of the deaf mute. In pronouncing such syllables as *pla, tra, abt*, he is almost sure either to separate the consonants, take breath between them, or interpose a vowel sound, as *pela, tera, abet*, etc.

It would be tedious to follow out all the errors into which deaf mutes in this toilsome process fall, and the particular directions given for endeavoring to rectify them. What has already been said will be sufficient to show that this process is correctly called by the German writers *mechanical speaking*; that much time must necessarily be devoted to it, and that with the greatest efforts only a defective utterance can be reasonably expected, even under the labors of the most experienced instructors.

2. METHOD OF INSTRUCTION IN READING ON THE LIPS.

This branch of instruction, though carried on at the same time with articulation, has difficulties of its own, which are confessed by the German teachers to be peculiar and great. As the former exercises have for their object the enabling of the deaf mute to express his own ideas in articulate language to others, it is the object of this to teach him to understand what is said *by* others, by watching the motion of the lips. How formidable the attempt (well for the deaf mutes in the German schools that they are imperfectly aware of it) will appear from considering the following circumstances, mentioned by the German teachers themselves:

1st. There are many sounds which demand positions of the organs so entirely similar to each other, as it respects external observation, that only a *very* practiced eye can discover the difference.

2d. No peculiar opening of the lips is necessary in the pronunciation of most of the consonants. In such cases it is usually decided by the vowel immediately preceding, and as the lips then conceal, for the most part, the interior of the mouth, the scholar must hence, in respect to many consonants, remain in uncertainty.

3d. In the flow of discourse, sounds run so much into one another that only a very practiced eye can seize hold of the individual parts.

4th. The pronunciation of different persons has to the eye so many variations as sorely puzzle the deaf and dumb.

5th. In connected discourse, many sounds which properly belong to words are lost, which greatly increases the difficulty of understanding by means of sight. For instance, in the sentence, *this singer ran nineteen miles*, few persons pronounce so distinctly as to make the *s, r, and n* twice perceptible, even to the ear, much less to the eye.

So great are these difficulties, both singly and in combination, that it is not pretended that mutes ever become able, in ordinary discourse, to make out each word, or perhaps the greater number. All they do is to make out a few and guess at the remainder. This was distinctly told me by the most accomplished reader on the lips whom I saw in Prussia.

Method of instruction. In learning to utter sounds himself the deaf mute has the aid of two senses, sight and feeling; in learning to read on the lips, however, he must trust exclusively to his eye. Hence the need of special exercises in this department. The following may be pointed out as the most noticeable things in such a course.

1st. At first the teacher speaks as slowly as possible, opens his mouth wide, and distinctly utters every sound. The consequence is, as I have had repeated occasion to observe, that the pronunciation of many teachers to their scholars is very unnatural, and such as is *never* heard in society. This probably is one reason also of unnaturalness observable in the pronunciation of even the educated deaf mutes, which I shall presently have occasion to notice.

2d. The most experienced teachers divide the sentences they utter into small groups of words, with pauses between them. Sometimes this division goes so far as the making of a pause after every word or even syllable.

3d. Occasion is taken as often as possible to make speaking a medium of communication.

4th. The pupil is generally required to repeat after the teacher, either silently or aloud.

5th. When the pupil fails to catch the word it is either written in the air or on a slate, to aid him. A few teachers use the manual alphabet for this purpose.

THE ELEMENTS OF HUMAN SPEECH AS APPLIED TO THE INSTRUCTION OF DEAF-MUTES IN ARTICULATION.*

We propose, in the first place, to try and explain what the elements of human speech are; and, secondly, to illustrate what we believe to be the best method of teaching deaf-mutes to make these elementary sounds, and combine them into syllables and words.

By the term *speech* we mean the expression of the thoughts by means of the voice, modified in its passage from the larynx to the outer air by the vocal organs, at the will of the speaker.

By the *elements* of human speech we mean those changes perceptible to the ear which the sound of the voice undergoes as it passes on, and of which all the syllables and words of a language are composed.

*By John Phillips, in the American Annals of the Deaf and Dumb.

The *prime* element of speech and song is produced by the vibration of the *chordæ vocales*, or vocal chords, set in motion by a stream of air passing from the lungs.

During the ordinary process of breathing these chords lie loosely, and incline toward each other at an acute angle. But by an effort of the will, as in speaking, and by the aid of certain muscles, they become extended and placed parallel to each other. In this position they are set in motion by the passing air and vibrate rapidly, making a noise, sound, or tone in the larynx.

This tone, as it passes on and escapes through the mouth or nose, becomes affected, varied, and modified by the glottis, palate, tongue, teeth, and lips, commonly called the organs of speech; and certain of these modifications are what we call the phonetic elements of any given language, or, in a wider sense, the elements of human speech.

Though the absolute number of sounds in any language may be said to be equal to the number of words in that language, yet the number of *elementary* sounds of which all the separate words of a language are composed is very limited; and on the printed page each is, or ought to be, represented by a separate symbol or letter.

The phonetic elements or elementary sounds of the English language are forty in number, according to Latham and Fowler, the most reliable authorities in England and America, and every Anglicized word in the language is made up of one or more of these sounds. They are divided into vocalic, or voice, and consonantal, or articulate sounds, and are produced, the former, by allowing the stream of air conveying the sound to pass uninterruptedly through the mouth; the latter, by checking the breath, and consequently the passing sound, by bringing certain parts of the mouth into contact.

Though the number of vocalic sounds we have the power of emitting is unlimited, yet a certain few are always agreed upon as *the* vowels of any particular language. In English we have twelve of these sounds, represented by only five letters; a striking illustration of how extremely deficient our alphabet is! So deficient, indeed, is it, that the forty primary sounds of our language have practically to be represented by twenty-three letters, our *c*, *g*, and *x* being redundant, in so far as sound is concerned.

Let us now examine the different sounds of our vowels, and account for them.

What causes the difference of sound or tone of *a* in *father*, in *fall*, and in *fate*; of *e* in *mete*, *o* in *note*, and *u* in *rule*, so perceptible to the ear?

How could we explain them in writing to a person at a distance, unacquainted with any of them? How could we illustrate them with our own organs of speech to a person whose closed ears were never penetrated by a wave of sound?

On analyzing the different vocalic sounds and their modes of production, we find they are formed and perfected in different parts of the mouth. The grave or Italian sound of *a* in *father*, the most natural of all voice sounds—the sound emitted by the infant on first breathing the breath of life; the sound, the different modifications of which are emitted by so many species

of animals, and the sound which justly takes precedence of all others in leading off the alphabets of so many different languages—is formed in, or emitted from the throat, with the mouth moderately open.

That of *a* in *ball* reaches up to the root of the tongue, and is sounded with the mouth wide open; while that of *a* in *fate* is collected in, and emitted from, the back part of the mouth.

The squeezed sound of *e* in *mete* or *ee* in *feet*, is formed in the middle of the mouth, by pressing the central top part of the tongue as closely as possible to the roof of the mouth without touching it, and forcing the breath between.

The name sound of *i*, and its long sound, as in *pine*, we have to discard altogether as a simple elementary sound, and classify as a double vowel or diphthong. Its short sound in such words as *fit* is in reality the short sound of *e* in *mete*.

The sound of *o* in *note* is collected, not in the throat, the back or middle of the mouth, but in the front part, just inside the lips.

The sound of *u* in *rule*, which is identical with that of *oo* in *pool*, is made between the lips, on protruding them; whilst that of *w*, very properly named in this respect, is produced by protruding the lips still farther, and nearly closing the circular aperture between them.

Thus we see that the peculiar tone of each vowel depends on the part of the mouth from which it proceeds, or the length of the buccal tube through which it is sounded.

The present name of our *u*, and its sound in *cube*, *tube*, etc., we have to classify as diphthongal. It originated in this manner: after the Norman conquest, our Anglo-Saxon progenitors, finding the close Norman *u* difficult for Saxon tongues to pronounce, preferred their own open sound of the letter. The proud Normans, on the other hand, disdainful to adopt the language of their conquered serfs, totally ignored the Anglo-Saxon *u*. Things went on in this way until the transition period of our language, when they compromised the matter by combining both into the diphthong *e-u*, or *u*, and thus transmitted to us in perpetuity a compound, instead of a simple or elementary vowel sound.

In treating of the sounds of the consonants, all we can do at present, without extending this paper far beyond its assigned limits, is to give the organic production of a few of them.

Consonantal sounds are those which do not coalesce into syllables and words except when joined to vocalic sounds, and pronounced with them. The former, however, can be isolated from the latter, and analyzed.

B, the first consonant and second letter of our alphabet, is sounded by closing or bringing the lips together, and then forcing them apart by the breath, or exploding the voice sound between them. If we close the lips, and, while keeping them together, try to give the name of the letter *b*, we recognize a sound, or something approximating to a sound, in the larynx. Whilst this is struggling to escape, if the breath forces the lips apart, the escaping air conveys the sound of this letter along with it.

The sound of *p* is produced organically in the same manner as that of *b*, with this difference: that while keeping the lips closed and attempting to give the sound or name of *p*, no hum or struggling sound is heard in the larynx. The breath barely presses against the lips and interior of the mouth, and on its explosion conveys the sound of this letter.

The sound of *b* is said to be sonant, because the *voice* is an indispensable element in its production. The sound of *p*, on the other hand, is called surd, because there is no voice sound used in producing it. In sounding *b*, the vocal chords are set in motion; in sounding *p*, they lie quiescent, as in ordinary breathing. Their whisper sounds are identical. If we pronounce the words *bill* and *pill* successively, both in the lowest audible whisper, the one cannot be distinguished from the other, and the only way they can be known apart is by their connection, as, *the bill is paid; the pill is swallowed*. The sounds of both are said to be explosive, because we cannot dwell upon or prolong them, as we can those of *l*, *m*, or *n*.

These two are the only pure labial or lip sounds in the language, and their representative letters have each but one sound, though in a few words each is silent, as in *psalm* and *dumb*.

M is a labial-nasal. It is formed by closing the lips and forcing the voice sound through the nose. Several species of animals utter this sound. The cow, calf, deer, sheep, and goat give it as plainly as any human being. They often give it alone, without parting the lips and giving the vocalic sound after it.

Some grammarians say consonantal sounds are peculiar to man, and that animals utter vowel sounds only. This is a mistake.

L is produced by placing the tip of the tongue against the roof of the mouth, near the front teeth, and letting the sound and breath escape through the mouth.

N is a palatal-nasal, formed by placing the tongue against the palate, stopping the passage of the breath through the mouth, and forcing it and the voice sound through the nose, with the mouth open.

The sibilant *s* is formed by placing the tongue forward in the mouth and hissing the breath out between the front teeth, with the mouth nearly closed, but the lips apart. The other sibilant, *z*, is produced in the same way, with this difference: the voice enters into the composition of the latter sound. The *s* is surd, the *z* sonant. The same relation exists between them as between *p* and *b*. From this it is evident there can be no more organic difficulty in sounding *s* than *z*, the testimony of foreigners to the contrary notwithstanding. Indeed, the difference is in favor of the *s*, as may be seen in comparing the *s* in *seal* with the *z* in *zeal*, the latter being the more complicated, as more organs are requisite to pronounce it; yet a German finds no difficulty in pronouncing the latter word, but finds considerable in sounding the former correctly, and for this reason: in German, the *s* is sonant, and the *z* surd—just the opposite of English. The Germans sound *s* nearly as we do *z*, the voice sound not being quite so strong; therefore a German, in speaking English, pronounces *seal* nearly as we do *zeal*, and complains that our

letter *s* is so hard to sound! The *z* in German is a compound sound, represented in English by the letters *ts*. The German word *Zelt*, for example, is pronounced in German as if written *tzelt* in English. Who will argue that our English word *Celt*, which we pronounce as if spelled *sell*, would be more easily pronounced if spelled *tzell*? In short, be it well understood that, organically, the sibilants *s* and *z* are more easily pronounced or sounded in English than in German, and, consequently, are sounded with greater facility by Englishmen in English than by Germans in German.

The sound of *th* is an elementary one, though represented in modern English by two letters. It has, properly speaking, two sounds, being surd in *thick*, *length*, etc., and sonant in *the*, *this*, etc. In Anglo-Saxon, the surd sound was represented by one letter and the sonant by another, both of which, unfortunately, afterward fell into disuse. The surd sound is made by placing the tip of the tongue against the upper front teeth and forcing the breath between; the sonant, by forcing the voice sound out along with the breath. There is no organic difficulty whatever in pronouncing either of these sounds. They are, at least, quite as easily made as those of the sibilants. Yet what a hindrance are they to Frenchmen and Germans in learning to speak our language correctly, because they have no sound approximating to either in their own languages. When surd, they give it the sound of *t*, as *tick* and *pat* for *thick* and *path*; when sonant, that of *d*, as *den* and *dat* for *then* and *that*.

These few remarks are all we can now make on our consonantal sounds. We have had to be very brief, and refer to only a few of the elementary sounds of our language, either surd or sonant, vocalic or articulate.

We are now prepared to take up the second part of our subject, and explain what we believe to be the best method of teaching deaf-mutes, and more especially *semi-mutes*, to produce or make these elementary sounds, and combine them into syllables and words—that is, to speak as other people do. In doing so, we shall sketch barely an outline map, leaving details to be filled in as the ground is gone over.

The first thing to be effected is to get the pupil to make a noise or sound in the larynx, by setting the vocal chords in motion. All teachers of any experience know how to begin here. When the pupil can make this sound voluntarily in a conversational tone of voice, without putting the hand to the throat, the first step has been made in advance.

This sound, as already stated, is the prime element of speech and song in man. And though we never expect to evolve song out of this rude element under existing circumstances, yet to develop it into speech is our reasonable expectation.

As good a way as any to go about this is first to convert it into vocalic sounds. For this purpose we take one of our pupils and seat him in front of us; then, opening our mouth, we give successively the sounds of *a* in *father*, *a* in *fate* *e*, *o*, and *u* in *rule*, directing at the same time the pupil's attention to the different positions of the mouth as the sounds one after the other are given. After pointing to the letters, and giving their sounds over

and over again, the pupil is directed to open his mouth and try to do the same. In trying to get his pupils to follow his directions, each teacher is thrown almost entirely upon his own resources. The signs and motions that one pupil will understand will often be incomprehensible to another. One method or expedient, which we have found to be an excellent one, is to take a short tube of some sort, and explain to the pupil by some means that in sounding the vowels the mouth is shaped into tubes of various lengths. That the sound of *a* in *father* proceeds from the extreme back part of the mouth; *a* in *fate* from the end of a short tube extending above the root of the tongue; *e* from one extending to the middle of the mouth and terminating at the top of the tongue pressed close to the roof of the mouth, but not touching it; *o* from a wide tube the whole length of the mouth; and *u* (in *rule*) from a long narrow tube not only the full length of the mouth but extended to the middle of the lips, protruded in the shape of a funnel. So soon as the pupil succeeds in sounding any of the vowels, we signify our assent, and point to the letter; then make him sound it again and again until the position of the mouth is fixed in his memory. When he sounds another we do the same, and indicate to him that it issues from a position in the mouth either backward or forward of the other one, and so on until these five vowels are mastered.

We now turn to the consonants, paying no attention to the other vocalic sounds for the present. We begin with the cognate consonants. We take *p* and *b* for instance. The sound of *p*, if it can be called a sound, is very easily given, being barely a puff of the breath between the lips; then, in giving *b*, we place the pupil's hand upon our throat, just above the projection of the thyroid cartilage, where he feels the thrill caused by the vibration of the vocal chords, and at once comprehends that the voice sound is indispensable in giving the sound of this letter, but has nothing to do in giving that of *p*; and that this is the only difference in their organic production. In the same manner we proceed with *t* and *d*, *k* and *g*, *f* and *v*, *s* and *z*.

We may next take all the letters of the alphabet in rotation. The pupil will recognize the fourteen already known to him as old acquaintances, and the twelve strangers can be introduced one by one. When this is done, the pupil may be said to have advanced a second step or stage in his course of instruction, although there are many elementary sounds he cannot yet articulate.

We now begin to exercise our pupils in combining all the consonantal sounds they have learned with each of the five vocalic sounds at first acquired, as:

bā, bā, be, bo, bu,
dā, dā, de, do, du, etc.

Then place the vowels first, as:

ām, am, em, om, um, etc.

There are a few sounds which will not coalesce, as *aq, eq, xa, xe, etc.*, which of course must be omitted.

For these exercises we strongly recommend the old-fashioned spelling-books containing the "abs," as they used to be called, or cards with the "abs" printed on them in all their combinations. These exercises serve the double purpose of combining two elementary sounds into one, and fixing the sounds of the letters or their organic productions in the memories of the pupils.

While these exercises are going on, the remainder of the forty elementary sounds may be mastered one by one, viz: *a* in *all*, *th* in *thin* and *then*, *ng* in *song*, etc. When these exercises are completed and all the elementary sounds acquired, the pupils will have advanced another stage.

Now comes our first, or if not our first, certainly our greatest real difficulty: we have now to make our pupils combine three or more simple sounds into one compound; in short to combine sounds into syllables and monosyllabic words—the most difficult task to be accomplished in the whole course of deaf-mute instruction in articulation. Such, at least, has been our experience. After the sounds of the letters are acquired it is easy to get deaf-mutes to combine two sounds into one, in *ba, be, bo, bu*. But when we come to add another sound or letter, as *bad, bet, bon, bus*, they pronounce them *bad-da, bet-ta, bon-na, bus-sa*; and it is all but impossible to make them drop this additional syllable at the end of each. The reason is this: when an ordinary person says *but*, for instance, the very instant the tip of the tongue touches the roof of the mouth, makes the *t* sound, and completes the word, that instant the vocal chords stop vibrating and the voice sound ceases. To be sure, it may cease only for an instant, yet it ceases. But the deaf-mute prolongs the sound until after the tongue is detached again from the roof of the mouth, consequently he says not *but*, merely; he says, *but-ta*. Placing the tongue against the roof of the mouth and checking the breath in saying *but*, has a tendency to stop the voice sound; and the pupil must be trained not to continue the sound with the escaping breath on the removal of the tongue. Again, it is often less difficult to break a deaf-mute from saying *but-ta* than *man-na*, because the tongue in the *t* sound checks the breath and sound for an instant, whereas in the *n* sound it only changes the course of the breath and sound from the mouth to the nose.

This defect in articulation has to be remedied before a pupil can be advanced a step further. While a pupil says *man-na* for *man* it would be futile to put him on to words of two or more syllables, or to join short words in the form of sentences. If we try to make him say, *Man is mortal*, he will say, *man-na is-sa mor-a-tal-la*, and will drawl it out in such an unnatural tone of voice as will be distressing to listen to. Unless he can be broken of this, it is far better to waste no more time in trying to teach him to speak.

But how this defect can be remedied is a question more readily asked than answered. We suggest: write down the word *man-na* just as the pupil

pronounces it, and show it to him, comparing it with the word *man* as it ought to be pronounced. Let him see "what his mouth is doing," as Mr. Bell aptly expresses it. Then make him speak it quickly; do not give him his own time to draw it out and supplement it with the *na*. Make him utter *man* in a short, explosive sort of shout; and when that is said, do not give him time to put his suffix at the end of it, but raise your hand, or clap your open palm to his mouth and keep back the *na*.

Making the pupil explode his syllables at once will have many desirable effects. It will throw life and spirit into his manner and tone of voice; it will check that mechanical drawl in his speech, so tedious to him and distressing to the ear of the listener, and with the aid of dozens of other expedients which the ingenious teacher may devise, will in time remedy the defect we are speaking of, in the majority of instances.

All deaf-mutes that surmount this last difficulty will have smooth sailing beyond. They can be taught to *speak*. By this we mean they can be taught to articulate a sufficient number of words to express their ideas and make known their wants. Their vocabulary can be extended to that of a child of five or six years, and will chiefly consist of words of Anglo-Saxon origin, easily pronounced, and not containing many silent letters. Difficult words of classic origin, or what children call hard words, we need hardly expect many of them to make much progress in articulating, though of course we may meet now and then an exceptional case.

We feel called upon in this communication to express our opinion of Mr. Bell's system of "Visible Speech as a means of communicating articulation to deaf-mutes."

Were we to consult our own feelings at present we should say nothing on the subject, but should leave it to time and experience to sanction or set aside that system. Having, however, expressed our opinion of it upward of a year ago, and that opinion being adverse to the system, we are now reasonably expected to reassert or retract it; and as our opinion is yet unchanged, all we can do is to state it again, in substance, as briefly as possible.

We have no faith in "Visible Speech as a means of communicating articulation to deaf-mutes," as treated by Mr. A. G. Bell, in the *Annals*,* because it is inapplicable to the purpose; because neither the system nor any symbol of it has ever yet been the "means" of communicating the articulation of a single elementary sound to any deaf-mute, or ever can be; because deaf-mutes have to learn to articulate before they can understand the symbols or alphabet of "Visible Speech," or the "deep meaning underlying" these symbols; because, in short, Mr. Bell "puts the cart before the horse," for it is articulation that is the means of communicating "Visible Speech" to deaf-mutes.

Indeed, we are thoroughly convinced that instead of "Visible Speech" being a help in teaching deaf-mutes to articulate, it is a great hindrance; and that, however successful Mr. Bell may be in his laudable endeavors, he would be much more so if he could resolve on throwing his "Visible Speech" to

*Vol. xvii, p. 1.

the winds, and substituting the letters of the alphabet as the representatives of primitive sounds, deficient as they are in number.

That we are correct, we think will be evident from the following considerations.

In teaching an ordinary child the alphabet, we point to each letter and name it, the child naming it after us. In commencing to teach a deaf-mute to speak, we point to each letter and give its *sound*; but as the mute cannot hear, we have to show him how the sound is made.

As an example of the manner in which a deaf-mute is taught to articulate a particular sound, let us take that represented by the letter *m*, and compare the ordinary method with that of Mr. Bell. The teacher, after pointing out the letter, closes his lips in the presence of the pupil, and placing one of the deaf-mute's hands upon his (the teacher's) throat, and the other upon his nose, sets the vocal chords in motion, and this produces the nasal hum, the peculiar sound of this letter. Whilst the teacher continues to prolong the sound, the pupil feels the thrill caused by the vibration of the vocal chords in the larynx with the one hand, and the thrill at the sides of the nose and the escaping breath with the other. After the repetition of this a few times until the mute understands to what his attention is being directed, he is motioned by his teacher to close his own lips, place one of his hands upon his own throat, and the other upon his nose; and if he succeeds in making the thrills in his own throat and nose, he has the required sound, for no one can produce these thrills with closed lips without making the sound represented by the letter *m*. At first the pupil may make some very awkward motions in trying to imitate his teacher. He may make a disagreeable gurgling noise in the throat, or expel the breath too forcibly from the nose, but under the direction of his teacher he soon gets over this, and after making the real sound a few times and finding how easily it is done, he becomes encouraged. After repeating it for a few days or weeks in succession along with other sounds, and especially after combining it with the vowel sounds previously acquired, he will never forget it. He will sound it *instantaneously* on the letter being pointed out to him, without waiting to think *how* the organs of speech are to be placed, and with as little hesitation as an ordinary child gives its name.

This is the method we followed before ever hearing of "Visible Speech." This was the method followed in Germany before we were born.

Now for Mr. Bell's method. Instead of taking the letter *m* as the representative of this sound, he introduces his symbol. He represents this simple sound by a compound character, consisting of four elementary parts, or *simple* characters. These simple characters are straight and curved lines, arbitrary representatives of the under lip, the nose, the sound of the voice, and the verb *to shut*. These four elementary signs, combined in a certain manner into a compound symbol, represent the sound of *m*, and when explained, mean "lip, shut, voice, nose," or, "Shut the lips, and pass the voice sound through the nose."

This symbol, and all its parts, Mr. Bell now explains in full to his pupils.

Well, of course they all at once shut the lips, pass the voice, and give the sound of the letter *m*? Oh, no; not at all! What then? Why, Mr. Bell just takes his pupils one by one, and goes through the very same *modus operandi* we have just been describing!!

Not one of his pupils even understands the symbol, or knows anything about the "deep meaning underlying it," until he has learned the organic production of the sound that symbol represents; nor then either, in all cases, we are inclined to believe.

Unless we look upon Mr. Bell as an enthusiast, it is inexplicable to us that, after going the rounds we have indicated in teaching a deaf-mute the organic production of an elementary sound, he attributes his success in making him produce that sound to one of those symbols of "Visible Speech."

In conclusion, we freely confess that all the information we have had in regard to "Visible Speech" as a means of instructing deaf-mutes is contained in the article mentioned, and if we misrepresent the utility of that system we do so involuntarily. That article is written in such plain, unequivocal language, that we do not think it possible we can be mistaken.

If at any future time we find we are in error in regard to the system, we shall take great pleasure in acknowledging it.

We believe that, whether "Visible Speech" is a help or a hindrance, Mr. Bell has done good service in pressing the question of articulation on the attention of the educators of the deaf and dumb, and that the time is gone by when a child who loses his hearing after learning to speak must necessarily lose his speech also.

ON ATTEMPTED CURES OF DEAFNESS.*

As it is desirable that the credulous portion of the community should, at all times and on all subjects, be guarded against the designs of traveling doctors, I propose to examine and to state, in the present letter, all that zeal and science and humanity have been able to effect for the physical relief of the deaf and dumb, in order that a plain wayfaring man may form his own judgment as to the benefit he may probably derive from seeing an advertising or a be-puffed aurist.

I am willing to allow that there are cases of partial deafness that may be relieved by the simple modes which are known to every well educated surgeon; but my remarks will chiefly refer to the attempts to cure *total deafness* and are not intended to apply to the regular practitioner, but to that class of professionals who prey on the unwary, and by their exorbitant

* By Charles Baker, Head Master of the Institute for the Deaf and Dumb, Yorkshire, England.

demands and magnificent promises of benefit to be derived, tax the pockets of the community, and bring the art of healing into disrepute.

Empirics abound in our country, and are not confined to those who profess to cure. A particular preparation is found serviceable in removing or alleviating a complaint. With no more knowledge than this bare fact, some person who hears of it and has the same complaint, or who fancies he has it, applies the remedy, without considering—indeed, without the means of knowing, if he did consider—whether he is in the same circumstances as to habit, temperament, diet, etc., as the individuals previously relieved. Should the nostrum be successful, or be thought to be successful (for the patient's natural constitutional vigor may have triumphed over the disease), its fame is trumpeted forth; should he experience no relief, the application of the intended remedy is soon forgotten. Empiricism, in its best sense, is not to be relied upon, nor should an experimenter, known as such, be suffered to enter the field against that man whose practice is founded less on his own experience than on a knowledge of the parts and offices of the wonderful moving and reasoning machine whose irregularities he is called upon to repair, and restate in their native vigor. Hence the danger of universal medicines; the folly of single specifics; hence, too, the misleading tendency of a custom into which many reputable medical practitioners have fallen, of appearing to countenance empirical preparations by testifying to their efficacy.

Every important organ of the body is liable to a variety of disorders; now, what can be thought of a practitioner who professes to cure all the disorders, of *only one organ*, by a single specific? Yet such is a common profession, and it is encouraged, as the victims to the practice can readily testify.

The human ear is one of the most delicately formed organs of the human frame. It is subject to a great variety of diseases; the parts adjacent are also subject to diseases by which this organ is affected. Some of these disorders occur before birth, some are not developed till after birth, and some supervene on other diseases. The principal diseases to which the organ itself and the adjacent parts are liable, are the following:

- Malformation of the auricle, or external ear.
- A diminished or an excessive secretion of wax.
- Obliteration of the auditory passage.
- An enlargement of the auditory passage.
- Extraneous matter in the Eustachian tube.
- Closure of the Eustachian tube.
- A gristly consistence of the auditory nerve.
- Disease of the brain.
- Diseases of the throat and glands.
- The auditory passage being loaded with hardened wax.

The growth of polypi from the lining membrane of the auditory passage. Total deafness, as I have said, follows upon various diseases. The records of the various institutions will show that deafness follows upon hydro-

cephalus, brain fever, scarlet fever, measles, dentition, convulsions, inflammation of the lungs, colds, small-pox, whooping-cough, and other diseases.

I would therefore ask any rational person to consider, if the man who professes the cure of the various diseases of the ear, and its parts, by any *one* remedy, is likely to be successful in *many* cases, the diseases being so distinct, and the *causes* of such diseases so totally different. My experience among the deaf and dumb has extended over fifteen years, and during the whole of that time I have inquired much into the physical means employed to restore hearing. I have heard of some instances of partial success in cases of acquired deafness; but I have heard of but one single instance in which a totally deaf person was restored to hearing, and this was at Brussels fifteen or sixteen years ago. This case I only know of by report, and have never seen it recorded. Hundreds of attempted cures have been made known to me; professional men of high character and attainments have devoted themselves to the subject, but in all cases they have ultimately despaired of success, have left the practice, and the ground, thus deserted by regular practitioners, under the impression that nothing satisfactory could be achieved, has been most profitably occupied by empirics, and ignorant pretenders.

Two hundred years ago it was a general opinion that dumbness was caused by some organic defect in the organs of speech. It is now well known that the deaf have the power of producing vocal sounds, and indeed of speaking and reading, and that these persons are dumb only because they are deaf. When this was first ascertained, it was natural that every method should be resorted to that science or medicine offered, to accomplish their restoration to hearing, for possessing this faculty, language would soon be acquired, and they would be at once restored to the society of their fellow men.

Many distinguished physicians have, in different places, directed their skill and science to various modes of curing or relieving deafness. Among these, the much lamented Sir Astley Cooper and Mr. Cleland, in England; Drs. Itard and Deleau, in France; Hendriskz and Guyot, in Holland; and Hymly, in Germany; may be mentioned as having taken extraordinary pains to insure success in the means they devised and adopted.

It is now universally believed among those who have given the most impartial and disinterested attention to the subject, that there is nothing sufficiently encouraging in all that has been done to warrant the conclusion that deafness can be removed, though it may be alleviated in some cases, in a slight degree, and that the very few instances of its removal must be regarded as isolated exceptions, which do not destroy the general principle.

Such have been the efforts of the skillful and the scientific to remove deafness, and so little the success by which they have been attended. Enough, however, has been done to show that it is difficult, and generally impossible, to discover *the cause of the deafness*; and that when it has been discovered in a few instances, the *most various modes of treatment have failed in imparting hearing*; and enough to lead any one to the very reasonable con-

clusion that the man who professes to restore the deaf and dumb to hearing and speech is merely a pretender; and that if he professes to do this by any single mode of treatment, he should be driven from respectable and informed society, with the stigma of impostor attached to his name.

HISTORY AND METHODS OF DEAF-MUTE INSTRUCTION*.

The eye of the deaf-mute is bright and active. All the wealth of beauty in form, color, and arrangement in the world around him, is open to his enjoyment. His only physical disability is the want of hearing. In most cases, the closest inspection can discover no imperfection in the ear of the living person, and after death, dissection detects none. For some mysterious reason, the auditory nerve fails, in his case, to transmit to the brain the vibrations of sound. A casual observer might regard this as an inconvenience, rather than a serious deprivation. To the well-furnished mind of the scholar, even total deafness brings no direct infliction. It is simply cutting off certain channels of communication with the outward world, and does nothing to impair the value or the availability of the treasures within. Deafness, to a mature mind, is only a negative loss, not a positive infliction. Notwithstanding these considerations, sad experience shows that when total deafness occurs at birth, or in the early years of life, it is one of the sorest calamities that afflict humanity. The deaf-mute is cut off almost entirely from communication with his fellow-men. He hears nothing of the conversation of the family circle and the social meal. Of the incidents occurring in the community of which he forms a part, and which make up so much of the history of individual life, he knows only what takes place under his own eye. A large portion of our knowledge, in the early periods of life, is derived from the observation and experience of others. The channels which render this light and intelligence the common property of other minds, are to the deaf-mute closed. He knows nothing of the shape of the world in which he lives, of the races that inhabit it, or of their past history. The family traditions of place and country, the exploits or renown of ancestors, which might excite a worthy pride or stimulate to an honorable ambition, never fall upon his palsied ear. More than all, his infirmity draws a thick veil over the realities that lie beyond the present life, and hides from his view the immortality that awaits him. So dark and inert is his mind, that the great problems of a future life, fail to awaken his curiosity or excite his attention. There is no authenticated case on record of a congenital mute who, by his own unaided efforts, has found out the being of a God, or discovered the fact of his own immortality. It is the universal testimony of educated mutes, that previous to instruction, they had no knowledge of

* By Rev. Collins Stone, in American Annals of the Deaf and Dumb.

these great truths. The deaf-mute, therefore, though he may be living in a Christian community, and the object of tender affection, yet, from the ignorance and terrible darkness of his condition, appeals most touchingly to every kind feeling of our nature. It is estimated that at least five hundred thousand of the human family are thus afflicted.

As the same causes that now produce this infirmity, have always existed among men, deaf-mutes have probably, in all ages, constituted a portion of human society. Repeated allusions made to them in the Scriptures, and in ancient history, confirm this supposition. Their condition has of course been modified by the kind and degree of the civilization in which they have lived, yet we have abundant evidence that their lot has been a hard one. In early times, and in uncivilized communities, they were regarded as monsters. They were thought to be under the special curse of God, and their infirmity was looked upon as the direct result of Satanic influence. Deaf-mute children were often put to death as soon as their infirmity was discovered. The familiar couplet of Lucretius:

"To instruct the deaf, no art could ever reach,
No care improve them, and no wisdom teach."

seems to have been the judgment of thinking men, upon the hopelessness of their condition. As late as the fourth century, Augustine declared that, "as faith cometh by hearing," it was manifestly impossible to the deaf-mute; he could neither hear the word, nor learn to read it. The code of Justinian, which seemed to embody the essential principles of right, for all countries and for all times, by positive and distinct enactment, denied the congenital mute all civil rights, consigned him to perpetual legal infancy, and considered him as incapable of managing his own affairs, or of transmitting his property.

During the golden days of Grecian and Roman refinement, the art of expressing ideas by pantomime was much cultivated, and was carried to a high degree of perfection. It is related that a contest once took place between Cicero, the eloquent Roman orator, and Roscius, the great comedian, to see which could express a thought most forcibly, the one by his gestures, or the other by his words. The very proposal of such a trial, indicates the attention which had been given to this method of communicating ideas. The sculptor, by attitudes and expressions of the countenance, caused the breathing marble to speak forth the feelings of the soul. The painter pictured upon canvas the course of history, and described the progress of nations, and the exploits of individual men. Ideographic language was in use, particularly among the Chinese and the Egyptians. It is remarkable that it should never have occurred to the gifted men of those times, by some of these methods, to address the eyes of that large class among them, whose ears were closed to the entrance of sound. We search, however, the records of Grecian and Roman civilization in vain, for the account of a single deaf mute being educated, much less for the establishment of a school or system of education for their benefit. Individual cases may have occurred in the

course of these long, dark centuries, in which ingenuity and affection discovered methods to break in upon his isolation, and bring him forth to the light. If such cases existed, they were single spots of brightness in a field of wide-spread and impenetrable darkness. The Scriptures tell us that the touch of the Master brought instant restoration to many of these stricken ones; and it is only under Christian institutions that their condition has excited attention, and efficient means have been taken for their emancipation.

To Pedro Ponce de Leon, a Spanish monk, of the fifteenth century, is usually accorded the high honor of being the first successful instructor of deaf mutes. Ponce was born in the city of Valladolid, in the year 1520. His first pupils were two brothers and a sister of the Constable of Castile, and afterward he is supposed to have had a considerable number under his instruction. According to his own account, he taught persons who were deaf and dumb from birth, "to speak, to read, to write, to keep accounts, to repeat prayers, to serve the mass, to know the doctrines of the Christian religion, and to confess themselves, *viva voce*." To some he taught Latin, to others Latin, Greek and Italian. It is quite possible, that some of Ponce's pupils were of a class who retained a portion of their hearing. The stories of these times partake largely of the marvelous, and Ponce's account of his work should doubtless be taken with allowance, yet he was probably highly successful as a teacher. Ponce died in the Convent of Ona, where most of his life was spent, in the year 1584, greatly honored for his benevolence and genius.

Some thirty-six years after the death of Ponce, John Paul Bonet, also a Spaniard, published an extended and valuable treatise on the art of deaf-mute instruction. The work of Bonet, now extremely rare, has the distinction of being the first formal essay published on this subject. It is a production of great merit, and shows its author to have been a man of brilliant genius. The manual alphabet, so generally in use among the deaf and dumb, is first found in Bonet's works, and he has been regarded as its inventor. It is known, however, to have been in use at an earlier period. Bonet died in 1620.

The first English writer on this subject was a physician by the name of John Bulwer, who, in 1648, published a book entitled "Philocophos, or the Deafe and Dumbe Man's Friend." On the title-page of his book he claims that "a man borne Deafe and Dumbe may be taught to Heare the sound of words with his eie, and thence learn to speak with his tongue." Bulwer was also the first distinctly to propose the use of pantomimic signs, as a means of teaching language.

The first practical teacher of deaf mutes in England was Dr. John Wallis, an eminent Professor of Mathematics in the University at Oxford. Dr. Wallis was distinguished as an able writer on deaf-mute education. His first work, "Grammatica Linguae Anglicanae," was published in 1653. His writings passed through several editions, and are held in high estimation at

the present time. One of his pupils was, in May, 1662, exhibited before the King and nobility, and the Royal Society of London.

In 1680 George Dalgarno published his "Didascalocophos, or the Deaf and Dumb Man's Tutor," an original and learned work which attracted great attention. Prof. Porter styles it, "one of the most remarkable and important productions in the whole history of the art."

During the sixteenth and seventeenth centuries, at various intervals, the peculiar conditions of the deaf mute attracted the attention of thinking men, and we find in Italy, in Holland, in France, Germany and Great Britain, notices of individual mutes who received education. The processes by which this was effected, however similar they may have been, were doubtless independently discovered by those who put them in practice. It should be remarked, however, that this relief came only to isolated cases—generally to members of noble families, who were able, by their wealth and influence, to secure such instruction, and richly to reward it; while the generations of deaf mutes, doubtless to be found then, as now, in all countries and communities, were left to grope their way in darkness and solitude through the world. It is only about a hundred years since, even in the most prominent countries of Christendom, systematic provision has been made for the great mass of this sadly afflicted class of society.

The middle of the eighteenth century is the brilliant era in the history of deaf-mute instruction. About this time, De l'Epee in France, Braidwood in Scotland, and Heinicke in Germany, founded Institutions, which, under various changes, remain to the present day. But more than this, it is through the labors and writings of these noble men, that the care and education of the deaf mute has been recognized and accepted in all Christian States, as the indispensable duty of humanity.

Among the names that shine out on the page of history, as the distinguished benefactors of the class we are considering, that of the venerable Charles Michael De l'Epee, is without question, entitled to the highest place. De l'Epee was born at Versailles, on the 25th of November, 1712. His father, an architect in the service of Louis XIV, impressed his children from their earliest years with principles of benevolence and piety. Young Charles early developed a character marked with purity, simplicity, and an ardent desire to do good to his fellow-men. When he reached the age for choosing a profession for life, his desires turned strongly to the service of the church, and he went through a course of study to fit him for its duties. On applying for ecclesiastical orders, however, he was required to sign a formula of doctrine to which he could not assent. This he refused to do. He then turned, reluctantly, to the law, and after making the necessary preparation, was admitted to the bar, and entered upon his new profession. He found it exceedingly distasteful, and soon became disgusted with the atmosphere which surrounded him. He had no pleasure in duties which brought him in contact with so much chicanery, duplicity and crime, and longed for some employment more congenial, and which might more fully gratify the ar-

dent wish of his heart to be useful. While his way seemed thus hedged in, an incident occurred that opened to him the path of usefulness. Providence designed him to occupy.

Calling, one day, at the house of a friend, he noticed two young ladies engaged in needlework, and on addressing them, received no reply. Repeating his remark, he still failed to secure from them the least attention. On expressing his surprise at this seeming rudeness to their mother, who soon entered the room, she informed him that her daughters were deaf and dumb; and added, with tears, that their teacher having just died, they were now left without any instruction. The sympathies of the benevolent Abbe were warmly interested. "Believing," he says, "that these two unfortunates would live and die in ignorance of religion if I made no effort to instruct them, my heart was filled with compassion, and I promised, if they were committed to my charge, that I would do all for them I was able." De l'Epee now entered with enthusiasm upon his life-work. He at once opened a school for indigent deaf mutes, maintaining them at his own expense. He at first refused to receive the children of the rich, and afterward consented to do so with extreme unwillingness. "The rich," he said, "come to my house by tolerance. It is not to them that I have devoted myself, it is to the poor only; but for them I should never have undertaken the instruction of the deaf and dumb."

De l'Epee was a man of gentle spirit and of disinterested kindness. His income was but £400. Reserving £100 for his personal expenses, he devoted the remainder to the support of his indigent pupils, whom he regarded as his own children, giving all his strength in self-denying labors for their improvement and happiness. His warm-hearted kindness and his brilliant success, soon attracted the attention of the world. Crowned heads, and the highest orders of the nobility, crowded to his humble establishment to witness the progress of his pupils. Several incidents are related which show the simple and earnest spirit with which he pursued his labor of love. In 1780 the Ambassador of the Empress of Russia, on visiting his school, offered him valuable presents in the name of his Sovereign. The Abbe, declining the benefaction, replied to the Ambassador that he never received money, but if his labors seemed to impress the Empress as worthy of any favor, he desired her to send some poor ignorant child from her dominions, to whom he might give instruction.

Joseph, Emperor of Austria, also visited De l'Epee, and was astonished at his success. Expressing his surprise that so excellent a man should be in such straightened circumstances, he offered to confer upon him the revenue of one of his estates. Declining the generous offer, the Abbe replied: "I am now an old man. If your Majesty desires to confer any gift upon the deaf and dumb, it is not my head, already bent toward the grave, that should receive it, but the good work itself. It is worthy of a great prince to preserve whatever is useful to mankind." The Emperor, readily interpreting his wishes, dispatched one of his ecclesiastics, the Abbe Storch, to Paris,

who, after acquiring the art, established at Vienna the first National Institution for the deaf and dumb in Austria.

De l'Epee died in 1789, at the age of sixty-seven years, greatly beloved and lamented. He was buried, with distinguished honors, in his native city where a monument is erected to his memory.

In 1760, five years after the opening of the school at Paris by De l'Epee, Thomas Braidwood commenced the instruction of the deaf and dumb at Edinburgh. He at first began with one pupil, the son of a rich merchant of Leith. The number afterward increased, and he attained a success which excited great interest among the distinguished men of his time. Braidwood kept his methods a profound secret, endeavoring to make his art the source of pecuniary emolument. A lady is said to have paid £1500 sterling, for the education of her son in Braidwood's school. The great expense of this school, led to the establishment of the Asylum at Kent Road, London, where indigent deaf mutes might receive a free education. The London Asylum was opened in 1792, under Dr. Thomas Watson, a nephew of Braidwood. In 1782 Braidwood's school was removed to Hackney, near London, where it continued till his death, in 1806. His methods of teaching remained a secret in his family for sixty years. His school was the parent of those since established in the British Isles.

Samuel Heinicke was born near Weissenfels, on the 10th of April, in the year 1729. His father, a simple agriculturist, intended his son for the same employment. Heinicke, however, feeling a decided repugnance for so quiet a life, left his home, and, at the age of twenty-one, entered the military service of the Elector of Saxony. He remained here but a few years, in the mean time devoting his leisure moments to literary pursuits, in which he was greatly interested. He entered the University at Jena at the age of twenty-nine, applying himself to his favorite studies with great zeal. It is a singular coincidence that the same year, 1755, in which De l'Epee opened his school at Paris, Heinicke became engaged in the instruction of a deaf-mute boy in Dresden. In April, 1772, Heinicke, with nine deaf pupils, opened at Leipsic the first Institution for deaf-mute instruction in Germany, which has since been followed by a large number of flourishing schools. He continued his benevolent labors with marked success till his death, which occurred on the 30th of April, in the year 1790. A circular, issued a few years since to raise funds for a monument to his memory, thus speaks of him. "He was a man of pure character, of a sensitive and profoundly religious spirit, gifted with the rarest qualities of genius, of a clear intellect and noble heart; who, full of the liveliest sympathies with the misfortunes of his fellow-men, made it the labor of a life, consecrated to God and humanity, to comfort the forsaken, to dry the tears of those who wept, and to minister to all who were in distress."

It thus appears that before the close of the eighteenth century, the work of deaf-mute instruction had become fairly inaugurated on the continent of Europe and in the British Isles. It has been fully demonstrated that the deaf mute was an intelligent being; that his infirmity brought upon him,

not mental imbecility, but an ignorance which could be in good part removed. The obligation was also acknowledged by governments and by christian men, to alleviate and remove the disability that bore so heavily upon him.

While in Europe, deaf mutes had thus excited general sympathy, and means were being provided for their instruction, in this country their condition had scarcely attracted attention. A single exception to this remark requires a brief mention.

In the year 1812, in the family of Col. William Bowling, of Goochland county, Virginia, were three deaf mute children. The reputation of the school at Edinburgh had already reached this country, and a brother and sister of Col. Bowling had been sent there for education in 1795. John Braidwood, grandson of Thomas, was induced by the liberal offers of Col. Bowling, to come across the sea to undertake the education of his children and establish a permanent school. He soon fell into dissipated habits and the scheme proved a failure.

The first Institution for deaf mutes on this continent, as is well-known, was opened at Hartford, on the 15th of April, 1817. The circumstances which led to its establishment, are too recent and familiar to require recital here. The desire of a prominent physician of that city to secure the education of a daughter, led to the founding of a school which was at first thought to be sufficient to educate all the deaf mutes of the country. A little inquiry, however, revealed the magnitude of the need, and other schools soon followed. The Institution at New York was opened in 1818; that in Pennsylvania in 1822; the one in Kentucky in 1823, and this in Ohio in 1829. From the original fountain, a noble stream has gone forth, bearing the blessings of education to all the deaf-mutes of the country. The duty to care for them has been willingly accepted, and there is now scarcely a State in our widely extended domain that does not offer to them the opportunity of instruction.

In the rapid view we have taken of the interest which deaf-mutes have excited in the world, I have refrained from commenting upon the peculiar methods that have been adopted to gain access to their minds and secure their development. I will now give to these a few moment's attention.

We have seen that the infirmity of the deaf-mute bears upon him in two directions. It cuts him off from intercourse with his fellows, and leaves him in profound ignorance, by closing up from his mind the avenues of knowledge. No system of education is of value to him that does not bring relief in these two particulars. It must give him the means of easy and rapid intercourse with others, and it must open his mind to the sources of information. How this can best be done, is a problem which has been long and carefully studied by many able minds, and its solution attempted by two widely different methods.

Nearly all the early efforts to educate the deaf and dumb, proceeded on one theory, viz: that speech is essential to thought; that the mind can only attach ideas to vocal sounds, and that, consequently, all ideas must necessa-

rily be communicated through this medium. This theory seems to reach back to the first communication of language to man by his Creator, and supposes that God gave man, by speech, the means of acquiring all the knowledge he is capable of receiving.

The earliest and most distinguished advocates of this theory, was John Conrad Amman a Swiss physician, who, in 1690, published an able work in support of his views. Amman ascribed to spoken language a mysterious and almost divine power. "In the human voice," he says, "may be said to dwell the very essence of life. The voice is a distinct emanation of that immortal spirit which God breathed into the nostrils of man when he created him a living soul. Among the immense number of gifts of God to man, it is speech, in which eminently shines forth the imprint of divinity. In like manner as the Almighty created all things by his word, so he gave to man, not only in appropriate language, to celebrate worthily his author, but further, to produce by speech whatever he desires, in conformity with the laws of his existence."

Heinicke drank his inspiration from the work of Amman, and embraced essentially his theories. To his mind, also, "it was the voice which showed forth the glory of God's gift to man. It was speech only which fully comprehended, contained and expressed the movements of the soul. Every other means of communication was dead." Views so extravagant, would naturally soon be materially modified by thinking men, yet, we find that, even to the present day, while no one will confess his acceptance of such absurd notions, their general influence is widely felt in the efforts made to restore this lost faculty to the deaf mute.

With regard to the vital point in this theory, that ideas can only be communicated by vocal speech, it is proper to say that it is a baseless and wholly erroneous assumption. Vocal sounds, so far from being the only basis or medium of thought, are simply the conventional and arbitrary representatives of ideas. They convey no meaning whatever to the mind, in the first instance, but must be explained by some other means, before they have any significance or power of suggestion. What idea do you obtain from the sound of a word, in a foreign language, which you do not understand? No amount of repetition will make it intelligible to you. The sound you recognize, but it must have an interpreter before it can convey ideas to your mind. To the deaf mute, the case is still worse. It should never be forgotten, that by the loss of hearing, his relation to vocal language is entirely changed. To him words have no existence; he hears them not. No vibrations fall upon his palsied nerves, and no art or theory can change this essential fact of his experience. Vocal language is abnormal to him. Sounds do not address the eye, which, in his case, must perform the duty of the ear. He only sees the rapid motion of the organs which produce the sounds, and these, difficult as they are to distinguish, must be interpreted to him by some medium of which his eye takes cognizance. No substitution of other words or sounds will avail, for, as already remarked, these have no existence to him as sounds, and no meaning as words. What, therefore, must you do

in teaching a deaf mute to speak? You impose upon him two most difficult tasks. He must first distinguish by the movement of the vocal organs, rapid and scarcely perceptible as they are, the words that are spoken. These *must* be explained to him, in the first instance, by significant signs. When he comes to understand the words and their meaning, he must learn to arrange his own organs in the way to produce, not some uncertain sound, but precisely those demanded by the combination of letters that compose the word.

Suppose you who speak, were reduced to this method of communication in your family circle, making no sounds and using only the lips. You understand the meaning of language, and know what to say, and this, with the deaf mute, is two-thirds of the battle. You will find, however, on the experiment, that you must be near the person addressed, who must concentrate upon you his profound and painful attention, that you can usually speak to but one person at a time, that your conversation must be confined to familiar subjects, or those which lie within a very limited range, that frequent repetition will be inevitable, and that you must enunciate your words with careful and tedious deliberation. You will be specially fortunate, if with all these restrictions, you are able to make out, here and there a word of the sentence addressed to you, from which you may guess the rest. If, in addition, you were to have the utterance of sounds which have no ear to modulate or guide them, you would soon be inclined to raise the inquiry whether there might not be some other more intelligible and agreeable method of communication.

There is a better method, a language that appeals directly to the perceptive faculties of the deaf mute, and needs no process of translation to make it understood. It is the language of signs, or of pantomime.

The language of pantomime is common to man in all ages, and in all states of civilization. It is invariably resorted to by voyagers, in conversing with the natives of newly discovered countries, and is universally understood. The Rev. William C. Woodbridge, an eminent scholar, and a former teacher of the deaf and dumb, affirms that he has seen this language employed in intelligent conversation with an Indian, a Chinese, a Sandwich Islander, and with deaf mutes from England, Scotland, Germany, France Italy and Switzerland. A native of the Sandwich Islands, visiting the Asylum in Hartford, gave an account of his early life, which was fully comprehended by the pupils. Some years since, when the Amistad Africans were in Hartford, waiting a judicial trial, they were visited by Dr. Gallaudet, at that time the Principal of the Asylum. He found himself able to converse with them freely, and drew from them the particulars of their country, their families and the incidents of their early life. The Indians in our western territories are divided into many distinct tribes, speaking different dialects yet they easily hold converse with each other by a common language of pantomime. Many of these signs are identical with those used by deaf and dumb, and a bright mute would find no difficulty in conversing with them on ordinary subjects.

The definiteness and copiousness of the language of signs will, of course, vary with the intelligence of those who use it. All language is a creature of society, rather than of individual life, and is expanded and refined by use and the wants of men. The language of signs, as employed by deaf mutes in an Institution, and by the cultivated men who make it the medium of their instruction, is capable of indefinite expansion, and of expressing all ideas that can be expressed by articulate sounds. It has the great advantage of grouping together several ideas, and representing them at once before the mind, as a painting, which in language must be expressed. In simple narratives, and in depicting the emotions, signs are far more expressive than words, and they also surpass them in the rapidity of communication on common subjects. You would be much more interested in the story of the boy stealing the old man's apples, if represented in graphic signs, than if related in words. A description of Niagara, the tumultuous rush of the seething waters, the awful plunge, the clouds of spray, pictured to the eye in expressive pantomime, is far more impressive than if given in written or spoken words. So the countenance beaming with love, kindling with expectation, glowing with admiration, scowling with hatred, or flashed with anger, describes these feelings much more vividly than the simple words used to represent them can do. Contrast, too, the clasp of affection with the impassive phrase that affirms its existence, or the glare of defiance with the strongest expression of such feelings in language. How tame would be the conversation of the Frenchman and the Italian without the accompanying gesticulation! Compare the eloquent periods of the advocate, when delivered with forcible and appropriate action, with the same words pronounced with a frigid countenance and an immobile person, or the expressive pantomime of the tragedian, with the same language either spoken or written, without this accompaniment, and you will recognize something of the power of significant gesticulation in the common intercourse of society. By means of the sign language, social worship is conducted in all our Institutions, and is exceedingly effective. The beautiful narratives of the Scriptures, and the truths of Divine revelation, can thus be brought clearly to the comprehension and to the interested attention of the deaf mute. The events of history, the facts of science, the theories and teachings of philosophy, can be as clearly presented to them by this expressive medium, as they can to hearing persons by oral speech.

The learned Jerome Cardan, Professor in the University of Padua, first announced this principle, upon which alone the education of the deaf mute can be successfully accomplished. Cardan thus expresses himself: "Writing is associated with speech, and speech with thought; but written characters and ideas may be connected together without the intervention of sounds, as in hieroglyphics. If sounds are not essential to render written characters intelligible, no more are they to explain gestures or signs." It is not known that Cardan put his principle, so important and so distinctly brought out, to the test of practical experiment.

The Abbe De l'Epee, when at the age of sixteen, received from his tutor

the same principle. It profoundly impressed his mind, and he afterward made it the basis of his system of instruction. The Abbe states it in the following terms: "There is no more natural and necessary connection between abstract ideas, and articulate sounds which strike the ear, than there is between the same ideas, and the written characters which address the eye." It seems surpassingly strange that so simple a principle, and one so constantly proved by observation and experience, should not earlier have been put to practical use, and stranger still that it should ever have been denied. It was sharply disputed, however, by the cotemporaries of De l'Epee, who, were the champions of articulation, and was considered by them a philosophical heresy. De l'Eppe demonstrated the truth of his proposition by the best possible evidence, that of successful experiment.

But written characters require an interpreter to the deaf mute as well as sounds; how shall they be made intelligible to him? How shall he know the meaning of written language? The Abbe soon came to the conclusion that the best instrument for explaining it, was the natural language of the deaf mute himself—that of pantomime—and that this, corrected, enlarged and perfected by a skillful hand, would prove adequate to interpret written words, and to express every shade of thought. The development and application of this principle by De l'Epee was the crowning glory of his life, and for this, his name will be embalmed in grateful remembrance as long as, among the generations of men, there shall be found one whose eye must perform the service of the ear.

The experience of a hundred years in this branch of education has happily brought all practical teachers into substantial agreement, with respect to the indispensable value of signs in developing the mind of the deaf mute, in explaining words, and in communicating facts. Even the most strenuous advocates for articulation as an aid to the mute in his intercourse with society, give their emphatic testimony to their worth and necessity in this regard. For his social enjoyment they are equally indispensable. It is as cruel as unwise, to deprive a mute child, in a family or in a school, of the pleasure and aid of his own beautiful and graphic language, and to compel him to express his ideas and wants in the, to him, unnatural, distasteful and unmeaning form of words, which he cannot understand, till they are explained to him. The fact, on the one hand, which the most enthusiastic advocate of articulation must admit, that the highest attainment of articulate speech, when it is made the medium or the end of education, can only give to a comparatively small proportion of deaf mutes a slow, tedious, uncertain means of communication with hearing persons, on a limited range of themes, and on the other, that signs give the power to address them when assembled in companies, of conducting social worship (which is entirely impracticable by articulate speech), and of educating *all* who are afflicted with deafness, should, aside from other considerations, have some weight in deciding the comparative merits of the two systems we have discussed.

Theories apart, no one can dispute that by means of signs, thousands of deaf mutes, relieved in a great measure from their disability, have been re-

stored to their friends and society, and not a few have risen to eminence as men of genius and culture. It is also worthy of special remark, that not a solitary instance has appeared in history, of a congenital mute, educated by articulation, who has risen to any prominence. The fact has also some significance, that the most successful articulators of whom the world has heard, have resorted to other methods of communication in intercourse with their familiar friends. Saboureaux de Fontenai, the favorite pupil of Pereira, who was a cotemporary of De l'Epee, was exhibited before the Academy of Sciences at Paris, for his ability to articulate, yet he was in the habit of conversing with his friends by spelling and writing. Lowe, the celebrated pupil of Dr. Watson, and a deaf mute barrister of London, informed Dr. Peet that his usual mode of communication with his family was by the fingers, and with strangers by writing. The practical value of articulation as a means of easy communication with hearing persons, is revealed by such facts more forcibly than theory can do, and it would seem to prove that it gives but a slight return for the immense labor it costs to acquire it.

Although, as already intimated, the introduction of deaf-mute instruction into this country, dates something more than fifty years after its permanent establishment in Europe, yet the work has been here most intelligently and successfully pursued. We have taken hold of this great interest with the good sense and practical wisdom which is characteristic of our people. In several particulars, I think, we may claim for our Institutions a pre-eminence over those of any other country in the world.

REPORT
OF THE
JOINT COMMITTEE
OF THE
EIGHTEENTH GENERAL ASSEMBLY
OF THE
STATE OF IOWA,
APPOINTED TO VISIT THE
INSTITUTION FOR THE DEAF AND DUMB,
LOCATED AT
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