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E. A. FAY,
National Deaf-Mute College,
Kendall Green,
WASHINGTON, D. C.

[Continued from page 2 of cover.]

LANGUAGE LESSONS, - - by Isaac Lewis Peet, LL. D.
Script Type. Pp. 232. Price \$1.25, (including postage.)

Designed to introduce young learners, deaf-mutes, and foreigners to a correct understanding and use of the English language.

It is believed that this book will meet a want long felt, as the directions for use are so minute that any one, even without previous familiarity with the instruction of deaf-mutes, may with its aid satisfactorily carry forward their education. It is therefore adapted for home instruction as well as for use in the class-room. In the latter it is admirably fitted to serve as a standard of attainment and a means of securing uniformity of method, thus rendering classification easier, and obviating the injury which often arises from transferring a pupil from one teacher to another. By its means the education of a deaf-mute can be successfully commenced at a very early age. In order to employ it to advantage it is not necessary to forego the use of other text-books, but it will, it is thought, supply many deficiencies, and moreover form in the pupil the habit of thinking in language.

With this view it need not be confined to elementary classes, as all the pupils in an institution would derive a benefit from going through the exercises.

COMPLETE SETS

OF THE

AMERICAN ANNALS OF THE DEAF AND DUMB

May be obtained as follows:

Volumes I and II of the present editor, whose address is given below;

Volumes III-XII, inclusive, and the first two numbers of Volume XIII, of ISAAC LEWIS PEET, LL. D., Principal of the New York Institution for the Education of the Deaf and Dumb, *Station M*, NEW YORK CITY.

The second and third numbers of Volume XIII, and all subsequent volumes, of the present editor.

The first and second volumes will be sold separately.

Of the volumes for sale at the New York Institution, the third and fourth, the fifth and sixth, the seventh and eighth, the ninth and tenth, and the eleventh and twelfth have been bound together, two volumes in one, the first two numbers of the thirteenth volume being included with the eleventh and twelfth volumes; these will be sold only as bound.

Of all the subsequent volumes single numbers will be sold separately.

The price of the *Annals* is \$2.00 a volume, or 50 cents a number. For further information address the editor,

E. A. FAY,
Kendall Green,
WASHINGTON, D. C.

REMARKS ON THE TABULAR STATEMENT OF INSTITUTIONS.

BY THE EDITOR.

IN our annual tabular statement of institutions for the deaf and dumb in the United States this year we have separated the denominational and private institutions from the public institutions supported chiefly by the States and cities.

The Articulation School at Marquette, Mich., and Mr. Koehler's school at Scranton, Pa., have gone out of existence. The New Jersey Institution, the St. Joseph's Institution at Hannibal, Mo., the Oral School at Scranton, Pa., Professor Bell's School at Washington, and Miss McCowen's School at Chicago appear in our list for the first time.

For several years we have endeavored to ascertain the number of semi-mute pupils in the institutions, but have never regarded the returns as wholly satisfactory on account of the varying standards of what constitutes semi-mutism adopted by the different principals. This time we have sought more exact results by asking (A) the number of pupils born deaf or who lost hearing before two years of age; (B) the number who lost hearing between two and four years of age; (C) the number who lost hearing after four years of age. We regret that the principals of 25 institutions in the United States and Canada, containing 2,874 pupils, have not been able to furnish these statistics; the answers given by the principals of 40 institutions, containing 5,130 pupils,—answers given in some cases at no little cost of labor—may be found in the tables.

We remind our readers again that the terms used to describe the methods of instruction are lacking in precision—especially the term “combined,” which, as explained in the *Annals*, vol. xxvii, p. 33, comprises several distinct methods. In the schools defined as “oral” also there is considerable diversity as to the relative importance of speech and writing in the elementary part of the work; one of them even uses a manual alphabet. A table in the Sixteenth Annual Report of the Clarke Institution, just published, gives the statistics of articulation teaching in the United States with much more fulness and precision than is attempted in our table.

INSTITUTIONS FOR THE DEAF AND DUMB IN CANADA, 1883.

	Name.	Location.	Date of opening.	Chief Executive Officer.	No. of Pupils.						No. of Instructors.†				
					During the year.	Male.	Female.	A.	B.	C.	Present Dec. 1, 1883.	Whole No.	Male.	Female.	Deaf-mute-†
1	Catholic Inst'n, (Male).....	Montreal, Can.....	1848	Rev. Alf. Belanger, Pt. S. V., Director.....	152	152	0	.....	.....	.....	108	15	15	0	1
2	Catholic Inst'n, (Female)**.....	do.....	1851	Sister Philippe, Superior.....	215	215	0	.....	.....	.....	215	32	0	32	4
3	Halifax Institution.....	Halifax, N. S.....	1857	J. Scott Hutton, M. A., Principal.....	75	42	33	.....	.....	.....	59	4	2	1	0
4	Ontario Institution.....	Belleville, Ontario.....	1870	R. Mathison, Superintendent.....	293	158	135	85	51	157	240	15	7	8	2
5	Mackay Institution.....	Montreal, Can.....	1870	Thos. Widd, Principal.....	45	28	17	33	6	6	38	4	2	2	2
6	New Brunswick Inst'n.....	Portland, N. B.....	1873	A. H. Abell, Principal.....	31	20	11	8	12	11	23	2	2	0	0
7	Fredericton Inst'n.....	Fredericton, N. B.....	1882	Albert F. Woodbridge, Principal.....	24	16	8	22	2	0	16	2	2	0	0
7	Institutions in Canada.....				835	631	204	148	71	174	705	74	31	43	11

	Name.	Method of Instruction.	School-hours.	Trades.‡	How Supported.	Value of build'gs and grounds.	EXPEND'RE LAST FISCAL YEAR.		No. vols. in libr'y.	Total No. pupils have received instruction.
							For support.	For build'gs and gr'ds		
1	Catholic Inst'n, (Male).....	Combined..	Five hours.....	Bo., Cab., Car., Pr., Sh., Ta.	State and pay pupils.....				1,500	462
2	Catholic Inst'n, (Female).....	do.....	8½ to 12 and 1 to 3½.....	Dr., Se.		\$175,000			2,000	500
3	Halifax Institution.....	do.....	9 to 12¾ and 2 to 4.....	Car., Ga., Pr., Sh.....	State, pupils, and vol. contributions.....		\$8,000			280
4	Ontario Institution.....	do.....	9 to 12 and 1½ to 3.....	Car., Dr., Sh., Ta.....	State.....	160,491	39,016	\$8,000	1,460	631
5	Mackay Institution.....	do.....	do.....	Car., Dr., Pr.....	State, pupils, and vol. contributions.....	37,837	5,761	695	30	94
6	New Brunswick Inst'n.....	Manual.....	9 to 12 and 2 to 4.....	Car., Gar., Pa., Se., Sh.	Pupils and vol. contributions.....	8,000	3,858	680	1,200	92
7	Fredericton Institution.....	Combined..	do.....	None.....	State and vol. contributions.....		3,000			24
7	Institutions in Canada.....									2,083

†† See foot-notes on page 91.

‡ See foot-notes on page 93.

** For the year 1882.

INSTITUTIONS FOR THE DEAF AND DUMB IN THE UNITED STATES, 1883—Continued.

B.—DENOMINATIONAL AND PRIVATE INSTITUTIONS.

PUBLIC, DENOMINATIONAL AND PRIVATE INSTITUTIONS.															
Name.	Location.	Date of opening.	Chief Executive Officer.	No. of Pupils.						No. of Instructors.*					
				During the year.	Males.	Females.	A.†	B.	C.	Present Dec. 1, 1883.	Whole No.	Male.	Female.	Deaf-mute.	Semi-mute.
1 Whipple's Home School.....	Mystic River, Conn.....	1869	Jonathan Whipple, Proprietor.....	16	14	2	12	0	2	10	2	2	0	.....	.....
2 Germ. Ev. Lutheran Inst'n.....	Norris, Mich.....	1875	H. D. Uhlig, Director.....	44	28	16	23	7	8	44	3	3	0	.....	.....
3 St. John's Cath. Institute.....	St. Francis, Wis.....	1876	.....	48	30	18	.....	.....	.....	43	3	3	0	.....	.....
4 F. Knapp's Institutet.....	Baltimore, Md.....	1877	F. Knapp, Principal.....	48	30	18	.....	.....	.....	43	3	2	1	.....	.....
5 Phonological School.....	Milwaukie, Wis.....	1878	Paul Binner, Principal.....	34	23	11	.....	.....	.....	30	4	2	2	.....	.....
6 St. Joseph's Institute.....	Hannibal, Mo.....	1882	Sisters of St. Joseph.....	8	5	3	.....	.....	.....	8	1	1	0	.....	.....
7 A. Graham Bell's School†.....	Washington, D. C.....	1883	A. Graham Bell, Ph. D., Principal.....	18	7	11	8	7	3	17	2	0	2	.....	.....
8 Voice and Hearing School.....	Chicago, Ill.....	1883	Miss Mary McCowen, Principal.....	2	1	1	1	0	1	2	2	1	1	.....	.....
				8	7	1	6	2	0	8	2	0	2	.....	.....
8 Denominational and Private Institutions.....				178	115	63	50	16	14	162	19	11	8	.....	.....

Name.	Method of Instruction.	School-hours.	Trades.	How Supported.	No. pupils have rec'd instr'n.
1 Whipple's Home School.....	Oral.....	9 to 12 and 1 to 4.....	Gardening.....	Tuition fees.....	51
2 Germ. Ev. Lutheran Inst'n.....	do.....	Six hours.....	None.....	Tuition fees and Lutheran congregations.....	100
3 St. John's Cath. Institute.....	Combined.....	7½ hours.....	Print'g, Sew'g, Shoemak'g.....	Voluntary contributions.....	127
4 F. Knapp's Institute†.....	Oral.....	9 to 2.....	None.....	Tuition fees.....	50
5 Phonological School†.....	do.....	.....	None.....	Tuition fees and Phonological Society.....	50
6 St. Joseph's Institute.....	Combined.....	9 to 11½ and 1½ to 4.....	None.....	Voluntary contributions.....	18
7 A. Graham Bell's School.....	Oral.....	.....	None.....	Tuition fees and Prof. Bell.....	2
8 Voice and Hearing School.....	Oral and aural.....	9 to 4.....	None.....	Tuition fees.....	8
8 Denominational and Private Institutions.....	.....	.....	.....	.....	406

* Including the principal.

† In connection with schools for hearing children.

† See foot-note on page 91.

24	LeCouteulx St. Mary's Inst.	Combined...	8 to 12 and 1½ to 4.....	Dr., Pr., Ta.....	State, counties, and pay pupils.....	90,000	30,000	3,000	550	350
25	Minnesota School.....	do.....	8 to 12½.....	Co., Dr., Pr., Sh., Ta	State.....	200,000	27,000	5,000	1,100	330
26	N. Y. Inst. for Imp'v'd Ins'n	Oral.....	9 to 12 and 1¼ to 3¼.....	None.....	State, counties, and pay pupils.....	300,000	32,888	5,586	.....	311
27	Clarke Institution.....	do.....	9 to 12 and 2 to 4.....	Cab., Se.....	Endowment, State, and pay pupils..	90,000	27,986	697	990	220
28	Arkansas Institute.....	Combined ..	8 to 12½.....[to 4½]	Pr., Dr., Ga., Sh. ..	State.....	32,000	15,000	5,000	75	195
29	Maryland School.....	do.....	7½ to 9¾, 9¾ to 12½, 2	Cab., Pr., Sh.....	do.....	250,000	24,932	326	2,150	278
30	Nebraska Institute.....	do.....	8½ to 12 and 1½ to 3.....	Car., Dr., Pr., Se.....	do.....	66,000	.....	800	750	181
31	Horace Mann School.....	Oral.....	9 to 2.....	Se.....[Car., Ta.	State and city.....	.....	.....	.....	.....	212
32	St. Joseph's Institute.....	Combined.....	9 to 11¾ and 1 to 3½.....	Ba., Dr., Fa., Sh., Ga	State, counties, and pay pupils.....	181,287	43,388	30,402	.....	333
33	West Virginia Institution*	Manual.....	8½ to 1½.....	Car., Pr., Sh., Ta.....	State.....	80,000	27,000	.....	634	199
34	Oregon School.....	do.....	9 to 12 and 1 to 3.....	None.....	do.....	1,200	3,965	1,326	.....	72
35	Md. Inst'n for Colored*	do.....	8 to 1.....	Br., Ch.....	do.....	.....	.....	.....	.....	39
36	Colorado Institute*.....	do.....	8 to 12 and 1½ to 4.....	Car., Pr.....	do.....	53,000	16,495	8,438	250	70
37	Erie Public Day-School.....	Oral.....	9 to 12 and 1½ to 3½.....	None.....	City.....	.....	.....	.....	.....	125
38	Chicago Day-Schools.....	Combined ..	9 to 3.....	None.....	State.....	.....	4,051	.....	.....	243
39	Central N. Y. Institution.....	do.....	9 to 12 and 1½ to 3½.....	Car., Dr., Gl.....	State and counties.....	40,000	39,601	1,170	200	82
40	Cincinnati Day-School.....	Manual.....	9 to 12 and 1½ to 4.....	None.....	City.....	.....	.....	.....	.....	184
41	Western Pa. Institution.....	Combined ..	9 to 12 and 1 to 3.....	None.....	State and voluntary contributions.....	135,000	21,234	15,054	700	219
42	Western N. Y. Institution..	do.....	8½ to 12½ and 2 to 4.....	Car., Dr., Ga., Pr., Se.....	State and counties.....	40,000	21,864	26,073	550	.....
43	Portland Day-School.....	Oral.....	9 to 12 and 2 to 4.....	None.....	City and pay pupils.....	.....	.....	.....	.....	37
44	Rhode Island School.....	do.....	9 to 1.....	None.....	State.....	.....	2,650	.....	310	45
45	St. Louis Day-School.....	Manual.....	8¾ to 12 and 1½ to 3¾ ..	None.....	City.....	.....	.....	.....	.....	73
46	N. E. Industrial School...	Combined ..	9 to 12 and 2 to 4.....	Farming.....	Voluntary contributions.....	9,500	2,683	300	225	30
47	Dakota School.....	Manual.....	9 to 12 and 2 to 4.....	Gardening.....	Territory.....	22,700	4,050	12,000	50	28
48	Oral Branch Pa. Inst'n.....	Oral.....	9 to 2.....	None.....	Pennsylvania Institution.....	.....	.....	.....	.....	73
49	Scranton Oral School.....	do.....	9 to 1.....	None.....	City and voluntary contributions.....	.....	.....	.....	.....	14
50	New Jersey Institution.....	Combined ..	9 to 12 and 1½ to 3½.....	None.....	State.....	100,000	.....	.....	.....	82
50	Public Institutions.....	.....	.....	.....	.....	.....	.....	.....	.....	23,110
8	Denominational and Pri- vate Institutions.....	.....	.....	.....	.....	.....	.....	.....	.....	406
58	Institutions in the U. S.....	.....	.....	.....	.....	.....	.....	.....	.....	23,525
	National College.....	Manual.....	8 to 12¾ and 1½ to 3½.....	None.....	Columbia Institution.....	.....	.....	.....	2,500	252

* Contains a department for the blind also, the expenses of which are necessarily included in the statement of expenditure.

† One session for school and one for shops, by a system of rotation.

‡ Two sessions for school and one for shops, by a system of rotation.

§ Bak.=Baking. Bas.=Basket-making. Bo.=Book-binding. Br.=Broom-making. Cab.=Cabinet-making. Car.=Carpentry. Ch.=Chair-
caning. Co.=Coopery. Dr.=Dress-making. Fa.=Farming. Ga.=Gardening. Gl.=Glazing. Ma.=Mattress-making. Pa.=
Painting. Pr.=Printing. Se.=Sewing. Sh.=Shoemaking. Ta.=Tailoring. Wt.=Wood-turning.

INSTITUTIONS FOR THE DEAF AND DUMB IN THE UNITED STATES, 1883—Continued.

PUBLIC INSTITUTIONS—Continued.

Name.	Method of Instruction.	School-hours.	Trades.‡	How Supported.	Value of buildings and grounds.	Expend're last fiscal year.		No. vols. in library.	Tot. No. pupils have received instruct'n.
						For support.	For build'gs and gro' ds.		
1 American Asylum.....	Combined..	9 to 12 and 2 to 4.....	Cab., Sh., Ta.....	Endowment and N. E. States	\$250,000	\$43,550	\$2,152	2,000	2,325
2 New York Institution	do.....	8 to 12 and 1 to 5†	Car., Cab., Bak., Dr., Ga., Pa., Pr., Sh., Ta.	State, counties, and pay pupils.....	524,000	128,851	3,462	3,926	2,993
3 Pennsylvania.....do.....	do.....	8½ to 11½ and 1½ to 3½	Dr., Sh., Ta.....	State and pay pupils.....	500,000	79,090	4,229	5,000	2,079
4 Kentucky.....do.....	Manual.....	8 to 1.....	Bo., Br., Dr., Ga., Pr.	State	136,000	31,416	2,000	1,500	830
5 Ohio.....do.....	Combined..	7½ to 9½, 10½ to 12½, 2 to 5†	Bo., Car., Pr., Sh.	do.....	500,000	74,652	20,000	2,000	2,008
6 Virginia*.....do.....	do.....	8½ to 1½.....	Bo., Car., Pr., Sh., Ta.	do.....	175,000	.....	.....	700	546
7 Indiana.....do.....	Manual.....	8 to 1.....	Cab., Ch., Sh.....	do.....	457,925	55,187	2,895	3,193	1,495
8 Tennessee School.....	Combined..	8½ to 11½ and 1 to 3.....	Pr., Sh.....	do.....	100,000	20,894	3,595	.....	.....
9 North Carolina Institution*	do.....	8 to 2.....	Cooking, Sh., Se.....	do.....	75,000	38,500	1,044	1,305	.....
10 Illinois.....do.....	do.....	8 to 11 and 12, 1 to 3 and 4½	Bak., Cab., Ga., Pr., Sh., Wt.	do.....	344,800	92,797	2,258	5,870	1,700
11 Georgia.....do.....	do.....	8 to 1.....	Sh.....	do.....	40,000	16,929	2,000	1,000	325
12 South Carolina*.....do.....	do.....	8 to 1.....	Pr., Sh., Se.....	State and pay pupils.....	40,000	10,142	1,178	.....	185
13 Missouri.....do.....	do.....	8 to 1.....	Cab., Pr., Sh.....	State	172,000	42,817	36,700	1,015	835
14 Louisiana.....do.....	do.....	8 to 1.....	Car., Pr., Ga.....	do.....	25,000	10,000	.....	275	.....
15 Wisconsin.....do.....	do.....	8 to 1 and 2 to 3.....	Ba., Car., Pr., Se., Sh.	do.....	100,000	38,526	1,474	650	665
16 Michigan.....do.....	do.....	7½ to 10½ and 12½ to 3½	Cab., Pr., Se., Sh.....	do.....	377,925	42,762	.....	750	948
17 Iowa.....do.....	do.....	8 to 12½.....	Br., Cab., Fa., Pr., Sh.	do.....	171,669	36,000	8,000	575	657
18 Mississippi.....do.....	do.....	8 to 1.....	Car., Ga., Pr., Sh.....	do.....	50,000	15,000	17,000	300	.....
19 Texas Asylum.....do.....	do.....	8½ to 1½.....	Ma., Pr., Sh.....	Endowment and State.....	80,000	14,257	7,000	195	203
20 Columbia Institution.....	do.....	8½ to 12½ and 2 to 3.....	Cab.....	United States and pay pupils.....	660,000	57,433	9,023	3,000	489
21 Alabama.....do.....	Manual.....	7½ to 12½.....	Cab., Ch., Ma., Sh.....	State	60,000	.....	500	500	185
22 California*.....do.....	Combined..	8 to 1.....	Car.....	do.....	350,000	39,019	1,549	1,000	262
23 Kansas.....do.....	do.....	8½ to 12 and 1½ to 3.....	Cab., Pr., Se., Sh.....	do.....	60,000	22,974	.....	500	369

28	Arkansas Institute (n).....	Little Rock, Ark.....	1868	John C. Littlepage, M. A., Principal.....	80	47	33	.....	.....	52	5	2	3	0	1
29	Maryland School.....	Frederick City, Md.....	1868	Chas. W. Ely, M. A.....do.....	108	60	48	80	17	11	99	10	3	7	3
30	Nebraska Institute.....	Omaha, Neb.....	1869	J. A. Gillespie, B. D.....do.....	115	74	41	55	11	5	93	8	3	5	1
31	Horace Mann School.....	Boston, (b) Mass.....	1869	Miss Sarah Fuller.....do.....	91	41	50	53	22	16	80	9	0	9	0
32	St. Joseph's Institute (f).....	Fordham, N. Y.....	1869	Mary B. Morgan, Superintendent.....	279	125	154	135	51	51	237	21	2	19	1
33	West Virginia Institution.....	Romney, W. Va.....	1870	John C. Covell, M. A., Principal.....	71	41	30	59	9	3	60	5	4	1	2
34	Oregon School (n).....	Salem, Oregon.....	1870	Rev. P. S. Knight.....do.....	33	16	17	.....	.....	.....	20	3	2	1	0
35	Institution for Colored.....	Baltimore, (c) Md.....	1872	F. D. Morrison, M. A., Superintendent.....	15	8	7	.....	.....	.....	13	2	2	0	1
36	Colorado Institute.....	Colorado Sp's, Colo.....	1874	{ J. W. Blattner, Principal..... George Failor, Superintendent.....	49	19	30	.....	.....	.....	43	4	2	2	0
37	Erie Day-School (n).....	Erie, Pa.....	1874	Miss Mary Welsh, Teacher.....	12	9	3	.....	.....	.....	10	1	0	1	0
38	Chicago Day-School (m).....	Chicago, Ill.....	1875	P. A. Emery, M. A., Principal.....	58	30	28	21	19	0	48	6	3	3	2
39	Central N. Y. Institution.....	Rome, N. Y.....	1875	Edward B. Nelson, B. A.....do.....	180	111	69	.....	.....	.....	153	11	8	3	2
40	Cincinnati Day-School.....	Cincinnati, (e) Ohio.....	1875	A. F. Wood.....do.....	35	21	14	26	3	6	28	2	1	1	2
41	Western Penna. Inst'n.....	Turtle Creek, Pa.....	1876	Thos. MacIntire, M. A., Ph. D., Principal.....	120	79	41	86	8	14	102	8	3	5	0
42	Western New York Inst'n.....	Rochester, N. Y.....	1876	Z. F. Westervelt, Principal and Sup't.....	162	81	81	63	61	38	143	13	2	11	1
43	Portland Day-School.....	Portland, Me.....	1876	Miss Ellen L. Barton, Principal.....	35	17	18	30	5	0	35	4	0	4	0
44	Rhode Island School.....	Providence, R. I.....	1877	Miss Katharine H. Austin, Principal.....	33	16	17	15	10	8	25	3	0	3	0
45	St. Louis Day-School.....	St. Louis, (f) Mo.....	1878	D. A. Simpson, B. A.....do.....	49	32	17	32	12	5	42	3	1	2	1
46	N. E. Industrial School.....	Beverly, Mass.....	1880	William B. Swett, Superintendent.....	19	11	8	12	7	0	19	2	1	1	0
47	Dakota School.....	Sioux Falls, D. T.....	1880	James Simpson.....do.....	23	14	9	.....	.....	.....	21	1	1	0	1
48	Oral Branch Pa. Inst'n.....	Philadelphia, (o) Pa.....	1881	Miss Emma Garrett, Teacher in charge.....	73	45	28	45	19	9	66	9	0	9	0
49	Scranton Oral School.....	Scranton, Pa.....	1883	Miss Mary Allen, Teacher.....	14	7	7	11	3	0	12	1	0	1	0
50	New Jersey Institution.....	Trenton, N. J.....	1883	Weston Jenkins, M. A., Superintendent.....	82	47	35	55	14	13	81	5	2	3	0
50	Public Institutions.....	.....	.....	.....	6,991	3,898	3,093	2,964	894	723	5,993	478	202	276	85
8	Denominational and Private Institutions. (p).....	.....	.....	.....	178	115	63	50	16	14	162	19	11	8	0
58	Institutions in the U. S.....	.....	.....	.....	7,169	4,013	3,156	3,014	910	737	6,155	497	213	284	85
	National College. (g).....	Washington, D. C.....	1864	E. M. Gallaudet, Ph. D., LL. D., Pres't.....	45	45	0	9	7	29	34	9	9	0	1

* Under this head are included the semi-deaf and all the deaf who have acquired some knowledge of language through the ear. † Including the principal.
 ‡ Not including the semi-mute teachers. ¶ A.—Number of pupils born deaf, or who lost hearing before two years of age. B.—Number who lost hearing when between two and four years of age. C.—Number who lost hearing after four years of age. The totals give the statistics of thirty-six institutions, containing 4,737 pupils.
 (a) Lexington Ave., bet. 67th and 68th sts. (b) No. 63 Warrenton street. (c) No. 258 Saratoga street. (e) Ninth street, bet. Walnut and Main.
 (f) This Institution has three branches; one situated at Fordham, another at Brooklyn, (510 Henry street), and another at Throgg's Neck, Westchester county, N. Y.
 (g) Cor. 9th and Wash streets. (m) There are five schools in different parts of the city. See page 81. (n) For the year 1882. (o) 317 South Eleventh street. (p) See page 94. (g) The National Deaf-Mute College is a distinct organization within the Columbia Institution. Its officers and students are included in the statement of the Columbia Institution given above.

INSTITUTIONS FOR THE DEAF AND DUMB IN THE UNITED STATES, 1883.

A.—PUBLIC INSTITUTIONS.

Name.	Location.	Date of opening.	Chief Executive Officer.	No. of Pupils.						No. of Inst'rs.†				
				During the year.	Male.	Female.	A.¶	B.	C.	Present Dec. 1, 1883.	Whole No.	Male.	Female.	Deaf mute.†
1 American Asylum.....	Hartford, Conn.....	1817	Job Williams, M. A., Principal.....	210	126	84	147	47	15	174	16	7	9	1 2
2 New York Institution.....	Washington Heights, New York, N. Y.....	1818	Isaac Lewis Peet, LL. D., Princ'l; Jas. C. Carson, M. D., Res't Phys'n and Sup't.	488	310	178	330	82	65	369	19	9	10	4 5
3 Pennsylvania...do.....	Philadelphia, Pa.....	1820	Joshua Foster, Principal.....	362	206	156	206	95	61	298	22	13	9	2 3
4 Kentucky.....do.....	Danville, Ky.....	1823	D. C. Dudley, M. A., Superintendent.....	167	98	69	.....	.....	.....	136	9	6	3	2 2
5 Ohio.....do.....	Columbus, Ohio.....	1829	Amasa Pratt, M. A., Superintendent.....	505	274	231	.....	.....	.....	407	27	13	14	7 6
6 Virginia.....do.....	Staunton, Va.....	1839	Charles S. Roller, Principal.....	80	44	36	55	12	13	74	9	7	2	2 2
7 Indiana.....do.....	Indianapolis, Ind.....	1844	William Glenn, Superintendent.....	328	175	153	.....	.....	.....	312	18	9	9	3 7
8 Tennessee School.....	Knoxville, Tenn.....	1845	Thomas L. Moses, Principal.....	147	90	57	.....	.....	.....	118	8	5	3	3 0
9 North Carolina Inst'n.....	Raleigh, N. C.....	1844	W. J. Young, M. A.....do.....	114	56	48	74	10	6	104	10	7	3	3 1
10 Illinois.....do.....	Jacksonville, Ill.....	1846	Philip G. Gillett, LL. D., Sup't.....	575	325	250	474	56	45	501	31	8	23	8 1
11 Georgia.....do.....	Cave Spring, Ga.....	1846	W. O. Connor, Principal.....	93	53	40	.....	.....	.....	85	5	4	1	1 2
12 South Carolina...do.....	Cedar Spring, S. C.....	1849	Newton F. Walker, Superintendent.....	58	26	32	.....	.....	.....	48	4	3	1	2 0
13 Missouri.....do.....	Fulton, Mo.....	1851	Wm. D. Kerr, M. A.....do.....	250	152	98	174	46	30	199	12	6	6	2 1
14 Louisiana.....do.....	Baton Rouge, La.....	1852	R. G. Ferguson, M. A.....do.....	43	25	18	.....	.....	.....	38	4	2	2	1 1
15 Wisconsin.....do.....	Delavan, Wis.....	1852	John W. Swiler, M. A.....do.....	237	134	103	148	64	25	208	14	5	9	2 1
16 Michigan.....do.....	Flint, Mich.....	1854	M. T. Gass, M. A.....do.....	271	145	126	.....	.....	.....	266	16	7	9	3 2
17 Iowa.....do.....	Council Bluffs, Iowa.....	1855	Henry C. Hammond, M. A.....do.....	290	170	120	.....	.....	.....	260	19	10	9	2 3
18 Mississippi.....do.....	Jackson, Miss.....	1856	J. R. Dobyns.....do.....	78	35	43	.....	.....	.....	76	6	4	2	2 1
19 Texas Asylum (n).....	Austin, Texas.....	1857	.....do.....	97	65	32	.....	.....	.....	86	6	3	3	3 0
20 Columbia Institution.....	Washington, D. C.....	1857	E. M. Gallaudet, Ph. D., LL. D., Pres't... Joseph H. Johnson, M. D., Principal.....	100	83	17	35	14	51	88	14	12	2	3 2
21 Alabama.....do.....	Talladega, Ala.....	1860	.....do.....	51	30	21	.....	.....	.....	51	5	4	1	3 0
22 California.....do.....	Berkeley, Cal.....	1860	Warring Wilkinson, M. A.....do.....	126	80	46	95	18	13	121	9	4	5	3 0
23 Kansas.....do.....	Olathe, Kansas.....	1861	H. A. Turtton, Superintendent.....	190	102	88	110	45	32	157	9	3	6	3 1
24 Le Couteux St. Mary's Inst.....	Buffalo, N. Y.....	1862	Sister Mary Anne Burke, Principal.....	167	94	73	88	49	30	154	11	0	11	1 0
25 Minnesota School.....	Faribault, Minn.....	1863	Jonathan L. Noyes, M. A., Superintend't... D. Greenberger, Principal.....	147	82	65	91	21	35	129	10	6	4	2 3
26 Insti't'n for Improved Insti'n... Clarke Institution.....	New York, (a) N. Y..... Northampton, Mass.....	1867 1867	.....do..... Miss Harriet B. Rogers, Principal.....	187 94	108 49	79 45	106 53	40 24	41 17	161 91	15 14	3 0	12 14	0 0

gorically and, as the *Churchman* in a later number admits, satisfactorily, in the *Standard of the Cross* for November 22, 1883.

“*Gallaudet and Clerc.*”—The gathering of the deaf-mutes of New England in Boston, on the 17th of December last, to hold “a joint grand celebration in honor of the birthday anniversaries of Gallaudet and Clerc,” calls our attention anew to a growing tendency among the deaf-mutes of New England and elsewhere to couple these two names together on terms of absolute equality. This is a tendency to be regretted, for it is not in accordance with the facts of history. Thomas Hopkins Gallaudet, the noble philanthropist, stands, as the Founder of Deaf-Mute Instruction in America, high above *every one* else connected with the work. Laurent Clerc was a teacher in the Paris Institution, whom he persuaded to become his assistant at Hartford. He was an estimable man, and as such, and as the first deaf teacher of the deaf in this country, we are glad to see his memory honorably perpetuated. But while we accord to him as well as to Gallaudet his due meed of recognition, we think it is well to honor the two men separately, as was done by the deaf-mutes of New York and Philadelphia on their respective birthdays in December, rather than to associate them in “a joint grand celebration,” as if the two names represented exactly the same idea of devotion to the welfare of the deaf, and were deserving of precisely the same place of distinction in history.

The Louisville Conference of Charities.—The Tenth Annual Conference of Charities and Correction, held at Louisville, Ky., in September last, gave more attention to the subject of the deaf and their education than any of the previous conferences have done. Dr. Peet read the able paper published in the present number of the *Annals*; other teachers who were present and took part in the discussion that followed were Mr. J. L. Noyes of Minnesota, Mr. J. A. Gillespie of Nebraska, Mr. Amasa Pratt of Ohio, and Miss Mary McCowen of Chicago.

The Next Conference of Principals.—Dr. P. G. Gillett, chairman of the Committee of Arrangements for the Conference of Principals of American Institutions for the Deaf and Dumb, is consulting the principals by correspondence upon the desirability of holding the next Conference at the California Institution.

I chose those who had been born deaf and others who had been afflicted later. The result was precisely the same as before, for it was with the utmost difficulty that I succeeded in making these people conscious of sounds which, even without the help of the dentaphone, they were capable of distinguishing if they were uttered loud and close to the ears.

I next proceeded with those who still possessed the capacity for recognizing words, and discovered that they could only understand very loud spoken words by means of the dentaphone, but with no greater distinctness and with no more facility than if the words had been spoken in the ear without the instrument at all.

I will simply add that in the course of these experiments I made use of three different dentaphones, and always obtained precisely the same result.

I may safely say, therefore, that where deaf-mutes are concerned, the dentaphone, in its present condition at least, cannot be put to any practical use, not even as a means of advancing articulation. Also, judging from the experiments I have made upon perfectly healthy persons, I am inclined to doubt whether the instrument can give any noteworthy assistance to any one whose hearing is in the least defective.

Deaf Clergymen.—On the 14th of October last, in Philadelphia, the Rev. Henry Winter Syle of Philadelphia and the Rev. Austin W. Mann of Cleveland, who were ordained deacons of the Episcopal Church several years ago, were ordained to the priesthood by the Right Reverend Bishops Stevens and Bedell. An appropriate and eloquent sermon was preached by the Rev. Dr. Thomas Gallaudet. Mr. Syle was the first deaf person in the world to be ordained to the diaconate, and now he and Mr. Mann are the first to be advanced to the priesthood. Mr. Frank Read of Jacksonville, Ill., was last summer ordained to the ministry of the Congregational Church, as Mr. Samuel Rowe of West Boxford, Mass., was several years ago.

The *American Literary Churchman* of November 1st criticises the ordination of Messrs. Syle and Mann on the ground that it was a violation of the Church canons requiring candidates to be examined in part *orally*, to have *read* a sermon, to be able to *deliver* sermons, and to perform certain manual acts in administering the sacrament inconsistent with the use of the hands in the sign-language. To a layman, familiar with the nature and scope of the sign-language, and regarding the spirit rather than the letter of the law, these objections seem very puerile; and they were answered in advance in a way that one would have supposed convincing even to the most literal interpreters of the canons by Bishop Stevens, in his sermon at the ordination of Mr. Syle to the diaconate, and by Dr. Gallaudet, in his sermon above mentioned. They are also answered cate-

Mr. STAINER, (of the London School-Board Classes:) If adults did not succeed, children would much less be capable of being trained for it to be of any use to them.

Mr. ELLIOTT: In my own Institution we have no industrial training in trades, but we have never found any difficulty in getting children apprenticed to suitable businesses. * * *

Mr. Dawson, of the St. John's (of Beverly) Catholic Institution at Boston Spa, advocated the teaching of trades, but his voice was the only one on that side of the question, and the following resolution, proposed by Mr. Sleight and seconded by Mr. Dawson, was passed unanimously:

That the intellectual and moral education of the deaf and dumb being the matter of paramount importance, this meeting recommends that any industrial training in our institutions which might interfere with this shall be remitted to a period when a satisfactory point in this direction shall have been gained. This is suggested by the experience of headmasters generally.

The Audiphone.—Miss Mary McCowen, who had charge of the class of semi-deaf children in the Nebraska Institution last year, and is now conducting a successful "Voice and Hearing School for the Deaf" in Chicago, writes us with reference to our remarks on the audiphone in the last number of the *Annals* (page 270) as follows:

Though I began the year's work as a most enthusiastic advocate of the audiphone, and used it conscientiously for several months, I cannot without a protest allow it to be said that the *teacher* of that class ascribes the success to the audiphone. I make a specialty in my work here of training the hearing, but I have thus far failed to find a single child that was really and truly helped by the audiphone.

The Dentaphone.—Dr. Treibel, principal of the Royal Institution for the Deaf and Dumb, Berlin, Prussia, communicates to the Archives of Otology the result of some extensive and critical experiments with this instrument. He undertook the experiments with the resolve "above all things to acquire a perfectly clear and unprejudiced judgment concerning its availability." He gives the result as follows:

I first experimented upon persons who were entirely deaf, some of them having been born so, and others having lost their sense of hearing in early childhood. The result was utterly negative, inasmuch as not one of them could hear any sound whatever with the aid of the dentaphone, even when the greatest effort was employed by the speaker.

I then selected for further experiments a large number of persons who still possessed some sense of vocal sounds, and on this occasion as before

Doncaster in 1882, the opinions expressed were almost unanimously against the teaching of trades while the pupils are at school. As every utterance on this side of the Atlantic has been strongly in favor of such teaching, our American readers may be curious to see the reasons urged in opposition to it at the Doncaster Conference. We quote only a part of the discussion:

Mr. NEILL, (of the Northern Counties Institution, Newcastle-on-Tyne :) We found it a disadvantage to send boys out of the Institution to be taught trades, and then we engaged men to come in and teach about a dozen boys, but our experience is that when they left the Institution they did not pursue those trades, but preferred something else.

The CHAIRMAN, (Mr. Howard, of the Yorkshire Institution, Doncaster :) That is my experience at Edinburgh. Printing was given up because of the result being utterly inadequate to the expense, and shoemaking was abandoned because the boys very rarely went to the trade after they left school. I have heard it stated that in manufactories, where machinery is largely used, the managers prefer that the deaf and dumb shall know nothing about the trade and learn it in their way. When I came here printing was in vogue, and it was given up for the same reason as at the Edinburgh Institution, viz., that the expense was too great for the result.

Mr. ELLIOTT, (of the London and Margate Institutions :) * * * If we should extend our school period, it would be almost imperative upon us to consider whether it would not be desirable to modify our present system. Considering, however, the age at which the children now leave our institutions, the subject of trades hardly comes within the scope of our consideration.

Mr. VAN PRAAGH, (of the Oral Association, London :) * * * As soon as the children are old enough, we teach them drawing and painting, which is a source of pleasure to them, besides being a great advantage afterwards when they have to choose a profession.

Mr. KINGHAN, (of the Ulster Institution, Belfast :) In our Institution our experience was not favorable to the continuance of trades. We taught tailoring and shoemaking, and we found it was spending a number of hours required for religious and mental training. It proved in the end injurious to the children, and our medical officers advised the discontinuance of trades. We found that, owing to the action of trades' unions, a boy who had spent three or four years in our Institution, supposing he desired to continue the trade of shoemaking outside, must serve the full apprenticeship as if he had never spent an hour at it in our Institution. * * * Many of the children when they got out of the Institution preferred to be something else. * * *

Mr. SLEIGHT, (of the Brighton Institution :) In the institutions children never become skilled workmen.

Mr. MURRAY, (of the London Asylum for Females :) In our first Institution [for both sexes] we abolished shoemaking and tailoring. It was carried on for a considerable time, but when the pupils left the Institution we found they were quite incapacitated for the work. * * * We tried brush-making, but the person to whom we had to sell the brushes would not give enough to cover the cost of the material.

As to her personal character, she was a very sincere, kind, and sympathetic friend. To her family she was devotedly attached, an affectionate daughter, and a kind and generous sister. Her religious character was quiet and unobtrusive. She was a member of the Lutheran church, a sincere Christian, and we trust has now gone to receive the reward promised to those who are faithful to the end.

St. Louis Day-School.—Miss Sylvia Chapin has resigned the position of teacher, and is succeeded by Miss Emma Macy.

Tennessee Institution.—Mrs. J. H. Ijams, widow of the late principal, has been appointed teacher.

Texas Asylum.—Col. Ford has resigned the position of superintendent.

Wisconsin Institution.—Mr. Zachariah G. McCoy, who had been a teacher in this Institution for twenty-eight years, died on the 9th of October last, at the age of fifty-three years. Mr. McCoy was a graduate of the New York Institution, and his whole life-work since leaving school was devoted to the Wisconsin Institution. He was a faithful and zealous teacher, and by his upright, noble character exerted a great influence for good upon the large number of pupils who, in his long term of service, came under his instruction.

The vacancy occasioned by Mr. McCoy's death has been filled by the appointment of Mr. Jas. Jos. Murphy, a graduate of this Institution and of the National College.

MISCELLANEOUS.

BY THE EDITOR.

Industrial Education.—The value and importance of an industrial education, carried on at the same time with the intellectual education, is generally recognized in American institutions for the deaf and dumb, but not in European institutions. The late Brussels Convention, it is true, adopted, though not without considerable opposition, a resolution approving it under certain circumstances; but Mr. Walther, in his summary of the principles of deaf-mute education prevailing in Germany, quoted in the last number of the *Annals*, page 244, says "the teaching of trades to deaf-mutes is not the duty of institutions," and at the Conference of Headmasters of British Institutions, held at

Clara Reed, and Miss Lida C. O'Harra, late steward's clerk, has been appointed teacher in the articulation department.

Pennsylvania Institution.—Miss Mary E. Ziegler, a valued teacher, died Nov. 15, 1883, of consumption, at her home in Carlisle, Pa. For the following sketch we are indebted to one of her associates:

Miss Ziegler was born near Carlisle, February 7th, 1852. Her ancestors were among the first settlers of that part of Pennsylvania. She became connected with the Pennsylvania Institution for the Deaf and Dumb as teacher in the autumn of 1875. She was prepared for the general work of teaching at the State Normal school at Millersville, Pa. She was specially fitted for the work of instructing deaf-mutes by having two deaf-mute brothers to whom she had devoted much attention and care. In this way she had become acquainted with the sign-language and manual alphabet, and had learned to sympathize with and to understand the nature and needs of the class of children among whom she was called to work.

At first, like other young teachers, she met with disappointments and failures. But she was not disheartened. She bravely determined to correct her mistakes, so far as possible, and endeavor to reach success. After much patient toil her efforts were crowned with gratifying success. Three classes were under her instruction. The pupils in the last two were remarkable for their intelligence and correct use of language.

This was not accomplished by the use of any novel methods, but by the persevering and careful employment of methods long in use in this Institution. She pursued a natural, systematic method, characterized by great simplicity. She also used signs very clearly in conveying ideas to her pupils.

Her influence upon the moral nature and deportment of her pupils was good. For this she possessed the advantages of a commanding presence and a dignified demeanor before her class, while by her kindness, firmness, and sympathy she won the love, respect, and confidence of her pupils, devoting herself sincerely and earnestly to their welfare, and attending to their little as well as important wants with a motherly interest.

It is not too much to say that she was thoroughly devoted to the work for which she sacrificed her life. She entered the Institution apparently in robust health, but, ere long, over-exhaustion, anxiety, and too close confinement told on her constitution, and she declined in health until it became quite broken down. Several times before her last sickness her friends felt very anxious about her, but she seemed to recover fair health and was hopeful almost to the very end of life.

The death of her mother in June last seemed a finishing blow. She returned in the autumn, though quite prostrated and utterly unfit to teach, determined to resume her duties, but she never entered her school-room to teach again. She remained in the Institution, rapidly declining, about a month, when the physicians pronounced her disease consumption. She returned to her home, where she lingered but a few weeks, and peacefully fell asleep.

ing youth, but not in deaf-mute instruction, has been appointed superintendent. Mr. Church has resumed his former title of steward.

Minnesota School.—The title of the Institution has been changed to "Minnesota School for the Deaf." The three schools at Faribault for the deaf, the blind, and imbeciles, respectively, have the collective title of "The Minnesota Institute," etc., but they have no connection with one another except in being under the same board of trustees.

Nebraska Institute.—A power press has been placed in the printing office. The *Nebraska Journal* now appears in new type as a four column quarto instead of a five column folio as heretofore.

The work of cultivating the hearing of the semi-deaf is still carried on. Mr. Gillespie writes :

The two classes organized last fall, as reported in the October *Annals*, are doing well. The hearing is being rapidly developed. I feel more enthusiasm in this matter than ever before. It is my firm conviction that were the hearing of the semi-deaf in our institutions cultivated, as I believe it can be and ought to be, it would reduce the number of so-called deaf-mutes in the country from 10 per cent. to 15 per cent. at least. This is not a visionary or theoretical opinion. It is the result of experience and patient hard work. The hearing can be cultivated and utilized in the education of this class, *and it pays.*

New York Institution.—Miss Annie B. Garrett resigned in December, 1882, to become teacher of articulation in the California Institution, and the vacancy was supplied by the appointment of Miss Julia F. Brearly. Mr. Jenkins in May, 1883, went to Trenton as superintendent of the New Jersey Institution, and in October Mr. R. B. Lloyd resigned his position to become a teacher in the same Institution. Mr. Lloyd's place is temporarily supplied by Mr. Thos. F. Fox, a graduate of the New York Institution and of the National College.

North Carolina Institution.—Miss Nettie Marshall has been appointed as an additional teacher in articulation.

Ohio Institution.—Mr. Leonce A. Odebrecht, a graduate of the Columbus High School, has been appointed to the vacancy in the corps of teachers occasioned by the resignation of Miss

teacher to accept the principalship of the Colorado Institute, and Miss Van Tassel to become a teacher in the Central New York Institution.

Illinois Institution.—Miss Cornelia Trask, a teacher in this Institution for twenty-five years, died Nov. 22, 1883. Miss Trask was born and educated in Hartford, Conn., and taught the deaf for a few years in the Indiana Institution, in New York, and in Memphis, Tenn., before coming to Illinois. When articulation teaching was begun by this Institution—the first of the older American schools to enter upon the work in earnest—Miss Trask was chosen to direct the experiment, and bringing to the task rare intelligence, enthusiasm and faithfulness, she produced results of remarkable excellence. She had previously taught by the manual method, and taking all her experience and proficiency into consideration she probably had a wider scope of practical knowledge in the work of deaf-mute instruction than any person now living. She was a woman of high character, and a devoted Christian.

The electric light has been in use in this Institution for several months, and is found to be exactly the light desirable for such establishments. The Edison Incandescent Light is the one adopted, and for indoor illumination it is regarded as superior to everything else except sunlight. It is also exceedingly cheap, not only in view of the quality of the light, but as a matter of fact, as compared with gas. Dr. Gillett recommends its adoption by all deaf-mute institutions.

Mackay Institution.—Mr. Widd tendered his resignation as principal on account of his health, but the managers declined to accept it, and have given him a year's leave of absence in the hope that his health may be restored and he may be able to return to his post. He has gone to Los Angeles, Cal., for the winter. Miss Harriet E. McGann has been appointed superintendent, and takes charge of the educational as well as the administrative department during Mr. Widd's absence. Miss Edith Terrill, of Belleville, Ont., is added to the corps of teachers.

Michigan Institution.—The system of management has again been reorganized. Mr. Platt, the principal, has resigned, and Mr. M. T. Gass, a gentleman of experience in schools for hear-

Chicago Day-Schools.—A class in articulation has been formed. It receives instruction daily, except Saturday and Sunday, at an hour that does not interfere with the regular school-room studies. The several schools under Mr. Emery's direction are situated as follows: High School, 155 W. Monroe street, near Halsted; 1st West Side School, Scammon School, W. Monroe, near Halsted; South Side School, Third Ave. School, near 12th street; North Side School, cor. Menominee and Hammond streets; 2d West Side School, cor. W. Division and Cleaver streets. Mr. Emery's address is 43 May street.

Colorado Institute.—We regret to have to say that our announcement in the last number of the *Annals* that the dual system of management of this Institution had been abolished, and the principal given full executive authority, was incorrect. The old system still exists, and in consequence Mr. Walker, from whose administration much good was expected, has felt compelled to resign the position of principal. Mr. Campbell has also resigned the position of teacher. Mr. J. W. Blattner, late of the Iowa Institution, has been appointed principal.

Columbia Institution.—Miss Sarah H. Porter, formerly of the Clarke Institution and more recently of the Lynn, Mass., high school, whose forcible article entitled "Society and the Orally Restored Deaf-Mute" in the last July number of the *Annals* attracted so much attention, has been added to the corps of instruction.

Fredericton (N. B.) Institution.—The building on Hawthorn Hill was destroyed by fire in March last, and the present location of the Institution is temporary. The old site, consisting of 117 acres and commanding a magnificent view of the St. John river, has just been secured with the intention of erecting a suitable building next spring.

Horace Mann School.—Professor and Mrs. Alexander Graham Bell have provided funds for the industrial education of some needy pupils out of school hours. Five boys have received instruction at the school of Mechanic Arts in the Institute of Technology, three of whom were beneficiaries of Professor Bell.

Iowa Institution.—Mr. Blattner has resigned the position of

VAN PRAAGH, WILLIAM. On Training Colleges for Teachers of the Deaf and Dumb. A paper read at the Conference of Headmasters of Institutions for the Education of the Deaf and Dumb, at Doncaster, 1882. London: 11 Fitzroy Square, W. 8vo, pp. 7.

Mr. Van Praagh argues forcibly the importance of a special training for teachers of the deaf, and urges that a training college, to be successful, should give the students practice in a large school with various classes of children. "Every good school, presided over by a competent principal, ought to be in reality a training college." Mr. Van Praagh does not underestimate the value of theoretical training by lectures, reading, etc., but regards actual work in various school-rooms—proceeding from the highest to the lowest—under the close supervision and constant direction of an experienced teacher, as the most important element of success.

REPORTS OF INSTITUTIONS. 1883. Clarke, Columbia, Gerlachshiem, (Baden,) Horace Mann, Llandaff, (Wales,) and Western New York Institutions.

The Report of the Clarke Institution is of especial interest, as containing answers from parents of pupils to a series of questions relating to their estimate of the benefit of articulation and lip-reading to their children, a statistical table prepared by Miss H. B. Rogers showing the extent to which articulation is taught in the Institutions of the United States, and a sketch of the Brussels Convention and of visits to European schools by Miss Caroline A. Yale.

INSTITUTION ITEMS.

BY THE EDITOR.

American Asylum.—At the celebration of the centennial anniversary of Longmeadow, Mass., on the 17th of October last, Professor Storrs was the president of the day and gave a peculiarly eloquent and beautiful address of welcome from Longmeadow to her children. The *Springfield Republican* says that "it was delivered with such grace of gesture and such fervor of utterance as rendered it doubly admirable. The ease of Professor Storrs's delivery reminds us to say that without doubt it is largely due to his long experience as a teacher of the deaf and dumb in the Hartford Asylum; for in that work not a few notable orators have been trained."

vain—to the sale of this volume for a comfortable livelihood in her declining years. The price of the book is \$1.75 or \$1.50, according to the style of the binding, and it may be obtained from Miss Fuller, whose address is Savanna, Carroll county, Ill.

HOUDIN, AUGUSTE. Congrès international de Bruxelles pour l'amélioration du sort des sourds-muets. Comité central d'organisation et d'études. Rapport sur les mémoires envoyés au comité en réponse aux six questions du programme. [Report on the papers sent to the central committee of organization and topics of the Brussels Convention, in reply to the six questions of the programme.] Bruxelles: F. Hayez. 1883. 8vo, pp. 48.

VAN SCHELLE, LÉON. Résumé analytique des travaux du troisième congrès international pour l'amélioration du sort des sourds-muets, tenu à Bruxelles du 13 au 18 août, 1883, précédé d'un aperçu sur l'origine des congrès internationaux pour l'amélioration du sort des sourds-muets et des résolutions prises par les congrès de Paris et de Milan. [Summary of the Proceedings of the Brussels Convention, preceded by a sketch of the origin of such conventions and of the resolutions adopted at Paris and Milan.] Bruxelles: F. Hayez. 1883. 8vo, pp. 42.

It seems to be generally agreed that the Brussels Convention was productive of little valuable result. Various reasons are assigned for this in the foreign periodicals by the Abbe Tarra and others; but we think the most satisfactory one is given in a private letter to the editor of the *Annals* from one of the leading delegates:

Such congresses between people who only half understand what is said by others than those of their own tongue, and who cannot influence each other's views by fair argument, can do little practical good, beyond bringing prominent workers into acquaintanceship with each other, and furnishing a reason for a pleasant holiday trip.

That the Convention was not entirely successful was certainly not the fault of Mr. Houdin, who performed the difficult and delicate task assigned to him in a thorough and satisfactory manner. He presents in French an analysis of all the papers presented in different languages to the Committee in answer to the questions designated, and at the close of each group gives his own carefully formed opinions on the subjects discussed. Whatever may be thought of the Convention, this Report is certainly a valuable contribution to the literature of our profession.

Mr. Van Schelle's Summary of the Proceedings seems to be a carefully and faithfully prepared abstract. We understand that a future publication will present the Proceedings in full.

which instruction should begin, the course of elementary instruction approved by Dr. I. L. Peet, the successful adoption by Mr. Z. F. Westervelt of Kindergarten principles in elementary training, the value of kitchen-garden and cookery lessons for deaf-mute girls, the connection of manual occupations with the educational courses, and the results of the National Deaf-Mute College.

FARRAR, ABRAHAM, Jr. Speech for the Deaf and Dumb. [In the Sunday Magazine for December, 1883, pp. 733-737. London: Isbister & Co.]

An able plea for the education of the deaf by the oral method, deriving special interest from the deafness of the author, who was himself educated according to the system he advocates by the Rev. Thos. Arnold, of Northampton, England.

FULLER, Miss ANGELINE A. The Venture. Detroit, Mich.: J. N. Williams. 1883: 12mo, pp. 232.

This volume of poems owes its interest and value largely to the fact that the author is totally deaf and partly blind—at times almost entirely blind, so that the poems had to be carried in memory until a respite permitted their commitment to paper. She lost her hearing by congestive chills at the age of thirteen, and two years later her sight became affected. The use of one eye is entirely gone, and with the other eye she is often able to distinguish only between light and darkness. Members of the family close by her side cannot be recognized, and all print or writing is a blank. At other times happily she is able to read and write with some comfort. She was for some time a pupil in the Illinois Institution for the Deaf and Dumb, using books with raised letters like the blind.

Verses written under such difficult and painful conditions are of course not to be judged by the same severe standard as is usually applied to poetical works. As Oliver Wendell Holmes says, in a characteristic notice of the book, "the circumstances under which these poems were written would disarm the most relentless critic." But he adds, with justice as well as kindness, that "the book is very creditable to the tender heart and the metrical talents of the authoress, with whom every reader must sympathize, and whose cheerful activity of mind under the natural impediments demands our highest respect and esteem."

We may add that Miss Fuller is looking—and we hope not in

Professor BREWER asked of Professor Bell as to the congenitally deaf offspring of deaf parents, whether the deafness was usually transmitted entire if at all. That is, in a "partially deaf" family does he mean that some of the children are entirely deaf and the others entirely normal, or are the most of the children neither entirely deaf nor with normal hearing, but what is called "hard of hearing?"

Professor BELL answered that no distinction had been made hitherto, but that it ought to be. He cited a case where a young man who was only hard of hearing had been educated at an institution of deaf-mutes, and had learned the sign-language. His hearing developed as he grew up and he could hear the other workmen in the shop conversing, but did not understand them because he only knew the sign-language.

He believed from personal observation that a considerable number of the congenitally deaf were only "hard of hearing," and that the sense of hearing could be educated in such cases so as to be of use. He did not know of any statistics showing the proportion of the pupils in our Institutions who were semi-deaf, but believed it was considerable. This conclusion was supported by the fact that it used to be the custom in some of our Institutions to summon the pupils from the play-grounds *by the ringing of a bell!* Pupils who could hear the ringing of a bell at a distance could have been taught to speak at home if artificial assistance had been given to their hearing. He was glad to know that efforts were now being made in some of our schools to develop the latent hearing possessed by many of the pupils. The Nebraska Institution had specially distinguished itself by its efforts in this direction. The experiments had been so successful that Mr. Gillespie, the principal, had expressed the opinion that "the semi-deaf, as a class, should be separated from the totally deaf, and educated with a view to sending them out from school as 'hard-of-hearing speaking people,' and not as deaf-mutes." This plan, again, though to be commended in the highest degree, increases the isolation of the congenitally deaf who are totally deaf, and must increase the probabilities of undesirable intermarriages.

Professor BREWER thought that the disuse of speech by persons partly deaf, as described by Professor Bell, would be a factor, though perhaps a minor one, in the formation of a deaf variety of mankind.

NOTICES OF PUBLICATIONS.

BY THE EDITOR.

EATON, JOHN. Report of the Commissioner of Education for the year 1881. Washington: Government Printing Office. 1883. 8vo, pp. 1117.

In addition to the statistics and other valuable information with respect to general education, this Report, as usual, gives full statistics of American Institutions for the Deaf and Dumb and other matter relating to the education of the deaf. The day-schools in Boston, Portland, Chicago, St. Louis, and Scranton are described. Other subjects discussed are the age at

opinion in relation to Dr. Bell's theory, he would remind the Academy that the laws of evolution applying to the lower animals do not apply to man; that the general tendency of human evolution is not toward the differentiation of varieties, but toward increasing homogeneity; and that if, in fact, there were a tendency to the establishment of a deaf-mute variety, it would constitute an exceptional case in the history of civilized man.

Mr. SAMUEL H. SCUDDER (of Cambridge, Mass.) said that, since statistics show that the majority of deaf parents bring forth hearing children, Professor Bell's argument might equally be applied to showing that the proposed policy would lead to a permanent hearing variety of men, and suggested that, as the deaf were eliminated from the general community by the proposed policy, it might lead to a real benefit, since the number of deaf in the community at large would be diminished, while at least a majority of the deaf community would have the power of hearing.

Professor SIMON NEWCOMB (Superintendent of the Nautical Almanac, Navy Department, Washington, D. C.) remarked that Mr. Scudder's suggestions seemed quite sound for the case of a community which was not replenished by the addition of deaf from the outside, and in which all the hearing children should remain. In such a case no permanently deaf variety would be formed, but the proportion of hearing persons would be likely to increase with each generation. A fundamental principle of the Darwinian law of descent is that it is necessary to the permanence of any characteristic that it should be continued through a number of successive generations; just how many generations could not be said. In order, therefore, that the result described by Professor Bell should be brought about it was necessary and sufficient that the community should be continually replenished from without and that its hearing children should be removed from it to mingle with the rest of the world. The result of this process would be that, as successive generations were born, there would be a continually increasing number of children whose ancestors for several generations back had been deaf. Hence the proportion of permanently deaf would continually increase until in the lapse of time the permanent variety described by Professor Bell would be formed.

Mr. SCUDDER asked Professor Bell if he could state the proportion of deaf-mute children from consanguineous deaf-mute parents, and if there was any law upon the point.

Professor BELL replied that he was making investigations upon this point, which he believed to be a very important one. The data in his possession at the present time were too few to be thoroughly relied upon. He did not think that, as a general rule, consanguineous marriages were so productive of deaf offspring as people generally supposed, and the researches of Dr. Darwin seemed to support this conclusion. But where a tendency towards deafness already existed in a family a consanguineous marriage seemed to bring out the defect in the offspring. A remarkable case bearing upon the point had just been reported to him from the Kentucky Institution. Two or three brothers and sisters of one family had been admitted to that Institution about the year 1828. One of these pupils married a deaf-mute, and had several children, all hearing and speaking. One of these children married his cousin—also a hearing and speaking person—and they had five children, all deaf and dumb.

Now, if social or any other causes tend to select the people of a community who have some special character not possessed by the whole, and to cause them to intermarry for successive generations, then this special character in time becomes fixed by heredity, and it probably becomes intensified by the selection. When thus fixed, it characterizes a variety, or "breed." In our experience with animals we have abundant illustration of this principle. Numerous breeds have already been made in this way, others are in process of formation; of the latter the modern trotting horse is an illustrious example.

We have illustrations also in human society; we see it in some of the phases of pauperism and crime. The intermarriage of criminals, and the numbers of criminals or persons with criminal instincts in certain families, has attracted the attention of various investigators. Every investigation of late years into pauperism shows the existence of a tribe or "variety" of paupers—as much an hereditary variety as are the gypsies. Dr. Hoyt's investigations among the paupers of New York State, a few years ago, showed that in most of the poor-houses of that State were paupers of three or more generations standing.

A gentleman connected with the Forest Service in India described to the speaker, a few years ago, the process by which new castes have sprung up in India since the English rule in that country began, and how these have modified the physical characteristics of these classes, forming, in a sense, new varieties of the native inhabitants. At first they began by the selection for certain kinds of service of men of special physical characters. This laid the physical foundations. The characters were further enhanced by the modes of life and the environment. The social customs of the country, in the meantime, controlled, or at least influenced, the marriages. What began as classes became castes, which castes had special physical features; in short, were *varieties*, special selection in marriage being the real factor in the formation of such a variety.

Professor Bell had shown in his paper that certain social and other influences tend to the intermarriage of the educated deaf. It seemed to the speaker that if this selection continues, a deaf "breed" will be the inevitable result, the "thoroughbreds" (to carry out the analogies with which he began) of which will all be deaf or nearly so, the variety shading off through all the grades of partial deafness to the normal hearing type.

Professor BELL rose again to say that there was another point which he would make. It had been discovered that those who were not congenitally deaf, and had lost the power of speech, which they had before disease had made them deaf, speedily regained the power of language. Special instruction had been devised for this. Then another philanthropic scheme had been devised for segregating these uncongenital deaf-mutes from the congenital deaf-mutes. This tended to increase the rapidity with which the congenital deaf-mutes were drifting into a new variety, because the element which had retarded this, namely, marriage with a non-congenital mate, was now being removed.

Major JOHN W. POWELL (Director of the Bureau of Ethnology and of the U. S. Geological Survey, Washington, D. C.) said that while he knew too little of the history of deaf-mute education to express any specific

Professor Bell claimed that these conditions were favorable for creating a deaf variety of the human race, and that segregation in childhood and the use of a foreign vernacular were the two great elements that were producing this unpleasant result. He thought that by placing the education of deaf children under the control of the Boards of Education instead of the Boards of State Charities arrangements might be made whereby deaf classes could be organized in the public schools. While he did not advocate the co-education of the deaf with hearing children, he thought that the instruction of the two classes in the same building would be attended with many advantages. The deaf children could associate with the hearing children in the play-ground, and be thrown into the same classes with them for instruction in such subjects as map-drawing, drawing, arithmetic on the black-board, calisthenics, etc. This plan would give all the advantages of special instruction, without the disadvantages of exclusive segregation. Then as to the language to be employed in communicating with them, he would advocate the substitution of the English language for the sign-language. He laid special stress upon the value of speech and mouth-reading as a means of establishing communication between the deaf and hearing children in the public schools. The constant association with hearing children would act as a stimulus to the acquisition of the English language, especially in its spoken form, which stimulus was wanting in all our institutions, the necessity for a knowledge of the English language not being realized by the pupils till their school course was completed and they were turned out into the world to earn their own living. Such an experiment as the speaker advocated had been tried in Greenock, Scotland,* and had been a perfect success. The deaf-mutes had formed far more friendships among the speaking children than among one another, and had learned to communicate with their hearing companions by word of mouth.

Professor WILLIAM H. BREWER (of Yale College, New Haven, Conn.) said that incident to his professorship he had for many years made a special study of heredity, more particularly in its relations to the production of domestic animals, and that he had collected many facts pertaining to the origin and development of breeds. He considered that the formation of a human variety, under the influences and conditions stated by Professor Bell, was in perfect accordance with well established facts in our experience with animals, and he held that the laws of heredity and variation apply to man and brute alike.

The general facts as to the origin of new breeds of domestic animals by the selection of animals having a special character are too well known to need discussion. By selecting animals having any special character for successive generations, in time a breed is formed in which this character is transmitted by heredity, and, moreover, the character is usually enhanced by the selection.

Breeds and varieties are synonymous terms in science. We speak of "varieties" of wild animals and of men in precisely the same sense in which we speak of "breeds" of domestic animals. In either case it means a group of individuals having certain characters not possessed by all the species, but which characters are in this group transmitted by heredity.

* With a class of *four* deaf children.—ED. ANNALS.

Professor Bell then went into the origin of the sign-language, and showed that it was imported from France, and retained traces of its French origin in its idioms and the structure of some of its signs. He contended that the deaf-mutes thought in this sign-language, and when they read English books had to translate the words in their minds into their sign-language. This made the deaf-mutes seek each other's society when they had left the institutions, and meet in societies formed for deaf-mute social intercourse. Naturally they intermarried. Then they had city and State associations of deaf-mutes, and even deaf-mute journals and conventions. At the latter discontented deaf-mutes had proposed to go out West and form settlements of deaf-mutes, where they might rule their own affairs in a silent, voiceless way. But it was shown that the majority of the children of deaf-mutes could talk, and so in time the settlement would be of purely speaking persons. The discontented deaf-mutes were of the opinion that by an act of Congress their settlements, if they ever have them, might be restricted forever to deaf-mutes.

We interrupt the report to inform such of our readers as may not be familiar with the amusing discussion of "A Deaf-Mute Commonwealth" which occupied some pages of the eighth and tenth volumes of the *Annals*—and which, as presented by Professor Bell, seems to have made more impression upon the scientists of the Academy than the facts warrant—that the project never met with any favor whatever among the deaf as a class nor among the wisest and best of their leaders. It was proposed by John J. Flournoy, of Athens, Georgia, a deaf gentleman of brilliant but undisciplined and unbalanced mind, who distinguished himself still more by his advocacy of *trigamy* as the remedy for existing social evils; it received some support from three or four young men of hasty judgment; but by the more thoughtful among the deaf, such as Booth, Burnet, Carlin, and Clerc, it was treated with merited disapprobation and ridicule, and never was seriously entertained by the deaf generally. We think Dr. Bell errs when he says that the plan was proposed in conventions of deaf-mutes. The only convention at which it was even mentioned, we believe, was the Third Convention of the New England Gallaudet Association of Deaf-Mutes, held in 1858. There the plan—having already been proposed in the *Annals* two years before—was referred to by two or three speakers, but only to be condemned. So much for the truth of history; we return to the report of the meeting of the Academy, merely suggesting as we go that this scheme of a quarter of a century ago was perhaps after all not much more chimerical than the proposal of to-day to abolish all our institutions for the education of the deaf, and to substitute therefor "a deaf variety" of day-schools for hearing children.

vised and partly rewritten for the *Annals* by Dr. Bell and the other distinguished gentlemen who took part in the discussion.*

Professor A. GRAHAM BELL read a paper on "The Formation of a Deaf Variety of the Human Race." He said that the influence of selection in modifying breeds of domestic animals was marked. If this could be done in the human race it would be equally marked. It had been supposed hitherto that, except in the case of hereditary diseases, nothing of transmission, or of evolution, in the human race had been observed. But something striking and abnormal is going on among deaf-mutes, something that is tending to create a new variety of the human race. The Professor here quoted reports of various asylums and institutions for deaf-mutes, showing that in about eighty cases out of one hundred deaf-mutes were married to deaf-mutes. These reports did not give the information whether the marriage in each case was between persons congenitally deaf, or between those who had become deaf by disease, or between one of each kind. He believed that those who, being congenitally deaf, married congenitally deaf persons, were likely to have deaf-mute children. The Professor presented diagrams showing that the majority of those who were congenitally deaf had relatives who were deaf-mutes also. But with regard to the number of deaf children resulting from the marriage of one or more deaf parents the facts were hard to obtain, in consequence of the incompleteness of the reports on the subject.

The total number of deaf-mutes in the United States was 34,000, or one out of every 1,500. Though he was unable to say what the proportion of deaf-mute children from the marriage of deaf-mute parents or one deaf-mute parent would be, he considered it safe to state that it would many times exceed the proportion of deaf children born from hearing parents. Before the opening of deaf-mute institutions deaf-mutes did not marry deaf-mutes to any great extent, and seemed to be afraid of transmitting their defect to their offspring. They either did not marry at all, or only married hearing persons. After fifteen or sixteen years of experience, the deaf-mutes seem to have become imbued with the idea that the progeny would not be affected, and the result has been an immense increase in the marriage of deaf-mutes to deaf-mutes. The Professor said that he had discovered four generations of deaf-mutes in which the deafness had actually been transmitted. He claimed that by bringing children together in deaf-mute institutions, and by giving them a sign-language which was not English, but was special to deaf-mutes, a state of things had been created out of the purest and most philanthropic motives which impelled male deaf-mutes to choose female deaf-mutes, because they were surrounded by them and used the same language.

* Some of the newspaper reports of the discussion were very erroneous, and have led to some criticism of Professor Bell for views he did not express. The *Springfield Republican*, for instance, speaks of the formation of a deaf variety of the human race as being in Professor Bell's opinion "a consummation greatly to be desired," and condemns him for "advocating the intermarriage of mutes and the education of deaf children by themselves, suppressing all tendencies to communicate with the outer world!"

many without their coming under our observation." On the other hand, it is a fact that the graduates of our institutions often marry each other, and it cannot be denied that deaf-mute parents sometimes have deaf-mute children;* and we are familiar with the statistics collected by Dr. W. W. Turner and others, which (so far as they go) tend to support Professor Bell's theory—a theory, indeed, which should properly be called by Dr. Turner's name rather than Dr. Bell's, since it was presented in substance by Dr. Turner at the Washington Conference of Principals in 1868.† But even if this theory were fully established, we should not regard it as a reason for abolishing our institutions for the deaf, since the good they do far outweighs the possible evil, and the same good could not be even approximated by Professor Bell's proposed system of the combination of schools for the deaf with those for the hearing; but we should endeavor to meet the evil by warning the deaf—especially in cases where the individual's ancestral history, as shown by the institution records, seemed to render the warning peculiarly necessary—of the danger liable to result from marrying persons similarly afflicted.

The following abstract of Professor Bell's paper and of the discussion by which it was followed is taken from the newspaper reports of the meeting of the National Academy, chiefly that of the New York *Tribune*, but it has been thoroughly re-

* In a letter just received from Dr. Philip G. Gillett, of Jacksonville, Ill., superintendent of the largest institution for the deaf and dumb in the world, he says: "Professor Bell applied to me lately as to the number of pupils who were the offspring of deaf-mutes. You will be interested to know that out of 1,700 pupils only thirteen had deaf parents, and that there were only ten families where deaf parents had deaf children."

† "It is a well-known fact, as regards domestic animals, that certain unusual variations of form or color which sometimes occur among their offspring may, by careful selection of others similar, and by a continued breeding of like with like, be rendered permanent, so as to constitute a distinct variety, as in the case of horses, sheep, and swine. The same course adopted and pursued in the human race would undoubtedly lead to the same result. * * * Shall it then be thought strange, if congenital deaf-mutes intermarry and have children, that they should sometimes transmit their infirmity to those begotten by them? Should we not rather expect that, in conformity with the general law of propagation, most of their children would be congenitally deaf?"—Dr. W. W. Turner's paper on Hereditary Deafness, in the Proceedings of the National Conference of Principals of Institutions for the Deaf and Dumb, held at Washington, D. C., May 12-16, 1868, page 91.

DISCUSSION BY THE NATIONAL ACADEMY OF SCIENCES CONCERNING THE FORMATION OF A DEAF VARIETY OF THE HUMAN RACE.

BY THE EDITOR.

SINCE the last number of the *Annals* was issued, Professor Alexander Graham Bell's active interest in the welfare of the deaf has not only led him to give the interesting address before the Philosophical Society of Washington, published in the present number, and to establish a school where—on a small scale—his own ideal of deaf-mute education may be attempted, but to read a paper before the National Academy of Sciences at its meeting in New Haven, November 13, 1883, on the danger that he fears will result to the world from our present system of deaf-mute education in "the Formation of a Deaf Variety of the Human Race." We call the attention of our readers to this paper, especially, in the hope that it may lead them to assist Professor Bell in obtaining the statistics he desires on the subject of deaf-mute offspring of deaf-mute parents. We confess that we think it would have been better if our friend had obtained his statistics first and presented his conclusions afterwards; but no great harm seems to have been done thus far; the public confidence in our beneficent institutions for the education of the deaf is too firmly established to be shaken by an unverified hypothesis concerning remote possibilities, even coming from a man so distinguished and a friend of the deaf so sincere as Professor Bell.

For our part, we regard Professor Bell's apprehensions for the future as having little foundation. Mr. Westervelt, of Rochester, who has spent the last thirty years in the Ohio, Maryland, New York, and Western New York Institutions, says, in a recent number of the "Paper for Our Little People," that "in all his acquaintance there is not one deaf-mute child born of deaf-mute father and mother who were graduates of the same institution, and who formed their acquaintance there." The testimony of the editor of the *Annals*, relating to an acquaintance of thirty years among the pupils of the Michigan, New York, and Washington Institutions, would be to the same effect. As Mr. Westervelt says, "While there may have been such cases and we may not have heard of them, it is impossible that there should have been

however imperfectly, is regarded by the public more as a foreigner than as a deaf-mute. Speech breaks through the barriers of prejudice that separate him from the world, and he is recognized *as one of ourselves*.

Dr. Gallaudet under-estimates the value of speech to a deaf child. He seems to think that speech is of little or no use unless it is as perfect as our own. The fact is that the value of speech to a deaf child must be measured by its *intelligibility*, rather than by its perfection.

It is astonishing how imperfect speech may be and yet be intelligible.

We may substitute a mere indefinite murmur of the voice for all our vowel sounds without loss of intelligibility. [Professor Bell spoke a few sentences in this manner and was understood by all present.] Here at once we get rid of the most difficult elements we are called upon to teach. If now we examine the relative frequency of the other elements of speech—the consonantal sounds—we find that 75 per cent. of the consonants we use are formed by the point of the tongue, and that the majority of the remainder are formed by the lips. The consonants that are difficult to teach are chiefly formed by the top or back of the tongue, but on account of their comparative rarity of occurrence they may be very imperfectly articulated without loss of intelligibility. Hence I see no reason why—in spite of our general ignorance of the mechanism of speech—we may not hope to teach all deaf children an intelligible pronunciation. Let teachers appreciate the value of speech to a deaf child, and they will make the attempt to give it to him. At the present time lack of appreciation operates to prevent experiment upon the large scale. Skilled teachers of articulation will become more numerous as the demand for their services increases; and their ingenuity, intelligently applied, will increase the perfection of the artificial speech obtained.

In the meantime do not let us discard speech from the difficulty of obtaining it in perfection. Do not let us be misled by the idea that intelligible but defective speech is of no use, and must necessarily be painful and disagreeable to all who hear it. Those who have seen the tears of joy shed by a mother over the first utterances of her deaf child will tell you a different tale. None but a parent can fully appreciate how sweet and pleasant may be the imperfect articulation of a deaf child.

can understand the sign-language of the deaf and dumb without much instruction and practice?

Pantomime and dramatic action can be used—and with perfect propriety—to illustrate English expressions, so as actually to facilitate the acquisition of our language by the deaf; but the abbreviated and conventionalized pantomime known as the “sign-language” is used *in place* of the English language and becomes itself the vernacular of the deaf child. Judging by the quotations made by Dr. Gallaudet, Moritz Hill himself makes a clear distinction between “pantomime” and the sign-language, retaining the former and proscribing the latter. “Every species of pantomime language,” he says, is not proscribed. “Natural signs,” or signs such as those “employed by hearing and speaking persons,” are retained, while “artificial signs are proscribed.”

All the arguments that have been advanced respecting pantomime and pantomime-language are equally applicable to pictures and a picture-language. We may say, for instance, that a picture-language is more natural than any of the spoken languages of the world, because pictures are naturally understood by all mankind. We may even arrive, by a further process of generalization, at the idea that picture-writing in the wider sense constitutes the only form of language that is “natural” at all, for all the other languages appear to be entirely arbitrary and conventional. If we pursue the parallel we shall arrive at the conclusion that a picture-language of some kind must necessarily be the vernacular of our pupils, by means of which the other more conventional languages may be explained and taught.

It is immaterial whether such statements are fallacies or not, so long as we do not apply them to educational purposes. But let us see how they work in practice. No one will deny that the exhibition of a picture may add interest to the fairy tale or story that we tell a child. It illustrates the language we use, and it may be of invaluable assistance to him in realizing our meaning. But is that any reason why we should teach him Egyptian hieroglyphics? Granting the premises, is the conclusion sound that we should teach him English *by means* of hieroglyphics? If such conclusions are illogical, then the fundamental ideas upon which our whole system of education by signs is based are also fallacious and unsound.

One word in conclusion regarding speech. The main cause of the fallacies that fog our conception of the condition of the deaf child is *his lack of speech*. A deaf person who speaks,

It was originally intended to have only a family or small school at Northampton, but it was soon found that signs could not be excluded from the playground, as the young children could not communicate in any other way. This plan was changed, the number of pupils was largely increased, and a preparatory department established in which signs were tolerated in the playground. On the removal of the pupils to the higher departments the use of signs is forbidden, and they are rarely used on the playground or between the pupils, either in or out of school hours.

In the latter years of instruction they acquire great facility in articulation and reading from the lips, though there is almost always some difficulty for a stranger to understand them.

Dr. Gallaudet had referred to the International Convention of deaf-mute teachers and their friends at Milan three years ago. Mr. Hubbard was present at the Convention held this year at Brussels, and was there informed that a delegate had been sent from France to attend the Convention at Milan and investigate the method of instruction in Italy, where articulation was used, for the purpose of deciding whether the instruction in the French schools should continue to be by signs or instruction by articulation be substituted for signs. The preference of the delegate had been for signs; but on witnessing the results obtained in the Italian schools, and hearing the discussion, he was led to advise that the instruction in the French schools hereafter be by articulation instead of signs, and such a change has, Mr. Hubbard understands, been made in most of the schools in France.

Mr. Hubbard learned from the reports at Brussels that almost all the European schools were taught by articulation, and that this means of instruction was being rapidly substituted for the sign-language in England as well as in France.

Professor BELL said :

Mr. President: Allow me to say a few words in reply to Dr. Gallaudet. There are signs *and* signs. There is the same distinction between pantomime and the sign-language that there is between a picture and the Egyptian hieroglyphics.

Pictures are naturally understood by all the world, but it would be illogical to argue from this that a picture-language like that developed by the ancient Egyptians must also be universally intelligible.

Pantomime is understood by all the world, but who among us

cation was granted, although again opposed by the gentlemen from Hartford.

The school was opened at Northampton, and has been in operation for nearly fifteen years, and teaching by articulation has ceased to be a visionary theory.

Many of the warmest friends of the Institution now are, like Dr. Gallaudet, connected with institutions where signs are used. In almost every institution for the deaf classes are now taught to articulate, though articulation is not used as the instrument for instruction.

Dr. Gallaudet had taken exception to the remark of Mr. Bell that idiots were born dumb, and said that in every school for idiots there were many feeble-minded children who could talk readily; but Mr. Bell used the word idiot, not as simply a feeble-minded person, but according to its ordinary meaning, "A human being destitute of reason or the ordinary intellectual powers of man."

Mr. Hubbard was very much surprised and pained to hear Dr. Gallaudet advocating even to a limited extent the marriage of deaf-mutes with one another.*

It has always been the policy at Northampton to prevent as far as possible such marriages, for the records show that the children born of such intermarriages are often deaf, and even where a congenitally deaf person marries a hearing person the children sometimes are deaf.

The tendency of the intermarriage of the deaf would be to raise a deaf race in our midst.

About one in 1,500 of the population are deaf; but if these intermarriages should take place, and a deaf race be created, the proportion would rapidly increase, and the object of all friends of the deaf should be to prevent the deaf from congregating, and to induce them to associate with hearing people.

In bringing the deaf together in institutions where they are taught by signs, the tendency is to make the deaf deafer and the dumb more dumb.

* Mr. Hubbard misunderstood Dr. Gallaudet if he thought he *advocated* the marriage of the deaf with the deaf. Dr. Gallaudet in his reply to Professor Bell, while he expressed his disapproval of such marriages, said they were not without some compensating benefits, or words to that effect; but he wrote in the *Annals* (vol. xviii, p. 202,) that "intermarriage among deaf-mutes" he was "constrained to deprecate *in toto*," and we understand that he has not changed his views on this subject.—ED. ANNALS.

made to ascertain how far the graduates had profited by instruction in articulation, it appeared that in almost every instance they could carry on conversation with others sufficiently to engage in many kinds of business from which they would have been excluded if they had only used signs.

It was true, as Dr. Gallaudet said, the congenitally deaf were frequently able to articulate more distinctly than those who lost their hearing at an early age, and this arises from the fact that the disease that caused the deafness affected the organs of articulation to a greater or less degree; but the congenitally deaf do not make as rapid progress in their studies as those who had once spoken, for these have a knowledge of language which the former could only obtain by long protracted study.

Mr. Hubbard believed that the pupils at the Clarke Institution made at least as rapid progress in all their studies as those taught by signs, while at the same time they acquired the power of reading from the lips and speaking, in which those taught by signs were deficient.

When the first application was made to the legislature of Massachusetts for the incorporation of the Clarke Institution, Mr. Dudley, of Northampton, chairman of the committee to whom the petition was referred, had a congenitally deaf child under instruction at Hartford; the petitioners were opposed by the professors from the asylum, as they believed an articulating school would retard the education of the deaf, as it was impracticable to teach the deaf by articulation, (that system having been tried and proved a failure,) and the new method was stigmatized as one of the visionary theories of Dr. Howe, (the principal of the Perkins Institute for the Blind and the teacher of Laura Bridgman, the blind deaf-mute,) who was associated with the petitioners in the hearing.

The application was rejected, through the influence of these professors and of Mr. Dudley, "who knew from experience with his own child that it was impossible to teach the congenitally deaf to talk."

Two years after the application was renewed and with better success.

Mr. Hubbard in the meantime, with the aid of Miss Rogers, had opened a small school where the deaf were taught to speak; this school was visited and examined by the committee, and the progress made was so great that Mr. Dudley became a warm convert, convinced that the impossible was possible, and the appli-

and in such schools the language of signs is kept in its proper position of subordination.

It goes without saying that in schools for the deaf there may be an injudicious and excessive use of signs. This is always to be guarded against, and where it is I am convinced that no harm but great good results from the use of signs in teaching the deaf.

Furthermore, it is well known that the attempt to banish signs from a school for the deaf rarely succeeds. Miss Sarah Porter, for three years an instructor in the Clarke Institution at Northampton, Mass., an oral school in which most excellent results have been attained, shows candor as well as judgment when she says in a recent article in the *American Annals of the Deaf and Dumb*,* "Every oral teacher knows that fighting signs is like fighting original sin. Put deaf children together and they will make signs secretly, if not openly, in their intercourse with each other."

It is not true as a matter of fact that the use of signs necessarily prevents the deaf from acquiring an idiomatic use of verbal language and from thinking in such language. Large numbers of them who have never been taught orally have come into such a use of verbal language, and while it is granted that many educated under the sign system do not use verbal language freely and correctly, the same is found to be true of very many who have been educated entirely in oral schools.

In one important particular the language of signs performs a most valuable service for the deaf, and one of which nothing has yet been found to take the place. Through signs large numbers of deaf persons can be addressed, their minds and hearts being moved as those of hearing persons are by public speaking in its various forms.

Having seen the good effects on the deaf of the discreet use of the sign-language, through a period of many years, I am confident that its banishment from all schools for the deaf would work great injury to this class of persons, intellectually, socially, and morally.

The Hon. GARDINER G. HUBBARD, in reply to Dr. Gallaudet's remarks, said he had been connected with the Clarke Institution for many years. The deaf pupils in that school are taught entirely by articulation. From recent inquiries which have been

* Vol. xxviii, p. 191.

speech is the form of expression natural to hearing persons, and I think a little reflection will satisfy most persons that with the deaf the language of signs is the only truly natural mode of expressing their thoughts.

Professor Bell urges that the use of signs in the education of the deaf is a hindrance rather than a help, and that it would be better to banish them altogether.

To this view I must give my very earnest dissent.

I might, of course, cite the opinions of very many successful instructors of the deaf who have followed only the sign method to sustain my position, but I prefer to call in again the testimony of Moritz Hill, a man whose whole life was devoted to the instruction of the deaf by the oral method.

In an exhaustive work on the education of the deaf* Hill says, speaking of those who pretend that in the "German method" every species of pantomimic language is proscribed:

Such an idea must be attributed to malevolence or to unpardonable levity. This pretence is contrary to nature and repugnant to the rules of sound educational science.

If this system were put into execution the moral life, the intellectual development of the deaf and dumb, would be inhumanly hampered. It would be acting contrary to nature to forbid the deaf-mute a means of expression employed by even hearing and speaking persons. It is nonsense to dream of depriving him of this means until he is in a position to express himself orally. Even in teaching itself we cannot lay aside the language of gestures, (with the exception of that which consists in artificial signs and in the manual alphabet, two elements proscribed by the German school,) the language which the deaf-mute brings with him to school, and which ought to serve as a basis for his education. To banish the language of natural signs from the school-room, and limit ourselves to articulation, is like employing a gold key which does not fit the lock of the door we would open, and refusing to use the iron one made for it. At the best, it would be *drilling* the deaf-mute, but not *moulding* him intellectually or morally.

Hill then follows with thirteen carefully formulated reasons why the use of signs is important and even indispensable in the education of the deaf.

Professor Bell is in error when he supposes that in the so-called sign-schools verbal language is only imparted through the intervention of the sign-language. In many well-ordered schools of this class language is taught without the use of signs,

* Der gegenwärtige Zustand des Taubstummen-Bildungswesens in Deutschland; von Hill, Inspector der Taubstummen-Anstalt zu Weissenfels, Ritter des St. Olafs, &c. Weimar: H. Böhlau. 1866.

educated on what Professor Bell calls the sign method, that "as a general rule, when his education is completed, his knowledge of the English language is like the knowledge of French or German possessed by the average hearing child on leaving school," or to say that "he cannot read an ordinary book intelligently without frequent recourse to a dictionary."

On the contrary, a majority of persons thus educated have a good knowledge of their vernacular, are able to use it readily as a means of communication with hearing persons, and *are* able to read intelligently without frequent recourse to the dictionary.

When Professor Bell has become familiar with the peculiarities of the deaf, by personal contact with a large number of this class of persons, I am confident he will not repeat his assertion that "nature has inflicted upon the deaf child but one defect—imperfect hearing." For he will then have discovered, what has long been known to teachers of experience, that deaf children, in addition to their principal disability, are often found to be lacking in mental capacity, in the imitative faculty, in the power of visual or tactile perception, and in other respects, all of which deficiencies, though they do not amount even to feeble-mindedness, much less to idiocy, do operate against the attainment of success in speech, as well as in other things which go to complete the education of such children.

Passing over several points of relatively small importance, in regard to which I believe Professor Bell's views to be subject to criticism, I come to his characterization as a fallacy of the opinion held by many "that the language of gestures is the only language natural to the child born deaf or who has become deaf in infancy."

I think that in order to sustain his view that this is a fallacy Professor Bell gives a strained and very unusual meaning to the words "natural language." If, as he explains, a natural language is any one that a child may happen to be first taught by those with whom he is associated, then I should have no controversy with him. But I understand a natural language to be one that is mainly spontaneous, and not at all one that is borne in upon a child from without.

Moritz Hill, to whom I have already alluded, speaks of the language of signs as "one of the two universally intelligible innate forms of expression granted by God to mankind," the other being speech. Now it is hardly necessary to urge that

only "eleven could converse readily with strangers on ordinary subjects on leaving school." Of course a much larger number would be able to converse with their teachers, family, and intimate friends on common-place subjects; but it would be found that very many could never attain to any real command of speech.

The explanation of this lies in the fact that a child deaf from infancy, in order to succeed with speech and lip-reading, must possess a certain quickness of vision, a power of perception, and a control over the muscles of the vocal organs by no means common to all such children.

Professor Bell's view has been held by many instructors with more or less tenacity, and *this* fact is explained by a readiness on their part to argue from the particular to the general. Having attained marked success with certain individuals, they draw, in their enthusiasm, the mistaken conclusion that success is possible in the case of every other deaf child, overlooking the fact that many things besides the mere deafness of the child may affect the result.

Experience has demonstrated the fact that in attempting to teach the deaf to speak, failure in many cases must be anticipated.

Professor Bell is mistaken in supposing ignorance as to the mechanism of the vocal organs to be a prominent cause of failure to impart speech to the deaf. It is no doubt true that among persons unfamiliar with the training of the deaf few have made the mechanism of speech a study; but in Germany, Italy, and France, not to speak of our own country, many are to be found who may be said to have mastered this subject. The results of their labors have been made available to instructors of the deaf, and all the best oral schools are profiting thereby.

Professor Bell is mistaken when he says that "in a majority of our schools and institutions articulation and speech-reading are taught to only a favored few, and in these schools no use of articulation is made as a means of communication;" and that "few, if any, attempts are made to teach articulation to those who have not naturally spoken."

In most of the larger institutions for the deaf in this country every pupil is afforded an opportunity to acquire speech, and instruction in this is discontinued only when success seems plainly unattainable.

It is a great error to suppose it to be true of a deaf person,

5. And last, but not least, let us banish the sign-language from our schools.

If it were our object to fit deaf children to live together in adult life, and hold communication with the outside world as we hold communication with other nationalities than our own, then no better plan could be devised than to assist the development of a special language suitable for intercommunication among the deaf.

But if, on the other hand, it is our object to destroy the barriers that separate them from the outside world and take away the isolation of their lives, then I hold that our energies should be devoted to the acquisition of the English language *as a vernacular* in its spoken and written forms. With such an object in view we should bring the deaf together as little as possible, and only for the purpose of instruction. After school-hours we should separate the deaf children from one another to prevent the development of a special language, and scatter them among hearing children and their friends in the outside world.

Dr. E. M. GALLAUDET replied to Professor Bell with some remarks, of which the following is an abstract:

Mr. President: I have listened with great interest to the remarks of Professor Bell this evening, and am ready to agree in many particulars with the views he has so well presented.

I am, however, compelled to differ with him at several points, and as these involve matters of vital importance in the treatment of the deaf I will beg the indulgence of the Society for a short time while I attempt to show to what extent some of Professor Bell's views are erroneous.

In proving the generally received opinion that the vocal organs of persons deaf from infancy are defective to be a fallacy, Professor Bell declares that difficulties encountered by such persons in acquiring speech are wholly external to themselves, and that all persons so situated can, with proper instruction, be taught to speak and to understand the motions of the lips of others.

That this is a grave error has been proved by the experience of more than a century of oral teaching in Germany. The late Moritz Hill, of Weissenfels, Prussia, a man of the widest experience and highest standing among the oral teachers of Europe, expressed to me the opinion a few years since that out of one hundred deaf-mutes, including the semi-mute and semi-deaf,

they express, without the intervention of signs, and written English can be taught to deaf children by usage so as to become their vernacular.

6. A language can only be made vernacular by constant use as a means of communication, without translation.

7. Deaf children who are familiar with the English language in either its written or spoken forms can be taught to understand the utterances of their friends by watching the mouth.

8. The requisites to the art of speech-reading are :

(a.) An eye trained to distinguish quickly those movements of the vocal organs that are visible (independently of the meaning of what is uttered ;)

(b.) A knowledge of *homophenes**—that is, a knowledge of those words that present the same appearance to the eye; and,

(c.) Sufficient familiarity with the English language to enable the speech-reader to judge by context which word of a homophenous group is the word intended by the speaker.

If we look back upon the history of the education of the deaf, we see progress hindered at every stage by fallacies. Let us strive, by discussion and thought, to remove these fallacies from our minds so that we may see the deaf child in the condition that nature has given him to us. If we do this, I think we shall recognize the fact that the afflictions of his life are *mainly due to ourselves*, and we can remove them.

Nature has been kind to the deaf child, man—cruel. Nature has inflicted upon the deaf child but one defect—imperfect hearing ; man's neglect has made him dumb and forced him to invent a language, which has separated him from the hearing world.

Let us, then, remove the afflictions that we ourselves have caused.

1. Let us teach deaf children to think in English by using English in their presence in a clearly visible form.

2. Let us teach them to speak by giving them instruction in the use of their vocal organs.

3. Let us teach them the use of the eye as a substitute for the ear in understanding the utterances of their friends.

4. Let us give them instruction in the ordinary branches of education by means of the English language.

* This word was suggested to me some years ago by Mr. Homer, late principal of the Providence (R. I.) School for Deaf-Mutes, and has now been permanently adopted.

English language operates to effect their absorption into society at large, and to weaken the bonds that tend to bring them together; whereas, a poor knowledge of the language of the country they live in causes them to be repelled by society and attracted by one another; and these attractive and repulsive tendencies are increased and intensified if they have been taught at school a language foreign to society and specially adapted for intercommunication among themselves. I say, then, let us banish the sign-language from our schools. Let the teachers be careful in their intercourse with their pupils to use English, and English alone. They can write, they can speak by word of mouth, they can spell the English words by a manual alphabet, and by any or all of these methods they can teach English to their pupils as a native tongue.

CONCLUSION.

In conclusion allow me to say—

1. That those whom we term “deaf-mutes” have no other natural defect than that of hearing. They are simply persons who are deaf from childhood and many of them are only “hard of hearing.”

2. Deaf children are dumb, not on account of lack of hearing, but of lack of instruction. No one teaches them to speak.

3. A gesture-language is developed by a deaf child at home, not because it is the only form of language that is natural to one in his condition, but because his parents and friends neglect to use the English language in his presence in a clearly visible form.

4. (a.) The sign-language of our institutions is an artificial and conventional language derived from pantomime.

(b.) So far from being natural either to deaf or hearing persons, it is not understood by deaf children on their entrance to an institution. Nor do hearing persons become sufficiently familiar with the language to be thoroughly qualified as teachers until after one or more years' residence in an institution for the deaf and dumb.

(c.) The practice of the sign-language hinders the acquisition of the English language.

(d.) It makes deaf-mutes associate together in adult life, and avoid the society of hearing people.

(e.) It thus causes the intermarriage of deaf-mutes and the propagation of their physical defect.

5. Written words can be associated directly with the ideas

this cause? Such unions do not generally result in the production of deaf offspring, because the deafness of the parents in a large proportion of cases is of accidental origin, and accidental deafness is no more likely to be inherited than the accidental loss of a limb. Still I would submit that the constant selection of the deaf by the deaf in marriage is fraught with danger to the community.

WHY THE ENGLISH LANGUAGE SHOULD BE SUBSTITUTED FOR THE SIGN-LANGUAGE AS A VERNACULAR.

If we examine the position in adult life of deaf children who have been taught to speak, or who have acquired the English language as a vernacular, whether in its written or spoken forms, we find an entirely different set of tendencies coming into play, especially if these persons have not been forced in childhood to make the acquaintance of large numbers of other deaf children, by social imprisonment for years together in the same school or institution apart from the hearing world.

Their vernacular use of the English language renders it easy for them to communicate with hearing persons by writing, or by word of mouth if they have been taught to articulate; and hearing persons can easily communicate with them by writing, or by word of mouth if they have been taught the use of the eye as a substitute for the ear. The restraints placed upon their intercourse with the world by their lack of hearing leads them to seek the society of books, and thus they tend to rise mentally to an ever higher and higher plane. A cultivated mind delights in the society of educated people, and their knowledge of passing events derived from newspapers forms an additional bond of union between them and the hearing world.

If they have formed in childhood few deaf acquaintances, they meet in real life hundreds of hearing persons for every deaf acquaintance; and if they marry, the chances are immensely in favor of their marrying hearing persons.

There is nothing in the deaf-mute societies in the large cities to attract them, and much to repel them; for the more highly educated deaf-mutes in these societies speak what is to them a foreign language, while the greater number of the deaf-mutes to be found there are so ignorant that self-respect forbids them from mingling with them.

Thus, the extent of their knowledge of the English language is the main determining cause of the congregation or separation of the deaf in adult life. A good vernacular knowledge of the

the German language he must resolutely avoid the society of English-speaking people. He then finds that the mental effort involved in conversation becomes less and less until, finally, he learns to think in German and his difficulties cease.

Now, consider the case of a deaf boy just graduated from an institution where the sign-language has been employed as a means of communication. His vernacular is different from that of the people by whom he is surrounded. He thinks in the gesture-language, and has to go through a mental process of translation before he can understand what is said or written to him in English, and before he can himself speak or write in English what he desires to say. He finds himself, in America, in the same condition as that of the American boy in Germany. If he avoids association with those who use the sign-language, and courts the society of hearing persons, the mental effort involved in conversation becomes less and less, and finally he learns to think in English, and his difficulties cease.

But such a course involves great determination and perseverance on the part of the deaf boy, and few, indeed, are those who succeed.

Not only do the other deaf-mutes in his locality have the same vernacular as his own, but they were his school-fellows and they have a common recollection of pleasant years of childhood spent in each other's society. Can it be wondered at, therefore, that the vast majority of the deaf graduates of our institutions keep up acquaintance with one another in adult life? The more they communicate with one another the less desire do they have to associate with hearing persons, and the practice of the gesture-language forms an obstacle to further progress in the acquisition of the English language.

These two causes, (a) previous exclusive acquaintance with one another in the same school and (b) a common knowledge of a form of language specially adapted for the communication of the deaf with the deaf, operate to attract together into the large cities large numbers of deaf persons who form a sort of deaf community or society having very little intercourse with the outside world. They work at trades or businesses in these towns, and their leisure hours are spent almost exclusively in each other's society. Under such circumstances can we be surprised that the majority of these deaf persons marry deaf persons, and that we should have as a result a small but necessarily increasing number of cases of hereditary deafness due to

Can it be wondered at, therefore, that such a child soon tires of home? He longs for the school play-ground, and the deaf companions with whom he can converse so easily. Little by little the ties of blood and relationship are weakened, and *the institution becomes his home.*

Nor are these all the harmful effects that are directly traceable to the habitual use in school of a language that is different from that of the people. Disastrous results are traceable inwards in the operations of his mind, and outwards in his relation to the external world in adult life. He has learned to *think* in the gesture-language, and his most perfected English expressions are only translations of his sign-speech.

As a general rule, when his education is completed, his knowledge of the English language is like the knowledge of French or German possessed by the average hearing child on leaving school. He cannot read an ordinary book intelligently, without frequent recourse to a dictionary. He can understand a good deal of what he sees in the newspapers, especially if it concerns what interests him personally, and he can generally manage to make people understand what he wishes by writing, but he writes in broken English as a foreigner would speak.

Let us consider for a moment the condition of a person whose vernacular is different from that of the people by whom he is surrounded. Place one of our American school-boys just graduated from school in the heart of Germany. He finds that his knowledge of German is not sufficient to enable him to communicate freely with the people. He thinks in English, and has to go through a mental process of translation before he can understand what is said or can himself say what he means. Constant communication with the people involves constant effort and a mental strain. Under such circumstances what a pleasure it is for him to meet with a person who can speak the English tongue! What a relief to be able to converse freely once more in his own vernacular! Words arise so spontaneously in the mind that the thought seems to evoke the proper expression.

But mark the result: The more he associates with English-speaking people the less desire does he have to converse in German. The practice of the English language prevents progress in the acquisition of German. I have known of English people who have lived for twenty years in Germany without acquiring the language.

If our American school-boy desires to become familiar with

because it is the only language that is natural to one in his condition, but because his friends neglect to use in his presence any other form of language that can be appreciated by his senses. Speech is addressed to his ear; but his ear is dead, and the motions of the mouth cannot be fully interpreted without previous familiarity with the language. On account, therefore, of the neglect of parents and friends to present to his eye any clearly visible form of language, the deaf child is forced to invent such a means of communication, which his friends then adopt by imitation. I venture to express the opinion that no gesture-language would be developed at home by a deaf child if his parents and friends habitually employed, in his presence, the English language in a clearly visible form. He would come to understand it by usage and use it by imitation.

An old writer, George Dalgarno, in 1680, has expressed the opinion, in which I fully concur, that "there might be successful addresses made to a dumb child, even in its cradle—*risu cognoscere matrem*—if the mother or nurse had but as nimble a hand as usually they have a tongue."

When deaf children enter an institution they find the other pupils and teachers using a form of gesture-language which they do not understand. For the first time in their lives they find a language used by those about them that is addressed to the senses they possess. After a longer or shorter time they discard the language which they had themselves devised, and acquire *by imitation* the sign-language of the institution.

HARMFUL RESULTS OF THE SIGN-LANGUAGE.

After a few months' residence in the institution the children return to their friends in the holidays using easily and fluently a language that is foreign to them, while of the English language they know no more than the average school-boy does of French or German after the same period of instruction. The only language they can employ in talking to their friends is the crude gesture-language of their own invention, which they had long before discarded at school: and they perpetually contrast the difficulty and slowness of comprehension of their friends, with the ease with which their school-fellows and teachers could understand what they mean. They have learned by experience how sweet a thing it is to communicate freely with other minds, and they are continually hampered and annoyed by the difficulty they meet with in conversing with their own parents and friends.

THE FALLACY THAT A GESTURE-LANGUAGE IS THE ONLY FORM OF LANGUAGE IN WHICH A CONGENITALLY DEAF CHILD CAN THINK.

Now what do we mean by a language being "natural" or not? I cannot believe that in this nineteenth century any one really entertains the fallacy that there is a natural language *per se*. So I presume that that language is considered natural to a person in which he thinks. Under this meaning the proposition assumes this shape: The sign-language taught in our institutions, or a gesture-language of some kind, is the only form of language in which a congenitally deaf child can think. That is, it is the only language of which the elements can be associated directly with the ideas they express.

In this form the fallacy is easily exploded, for in the course of the last 100 years so many experiments have been made in the education of the deaf that we now know with absolute certainty that deaf children can be taught to associate written words directly with the ideas they represent; and when they are taught to spell these words by a manual alphabet, the movements of the fingers become so natural a method of giving vent to their thoughts that even in sleep their fingers move when they dream.

Not only has written English been made the vernacular of congenitally deaf children, but the same result has been achieved with written French, German, Spanish, and Dutch, and other languages.

Congenitally deaf children who have been taught articulation move their mouths in their sleep and give utterance to words when they dream.

Laura Bridgman, the blind deaf-mute, was taught by the late Dr. Howe to gather ideas through the sense of touch. English words printed in raised letters were presented to her sense of touch in connection with the objects which they represented, and she associated the impressions produced upon the ends of her fingers with the objects themselves. The English language in a tangible form became her vernacular.

All these facts assure us that any form of language may become natural to a deaf child by usage so long as it is presented to the senses he possesses. There is only one way that language is naturally acquired, and that is by usage and imitation. Any form of language that can be clearly appreciated by the senses the deaf child possesses will become his vernacular if it is used by those about him.

WHY THE DEAF EMPLOY A GESTURE-LANGUAGE.

A gesture-language is employed by a deaf child at home, not

When, in 1817, the first school for the deaf and dumb was opened in America the sign-language as used in the school of the Abbe de l'Epée, then under the charge of his successor, the Abbe Sicard, was imported from France and it became the medium of instruction. The teachers trained in this school naturally became the principals of other institutions established upon its model, and thus the sign-language has been diffused over the length and breadth of our land.

I heartily agree with all that experienced teachers of the deaf have urged concerning the beauty and great interest of this gesture-language. It is indeed most interesting to observe how pantomimic gestures have been abbreviated to simple signs expressive of concrete ideas; how these have been compounded or have changed their meaning to indicate abstract thoughts; and how the sequence of the sign-words has to a certain extent become obligatory, thus forming a sort of gesture syntax or grammar.

The original stock or stocks from which our languages are derived must have disappeared from earth ages before historic times; but in the gesture-speech of the deaf we have a language whose history can be traced *ab origine*, and it has appeared to me that this fact should give it a unique and independent value. In the year 1878, in a paper read before the Anthropological Society of London, I advocated the study of the gesture-language by men of science; for it seemed to me that the study of the mode in which the sign-language has arisen from pantomime might throw a flood of light upon the origin and mode of growth of all languages.

You may ask why it is that with my high appreciation of this language, *as a language*, I should advocate its entire abolition in our institutions for the deaf.

I admit all that has been urged by experienced teachers concerning the ease with which a deaf child acquires this language, and its perfect adaptability for the purpose of developing his mind; but after all it is not the language of the millions of people among whom his lot in life is cast. It is to them a foreign tongue, and the more he becomes habituated to its use the more he becomes a stranger to his own country.

This is not denied by teachers of the deaf and dumb, but the argument is made, as I have stated above, that it is the only language that is natural to congenitally deaf children, or that, at all events, some form of gesture-language must necessarily be their vernacular, and be employed to teach our English tongue.

After he has presented a sufficient number of such signs you perceive that the one thing common to them all was their color—they were white. And thus you gain the idea that the cow was white.

Do you suppose he goes through this process every time he desires to communicate the idea of white? No; he remembers the object which had conveyed to your mind the idea that that cow was white, and the sign for this object is ever after used as an adjective qualifying the object the whiteness of which he desires to indicate. Of course you cannot predicate what this particular sign may be. I have seen children who have conveyed the idea by touching their teeth; others who expressed it by an undulatory downward movement of the hand, expressive of the way in which a snowflake falls to the ground.

It will thus be understood that a deaf child first commences to express his ideas by pantomime, and that by a process of abbreviation pantomimic gestures come to be used in a conventional manner. Pantomime is no more entitled to the name of language than a picture is, although many ideas can be conveyed through its means. In proportion as it becomes more conventional and arbitrary it becomes more and more worthy of the name of language.

THE SIGN-LANGUAGE OF OUR INSTITUTIONS.

Now when the deaf children who lived with the Abbe de l'Epée were first brought together, each of them used a gesture-language he had invented for himself as a means of communicating with his friends at home. Thus there were as many gesture-languages as there were children. The only element common to these languages was probably the pantomime from which they had all sprung. But now what happened? Association, and the necessity of intercommunication, led to their adoption of common signs. Each child presented his gestures to his fellows, and by a process of selection those signs that appeared to the majority to be most fitting survived, and were adopted by the whole, and the synonymous signs which were not so well fitted were either forgotten by disuse or used in a new meaning to express other ideas.

I do not wonder at the interest displayed in this growth by the Abbe de l'Epée and his contemporaries. To my mind, it was the most interesting and instructive spectacle that has ever been presented to the mind of man—the gradual evolution of an organized language from simple pantomime.

had some white spot or other mark upon the nose, and the gesture of the child had not indicated a cow in general, but your black cow "Bessie," with the white spot on her nose, in particular.

Having advanced thus far in the comprehension of his meaning, do you think that the child will take the trouble to go through this same pantomime the next time he wishes to tell you about your cow? No; he may commence such a pantomime, but before he gets half through you understand what he means, and he never completes it. A process of abbreviation commences, until finally a touch on the bridge of his nose alone becomes the name of your black cow "Bessie," and the simple holding of his hands above his head conveys to your mind the idea of a cow in general.

By a natural process of abbreviation the child arrives at a simple gesture or sign for every object or thing in which he is interested.

But there are many thoughts he desires to express which are abstract in their nature. How, for instance, can he indicate by any sign the color of an object? Suppose, by way of illustration, that he desired to communicate to you the idea that he had seen in the road a cow that was perfectly white.

I shall try to depict the conversation between yourself and your deaf boy as it might actually have occurred:

The Boy. The boy points to the road, touches his teeth, and holds his hands above his head.

You gather from this a vague idea of some connection between that road, the boy's teeth, and a cow.

Here is a problem: What did he mean? It is pretty clear that he had seen a cow in the road, but what connection had his teeth with that? Perhaps the cow's teeth were peculiar. You think you had better get him to explain, so—

The Father. You touch your teeth with an interrogative and puzzled look.

The Boy. The boy responds by showing you his shirt sleeve and pointing to the road.

Can he mean that there was any connection between his shirt sleeve and the cow? To clear this point—

The Father. You touch his shirt sleeve and raise your hands above your head with a look of interrogation.

The Boy. The boy nods vigorously, raises his hands above his head, and makes his sign for "snow," followed by other signs for other objects that are white.

mankind, and that the shapes of the Hebrew letters had some natural relation to the sounds they represented; that they pictured, in fact, the positions of the vocal organs in forming the sounds. The latter idea led him to employ the characters as a means of teaching articulation to a deaf-mute, but the former idea led him to teach his deaf-mute Hebrew instead of his native tongue. When we examine the languages of the world that are naturally acquired by hearing children, we fail to discover any natural connection between the words and the things they represent; everything is arbitrary and conventional.

ORIGIN AND MODE OF GROWTH OF A GESTURE-LANGUAGE.

Now let us examine for a moment the nature of a gesture-language and the manner in which it comes into existence. You may be, we shall suppose, a farmer, and your little deaf boy comes running into the house in great excitement, anxious to tell you something he has observed. How does he do so?

We shall imagine a case. He commences by placing his hands above his head, bowing low, and marching about the room, after which he points out of the window.

You shake your head, you have not the remotest idea what he means.

His face assumes an anxious look and down he goes upon his hands and knees and scrambles over the floor, touching the carpet with his mouth from time to time, and then again he points out of the window. Still you do not comprehend. A look of perplexity crosses his face. What can he do to make you understand? At last his face lights up as a new thought comes into his mind, and he touches the bridge of his nose and again points out of the window.

But alas! alas! you cannot understand.

The little fellow is perplexed and troubled. At last, in despair, he takes hold of your coat and pulls you out of the door around the corner and—*you find your cow in the turnip patch.*

Now you begin to understand what it was he meant to say; he had tried to picture the cow, and to imitate its actions. The hands held above the head had indicated the horns; the scrambling on the floor on his hands and knees had imitated the action of a four-footed animal, and his mouth to the carpet meant the cow eating the turnips.

But how about the bridge of his nose?

You will probably observe that the cow to which he referred

proposition that the sign-language is the only language that is natural to congenitally deaf children is like the proposition that the English language is the only language that is natural to hearing children. It is natural only in the same sense that English is natural to an American child. It is the language of the people by whom he is surrounded.

A congenitally deaf child who for the first time enters an institution for the deaf and dumb finds the pupils and teachers employing a gesture-language which he does not understand, but in time he comes to understand it, and learns by imitation to use it just as an American child in Germany comes in time to understand and speak German. Although congenitally deaf children when they enter an institution do not understand or use the sign-language as there employed, they each know and use a gesture-language of some kind, which they employ at home in communicating with their friends and relatives.

Hence it is argued that if the "sign-language" employed in our institutions is not the only one, a gesture-language of some kind is necessarily the vernacular of the congenitally deaf child. The scope of the statement is thus widened, and the proposition we have now to consider may be thus expressed: Gesture-language, in the wider sense, is the only form of language that is natural to those who are congenitally deaf.

It is a matter of great importance to the 34,000 deaf-mutes of this country and to their friends and relatives, as well as to all persons who are interested in the amelioration of the condition of the deaf and dumb, that we examine this proposition with care and decide whether it is a fallacy or not. To my mind it is a fallacy based upon another concerning the nature of language itself, namely, that there is such a thing as a natural language. Such an idea has led to errors in the past and will ever continue to do so. We have all read of the monarch of ancient times who is recorded to have shut up a number of little children by themselves and to have given orders to their attendants to hold no communication with them, so that he might observe what language they would naturally speak as they grew up. It is recorded that the first word uttered was a Greek word; from which it was argued that the Greek language was the natural language of mankind.

In the 17th century the ingenious Van Helmont was imbued with the idea that the Hebrew language was of Divine origin, from which he argued that Hebrew was the natural language of

in which two girls were sewing. He addressed some remarks to them but received no reply. These girls were deaf and dumb. At once the kind heart of the good Abbe was touched and he determined to devote his life to the amelioration of the condition of the deaf and dumb. He gathered together quite a number of deaf children who made their home with him. He spent his time in their society and devoted to their comfort all that he possessed, reducing himself even to poverty for their sake. He soon observed that these children were communicating with one another, but not by speech. They were inventing a language of their own entirely unlike any of the spoken languages of the earth—a language of gestures. These children were reasoning by means of this language, they were thinking in gestures instead of in words, and the idea occurred to the Abbe de l'Epée that the old dogma that had for so many hundred years prevented the education of the deaf was a fallacy. Here was nature developing an instrument of reason with which speech had nothing to do. Why should he not study this gesture-language and assist these children in their attempts to perfect a means of communication of this kind, and why should he not use this means of communication so as to lead their minds to higher and ever higher thoughts? He did so, and succeeded in developing the “sign-language” that is now so extensively employed in this country in the education of the deaf. The experiment at once attracted attention; kings and emperors visited the humble abode of the Abbe de l'Epée and were astonished by what they saw. He conversed with his pupils in the gesture-language, and he taught them through its means the meaning of written French, so that they were enabled to communicate with hearing persons by writing.

THE FALLACY THAT A GESTURE-LANGUAGE IS THE ONLY FORM OF LANGUAGE THAT IS NATURAL TO THE CONGENITALLY DEAF.

The old fallacy was done away with, but a new one immediately took its place, which has been introduced into our country with the language of signs and is now the main obstacle to the acquisition of English by the congenitally deaf. The fallacy to which I allude is that this gesture-language is the only language that is natural to the congenitally deaf; and that, therefore, such children must acquire this language as their vernacular before learning the English language and must be taught the meaning of the latter through its means. The

rely more upon writing and less upon the mouth in their instructions to young congenitally deaf children.

After a probationary period pupils who could speak before they became deaf become so expert in speech-reading that the regular instruction of the school-room can be carried on through its means without detriment to the pupils' progress. The exceptional cases of congenitally deaf persons who have become expert in this art assure us that, with all who are deaf from infancy, we can certainly achieve the same results if only we can give them a sufficient knowledge of our language at least in its written form. In the early stages of the education of the congenitally deaf it appears to me that written English should be made the vernacular of the school-room, and that all words or sentences written should also be spoken by the teacher and read by the pupils from the mouth.

When the English language has become vernacular there is no reason why instruction should not also be given by word of mouth alone, (as in the case of those who could speak before they became deaf,) without interfering with mental development. Before leaving this subject I would say that it is of importance to remember that speaking and understanding speech by the eye are two very different things. We can all of us speak very readily, but I fancy it would puzzle most of us to be called upon to tell what a speaker says by watching his mouth. The congenitally deaf can certainly be taught to speak intelligibly even by persons unfamiliar with the mechanism of articulation. Such pupils should therefore be taught to articulate, and their vocal organs should be continually exercised in the school-room by causing them to speak as well as to write. The congenitally deaf can be taught to articulate even *before* they are familiar with English, but I do not think they can acquire the power of understanding ordinary conversational speech by watching the mouth, at least to any great extent, until *after* they have become familiar with our language. /

GESTURE-LANGUAGE.

I have already stated that the old fallacy "without speech there can be no reason" prevented for hundreds of years any attempt at the education of the deaf and dumb, and now I come to the memorable experiment that forever exploded the fallacy. Towards the latter end of the last century the Abbe de l'Epée, during the course of his ministrations in Paris, entered a room

reason is that, as a class, the former have not a vernacular knowledge of our language even in its written form, while the latter have. Children who become deaf in infancy from disease are at as great a disadvantage in this respect as the congenitally deaf, and for the same reason.

I shall enquire more particularly into the cause of this lack of familiarity with the English language, and I shall show that it results from a wide-spread fallacy regarding the nature of language and the means by which our language should be taught. In the meantime I shall simply direct attention to the fact that those who are deaf from infancy do not, as a general rule, become familiar with the English language even in its written form.

It is obvious that if we talk to deaf children by word of mouth and refrain from explaining the words that are ambiguous, by writing or some other clearly visible means, those pupils who are already familiar with the language have very great advantages over the others. They have a fund of words from which to draw; they can guess at the ambiguous word and substitute other words within their knowledge, so as finally to arrive at the correct meaning. But young children who have been deaf from infancy, and who never therefore have known our language, are not qualified at once for this species of guess-work. They know no words excepting those we teach them, and have therefore no fund to draw upon in case of perplexity. If we commence the education of such children by speech-reading alone they are plunged into difficulties to which they have not the key.

To such children it becomes a matter of absolute necessity that our language should be presented to them in an unambiguous form.

With such pupils writing should be the main reliance; and speech-reading can only be satisfactorily acquired by the constant accompaniment of writing, or its equivalent—a manual alphabet. I have no hesitation in saying that the attempt to carry on the general education of young children who are deaf from infancy by means of articulation and speech-reading alone, without the habitual use of English in a more clearly visible form, would tend to retard their mental development. I do not mean to say that this is ever actually done, but I know there is a tendency among teachers of articulation to rely too much upon the general intelligibility of their speech. Let them realize that the intelligibility is almost entirely due to context, and they will

derstand general conversation, that he shall know the words that look alike, so that a given series of movements of the vocal organs shall suggest to his mind not a single word but a group of words from which selection is to be made by context.

An illustration will explain what I mean. There are many words which have the same sound to the ear, but different significations. For instance, were I to ask you to spell the word "rane," you could not tell whether I meant "rain," "rein," or "reign." These words sound alike, but they lead to no confusion, for they are readily distinguished by context. In the same way "homophenous words," or words that have the same appearance to the eye, are readily distinguished by context.

As a general rule, when a teacher finds that her pupil does not understand a given word she supposes the non-comprehension to be due to an untrained eye, and this leads to the patient repetition of the word with widely opened mouth, to make the action of the organs more visible.

This, unintentionally, enables the pupil to acquire a knowledge of homophenous words; for, when he fails to understand in the first instance, he is requested to try again. He then guesses at the meaning. He thinks of all the words that past experience has taught him looked something like the word proposed, and after a series of guesses generally succeeds in his attempt to unravel the meaning.

In this way success comes at last, and not in consequence of the pupil seeing more than he saw at first, but in consequence of knowledge gained by experience of failure. He learns what words present the same appearance to the eye. Let teachers find out the words that look alike, and teach them in groups to their pupils. In this way instruction will take the place of knowledge gained at present by painful experience.

III. The third requisite to good speech-reading is familiarity with the English language. Familiarity with our language either in its written or spoken form is absolutely essential in order that a deaf person may make use of context in his attempt to decipher our speech. It is a mental problem that the deaf child has to solve, and not solely a problem of vision. The eyes of the congenitally deaf, if there is any difference at all, are rather stronger and better than the eyes of those who become deaf from disease; and yet, as a class, the congenitally deaf acquire the art of speech-reading with much more difficulty than those who could speak before they became deaf. The

pupil gave utterance to a very different word from that which had been spoken by the teacher. The latter repeated the word a number of times, opening her mouth to the widest extent, and the boy each time repeated the incorrect expression. The teacher grew annoyed at the supposed stupidity of the pupil, and the pupil grew sulky and was discouraged in his attempt to read from the mouth, whereas in reality it was not the stupidity of the boy that was in the way of his progress, but the ignorance of the teacher, who did not know that the words that were so different to her ear were absolutely alike to his eye. Some teachers in their anxiety to teach speech-reading to their pupils have the idea that they should refrain from every other mode of communication so that their pupils may be forced to observe the movements of the mouth and the mouth alone.

For instance, it is easy to write an ambiguous word, or to spell it by a manual alphabet, but some teachers refrain from doing so under the impression that this practice leads the pupil to depend upon the hand, instead of the mouth.

Again, deaf persons gather an idea of the emotion that actuates a speaker by the expression of his countenance. In fact, facial expression is to the eye what the modulation of the voice is to the ear. It gives life to the inaudible utterances of the mouth; but there are some teachers who are so afraid that their pupils may come to depend upon the face instead of the mouth that they think they should assume an impassive countenance from which nothing could be inferred.

REQUISITES TO THE ART OF SPEECH-READING.

If we examine the visibility of speech and the causes of its intelligibility we shall find that there are three qualifications that must be possessed by a deaf child in order that he may understand readily the utterances of his friends. Omit any one of these qualifications and good speech-reading is an impossibility.

I. The eye must be trained to recognize readily those movements of the vocal organs that are visible. Has this ever been done? Have not pupils been required to grapple with all the difficulties of speech-reading at once, and to observe not only the movements of the vocal organs but to find out the meaning of what is said?

II. I have already explained that certain words have the same appearance to the eye, and it is necessary, if the pupil is to un-

they understood what I said or not, but simply to write down what they thought the words looked like, and what do you think they wrote? Upon examining their slates I found that nearly every child had written the following sentence: "It rained very hard, and for that reason I did not go." I told the pupils to be very careful to observe whether they could distinguish any difference between the words I uttered and the words they wrote. I therefore went over the whole string of words again, articulating them one by one very distinctly. No difference whatever was detected. The mother of one of my pupils was present, and was greatly astonished to see her daughter writing down words so different from those I had pronounced. She said that she could not have believed that her daughter could have been so stupid, but her surprise was increased when she found that the other children had written the same sentence. I told her that there was no difference in appearance between the words I had uttered and the words they had written. She desired to test the matter herself with her own child. She asked her daughter to repeat after *her* the words I had written, but the result was the same. The last part of the sentence she repeated at least a dozen times without shaking her daughter's confidence in the belief that the words she had uttered were precisely the same as those spoken by her mother. To one who could hear it was a startling revelation to observe the confidence of the child in the accuracy of her replies.

"Repeat after me," said the mother as she pronounced the words singly and with deliberate distinctness: "high;" answer, "I:" "knit;" answer, "did:" "donned;" answer, "not:" "co;" answer, "go." "Are you sure you have pronounced the words exactly as I have said them?" Answer, "Yes, perfectly certain." "Try again: knit;" answer, "did:" "donned;" answer, "not." "Are you *sure* I said that?" Answer, "Yes, absolutely sure." "Try again," and here the mother mouthed the word "donned;" answer, "not." The mother was convinced; and she left the room with the remark that she felt that she had been very cruel to her child, through ignorance of the fact that words that were very different to her ear looked alike to her child, and could not possibly be distinguished excepting by context.

I have seen a teacher attempting to impart instruction to a deaf child by word of mouth. She would speak word by word and the pupil would repeat after her. Upon one occasion the

organs more visible. When we realize that context is the key to speech-reading, theory asserts that ordinary conversational speech should be more intelligible than slow and labored articulation. This is amply proved by the experience of the most accomplished speech-readers. I have been told by one who has acquired this art that when introduced to strangers their speech is more readily understood if they are not aware they are speaking to one who cannot hear. The moment they are told they commence to speak slowly and open their mouths to an unnatural extent, thus rendering their articulation partially unintelligible. The change brought about by the knowledge that the listener could not hear was sometimes sudden and great.

I have lately made an examination of the visibility of all the words in our language contained in a small pocket dictionary, and the result has assured me that there are glorious possibilities in the way of teaching speech-reading to the deaf if teachers will give special attention to the subject.

One of the results of my investigation has been that the ambiguities of speech are confined to the little words, chiefly to monosyllables. The longer words are nearly all clearly intelligible. The reason is obvious, for the greater number of elements there are in a word the less likelihood is there that another word can be found that presents exactly the same outline to the eye.

We need never be afraid, therefore, of using long words to a deaf child if they are within his comprehension. We are apt to have the idea that short words will be simpler, and we sometimes try to compose sentences consisting as much as possible of monosyllabic words, under the impression that such words are easy for the pupil to pronounce and read from the mouth. It is more common, therefore, to present such sentences to beginners than to more advanced pupils. Now, I do not mean to say that these sentences may not be easier for a child to pronounce, but the words used are the most ambiguous to the eye. Such a simple word as "man," for instance, is homophenous with no less than thirteen other words.

A few years ago I dictated a string of words to some pupils with the object of testing whether they judged by context or were able to distinguish words clearly by the eye. The results are instructive. Among the words dictated occurred the following: "Hit—rate—ferry—aren't—hat—four—that—reason—high—knit—donned—co." I told the pupils not to mind whether

child who cannot distinguish the elements understand words which are combinations of these elements?

When the lips are closed we cannot see what is going on inside the mouth. The elementary sounds of our language, represented by the letters *p*, *b*, and *m*, involve a closure of the lips. Hence the differences of adjustment that originate the differences of sound are interior and cannot be seen.

But while the deaf child may not be able to say definitely whether the sound you utter is *p*, *b*, or *m*, he knows certainly that it must be one of these three; for no other sounds involve a closure of the lips. And so with the other elements of our language. While he may not be able to tell definitely the particular element to which you give utterance, he can generally refer it to a group of sounds that present the same appearance to the eye. In the same manner he may not be able to tell the precise word that you utter, but he can refer it to a group of words having the same appearance. For instance, the words "*pat*," "*bat*," and "*mat*" have the same appearance to the eye. While he cannot tell which of these words you mean when it is uttered singly, he readily distinguishes it in a sentence by the context. For instance, were you to say that you had wiped your feet upon a "*mat*," the word could not be "*pat*" and it could not be "*bat*."

Here we come to the key to the art of understanding speech by the eye: Context. But this involves, as a prerequisite, a competent knowledge of the English language, and we may particularly distinguish those children who have acquired the art from those who have not by their superior attainments in this respect. We can, therefore, see why children who have become deaf after having learned to speak, naturally acquire this power to a greater extent than those who are born deaf.

There are many cases of congenitally deaf children who have acquired this art as perfectly as those who have become deaf from disease, but in every case such children have been thoroughly familiar with the English language at least in its written form.

FALLACIES REGARDING SPEECH-READING.

The fallacy that speech is as clearly visible to the eye as it is audible to the ear hinders the acquisition of the art by causing the teacher to articulate slowly, and word by word, even opening the mouth to its widest extent to make the actions of the

As a matter of personal observation I am convinced that a large proportion of the congenitally deaf are only hard of hearing, and this belief is supported by the fact that it used to be the custom in some of our institutions to summon the pupils from the play-ground *by the ringing of a bell!* Does this not indicate that a large number of the pupils could hear the ringing of the bell and that they told the others who could not hear at all? Such pupils could have been taught to speak at home by their friends if artificial assistance had been given to their hearing. There was no necessity for their ever becoming deaf and dumb.

It is only within the last fifteen years or thereabouts that schools have been established in the United States where all the deaf children admitted are taught articulation and speech-reading; but such schools are rapidly increasing in number. Still, it is not generally known that the experimental stage has passed and that all deaf-mutes can be taught intelligible speech. This is now done in Italy and Germany, and the International conventions of teachers of the deaf and dumb held recently at Milan and Brussels have decided in favor of articulation for the deaf.

I have stated before that the difficulties in the way of teaching articulation are external to the deaf. They lie with us and in our general ignorance of the mechanism of speech. A teacher who does not himself understand the mechanism of speech is hardly competent to produce the best results. So dense is the general ignorance upon this subject that it is probable that of the 50,000,000 of people in this country the number of persons who are familiar with all that is known concerning the mechanism of speech might be numbered on the two hands. Considering this, the success obtained in our articulation schools is gratifying and wonderful.

UPON THE ART OF UNDERSTANDING SPEECH BY THE EYE.

It has been found in the articulation schools of this country that deaf children can acquire the art of understanding by eye the utterances of their friends and relatives; this fact has led some teachers to suppose that speech is as clearly visible to the eye as it is to the ear, and this fallacy tends to hinder the acquisition of the art by their pupils.

When we examine the visibility of the elementary sounds of our language, we find that the majority can not be clearly distinguished by the eye. How then, you may ask, can a deaf

been the earliest English writer upon the subject of the instruction of the deaf and dumb, published in the year 1648 a treatise entitled "Philocophus; or the Deaf and Dumb Man's friend. Exhibiting the Philosophicall verity of that subtile Art, which may inable one with an *observant Eie*, to *Heare* what any man speaks by the moving of his lips. Upon the same Ground, with the advantage of an Historicall Exemplification, apparently proving, 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."

ARTICULATION TEACHING IN AMERICA.

In Europe at the present time deaf children are much more commonly taught to speak and understand speech than in this country.

In the majority of our schools and institutions articulation and speech-reading are taught to only a favored few, and in these schools no use is made of articulation as a means of communication. A considerable number of the deaf children in our institutions could once hear and speak, and those pupils who retain some knowledge of spoken language have their vocal organs exercised for an hour or so a day in an articulation class under a special articulation teacher, but this is not enough exercise to retain the speech. I have seen a boy who became deaf at twelve years of age, and who had previously attended one of our public schools, go into an institution for the deaf and dumb talking as readily as you or I, *and come out a deaf-mute.*

Few, if any, attempts are made to teach articulation to those who have not naturally spoken, except at the special request of parents who desire that the experiment shall be tried with their children.

I have seen a congenital deaf-mute—who also had a sister deaf and dumb—who was taught to speak in adult life, and I found upon experiment that he could understand by ear the words and sentences that he had been taught to articulate when they were spoken in an ordinary tone of voice about a foot behind his head; yet this young man had been educated at one of our best institutions without acquiring articulation, and as a consequence he grew up a deaf-mute and married a deaf-mute. He informed me himself that he could hear the people talking in the workshop where he was employed but did not understand what they said.

without words; but what words can a deaf child know who has never heard the sounds of speech?

When we think we think in words, though we may not actually utter sounds. Let us eliminate from our consciousness the train of words and what remains? I do not venture to answer the question, but it is this, and this alone, that belongs to the thoughts of a deaf child.

It is hardly to be wondered at, therefore, that the fallacy should have arisen in the past that there could be no thought without speech, and this fallacy prevented for hundreds of years any attempt at the education of the deaf. Before the end of the last century deaf-mutes were classed among the idiots and insane; they had no civil rights, could hold no property; they were irresponsible beings. Even those interested in the religious welfare of the world consigned their souls to the wrong place; for "faith comes by hearing," and how could a deaf child be saved! I say that for hundreds of years the old fallacy that "without speech there could be no reason" hindered and prevented any attempt at the amelioration of the condition of the deaf. But strange to say, it was this very fallacy that first led to their education. It was attempted—by a miracle—to teach them to speak.

In Bede's History of the Anglo-Saxon Church, we read "how bishopp John cured a dumme man with blessing him."*

Now, stripped of the miraculous, this is simply a case of articulation teaching. In the other countries of Europe the first attempts at the education of the deaf were also made by teaching them to speak, and as the early teachers were monks of the Roman Catholic church, it is probable that these schools resulted from the attempts to perform the miracle of healing the dumb. A large proportion of the deaf and dumb who were thus brought together were successfully taught to articulate.

But now comes a marvel. It was found by the old monks that their pupils came to understand the utterances of others by watching the mouth. Such a statement appears more marvelous to those who understand the mechanism of speech than to those who are ignorant of it, and there is a general tendency to consider this accomplishment as among the fictitious embellishments of the old narratives. But the experience of modern teachers confirms the fact. John Bulwer, who is said to have

* As Bede's narrative has been published in the *Annals*, vol. i, p. 83, it is omitted here.—ED. ANNALS.

acquired by imitation and through the same agency defects of speech are propagated. A child copies the defective utterance of his father. A school-fellow mocks a stammering companion and becomes himself similarly affected. In the one case the fallacy that the supposed disease is hereditary prevents attempts at instruction and correction, and in the other the idea that the affliction is the judgment of God in the way of punishment discourages the afflicted person and renders him utterly hopeless of any escape excepting by a miracle.

A practical illustration of the fact that defective speech is propagated by imitation is shown in my own case. When I was a boy my father was a teacher of elocution, and had living with him at one time one or two pupils who stammered. While under the care of my father these boys spoke clearly and well without any apparent defect, but owing to his being called away for a protracted period of time his pupils relapsed, and the boys commenced to stammer as badly as at first. Upon my father's return he found a house full of stammerers. *His own sons were stammering too!* I can well remember the process of instruction through which I went before the defect was corrected in my own case.

IGNORANCE THE REAL DIFFICULTY IN THE WAY OF TEACHING DEAF CHILDREN TO SPEAK.

Speech is the mechanical result of certain adjustments of the vocal organs, and if we can teach deaf children the correct adjustments of the perfect organs they possess, they will speak. The difficulty lies with us. We learn to speak by imitating the sounds we hear, in utter ignorance of the action of the organs that accompanies the sounds. I find myself addressing an audience composed of scientific men, including many of the most eminent persons in the country; and I wonder how many there are in this room who could give an intelligible account of the movements of their vocal organs in uttering the simplest sentence? We must study the mechanism of speech, and when we know what are the correct adjustments of the organs concerned, ingenuity and skill will find the means of teaching *perfect* articulation to the deaf.

THE OLD FALLACY—"WITHOUT SPEECH, NO REASON."

I have already stated that children who are born deaf are also always dumb. How then can they think? It is difficult for us to realize the possibility of a train of thought being carried on

prevents loss of distinctness. We can learn, however, from the case of Alexander Selkirk how important is constant practice of the vocal organs. This man, after about one year's solitary residence upon an island, was found to have nearly forgotten his mother tongue; and we find that deaf adults who shrink from society and use their vocal organs only on rare occasions acquire peculiarities of utterance that are characteristic of persons in their condition, although the general intelligibility of their speech is not affected.

FALLACIES REGARDING THE NATURE OF SPEECH.

The fallacies I have already alluded to respecting the difference between those who become deaf in childhood and those who become deaf in adult life have their origin in a fallacy concerning the nature of speech itself. To most people who do not reflect upon the subject it appears that speech is acquired by a natural process similar to that by which we acquire our teeth. We are all born dumb and without teeth. At a certain age the teeth make their appearance, and at another age we begin to talk. To unreflecting minds it appears that we *grow into speech*—that speech is a natural product of the vocal organs produced without instruction and education; and this leads directly to the fallacy that where speech is wanting or imperfect the vocal organs are defective.

I have already stated that this cause has been assigned in explanation of the dumbness of children who are deaf. The idea gives rise also to the popular notion that stammering and other defects of speech are diseases to be "cured," and the attempt has been made to do so even by heroic treatment. It is not so very long ago that slices have been cut from the tongue of a stammerer in the vain hope of "curing" what was after all but a bad habit of speech. I have myself known of cases where the uvula has been excised to correct the same defect. The dumbness of the deaf and the defective speech of the hearing are some of the penalties we pay for acquiring speech ignorantly by mere imitation. If parents realized that stammering and other defects of speech were caused by ignorance of the actions of the vocal organs, and not necessarily through any defect of the mouth, they would have their children taught the use of the vocal organs by articulation teachers instead of patronizing the widely-advertised specialty physicians who pretend by secret means to "cure" what is not a disease. Speech is naturally

this country success has followed and articulation schools have been established.

FALLACY CONCERNING THE INTELLIGENCE OF DEAF CHILDREN.

The use of the word "mute" engenders another fallacy concerning the mental condition of deaf children. There are two classes of persons who do not naturally speak: those who are dumb on account of defective hearing, and those who are dumb on account of defective minds. All idiots are dumb.

Deaf children are gathered into institutions and schools that have been established for their benefit away from the general observation of the public, and even in adult life they hold themselves aloof from hearing people; while idiots and feeble-minded persons are not so generally withdrawn from their families. Hence the greater number of "mutes" who are accessible to public observation are dumb on account of defective minds and not of defective hearing. No wonder, therefore, that the two classes are often confounded together. It is the hard task of every principal of an institution for the deaf and dumb to turn idiots and feeble-minded children away from his school—children who hear perfectly but cannot speak. Although it is evidently fallacious to argue that "because all deaf infants are dumb and all idiots are dumb, therefore all deaf infants are idiots," still this kind of reasoning is unconsciously indulged in by a large proportion of our population, and the majority of those who for the first time visit an institution for the deaf and dumb express unfeigned astonishment at the brightness and intelligence displayed by the pupils.

WHY HEARING CHILDREN WHO BECOME DEAF ALSO BECOME DUMB.

I have stated above that children who are born deaf do not naturally speak because they cannot hear. For the same reason children who lose their hearing after having learned to speak naturally tend to lose their speech. They acquired speech through the ear by imitating the utterance of their friends and relatives, and when they become deaf they gradually forget the true pronunciation of the words they know, and have naturally no means of learning the pronunciation of new words; hence, their speech tends to become more and more defective until they finally cease to use spoken words at all.

Adults who become deaf do not usually have defective speech, for in their case the habit of speaking has been so fully formed that the mere practice of the vocal organs in talking to friends

vanced in explanation. Antony Deusing,* in 1656, claimed that the nerves of the tongue and larynx were connected with the nerves of the ear, "and from this communion of the vessels proceeds the sympathy between the ear, the tongue and larynx, and the very affection of those parts are easily communicated one with the other. Hence it is that the pulling of the membrane of the ear causeth a dry cough in the party, and that is the reason why most deaf men are dumb, or else speak with great difficulty, that is, are not capable of framing true words or of articulate pronunciation, by reason of the want of that convenient influx of the animal spirits; and for this cause also it is that those who are thick of hearing have a kind of hoarse speech."

The value of Deusing's reasoning may be judged of by the further information he gives us concerning the uses of the Eustachian tube. "By this it is," he says, "that smokers, puffing up their cheeks, having taken in the fume of tobacco, send it out at their ears. Therefore, the opinion of *Alcmaeon* is not ridiculous, who held that she-goats did breathe through their ears," etc., etc.

It is easy for us to laugh at the fallacies of the past, but are we ourselves any less liable to error on that account? The majority of people at the present day believe that those who are born deaf are also dumb *because of defective vocal organs*. Now let us examine this proposition. It is a more ridiculous and absurd fallacy than that of Deusing and more easily disposed of.

The hypothesis that congenitally deaf children do not naturally speak because their vocal organs are defective involves the assumption that were their vocal organs perfect such children *would* naturally speak. But why should they speak a language they have never heard? Do we speak any language that we have not heard? Are our vocal organs defective because we do not talk Chinese? It is a fallacy. The deaf have as perfect vocal organs as our own, and do not naturally speak because they do not hear. I have myself examined the vocal organs of more than four hundred deaf-mutes without discovering any other peculiarities than those to be found among hearing and speaking children. The deaf children of Italy and Germany are almost universally taught to speak, and why should we not teach ours? Wherever determined efforts have been made in

* "Dissertatio de surdis ab ortu." Groningae: 1656. Translated into English by Geo. Sibscota under the title, "The deaf and dumb man's discourse." London: 1670,

FALLACIES CONCERNING THE DEAF.*

BY ALEXANDER GRAHAM BELL, PH. D., WASHINGTON, D. C.

I AM glad to have the opportunity of saying a few words to the members of the Philosophical Society upon a subject that has occupied much of my thoughts of late, namely: fallacies concerning the deaf, and the influence of those fallacies in preventing the amelioration of their condition.

It is difficult to form an adequate conception of the prevalence of deafness in the community. There is hardly a man in the country who has not in his circle of friends and acquaintances at least one deaf person with whom he finds it difficult to converse, excepting by means of a hearing-tube or trumpet. Now, is it not an extraordinary fact that these deaf friends are nearly all adults? Where are the little children who are similarly afflicted? Have any of us seen a child with a hearing-tube or trumpet? If not, why not? The fact is that very young children who are "hard of hearing," or who cannot hear at all, do not naturally speak, and this fact has given origin to the term "deaf-mute," by which it is customary to designate a person who is deaf from childhood.

"But are there no deaf children," you may ask, "excepting those whom we term deaf-mutes?" No, none. In the Tenth Census of the United States, (1880,) persons who became deaf under the age of sixteen years were returned as "deaf and dumb." Such facts as these give support to the fallacy that deafness, unaccompanied by any other natural defect, is confined to adult life, and is specially characteristic of advancing old age.

So constant is the association of defective speech with defective hearing in childhood, that if one of your children whom you have left at home, hearing perfectly and talking perfectly, should from some accident lose his hearing, he would also naturally lose his speech. Why is this, and why are those who are born deaf always also dumb?

FALLACIES CONCERNING THE DUMBNESS OF DEAF CHILDREN.

The most ingenious and fallacious arguments have been ad-

* An address delivered at the two hundred and thirty-ninth meeting of the Philosophical Society of Washington, D. C., held on Saturday, October 27th, 1883, and reprinted by permission from the Bulletin of the Philosophical Society.

THE NUMBER OF THE DEAF AND DUMB IN THE WORLD.*

BY WILLIAM E. A. AXON, M. R. S. L., MANCHESTER, ENGLAND.

A RIGIDLY accurate estimate of the total number of human beings incapable of speech is impossible. Many congenital deaf-mutes will escape classification in their earliest years, as parents will not recognize the unpleasant truth until doubt is no longer possible. The proportion of deaf-mutes to the ordinary population varies in different countries, but it appears to be about one in every fifteen hundred. Taking this as the basis, MM. Guyot in 1842, when the population of the globe was supposed to be 850,000,000, considered that the number of deaf-mutes then living was 600,000. (Guyot: *Liste Littéraire Philocophe*, p. 341.) Since that date there has been a large increase of population. There has also been an increase in the extent of our knowledge as to the number of the dwellers upon the earth. Messrs. Behm and Wagner in 1875 estimated the population of the globe to be 1,396,843,000. (Behm and Wagner: *Bevölkerung der Erde*. Gotha: 1875.) Accordingly, in the following year, taking the figure at fourteen hundred millions, the present writer, accepting the proportion previously employed by Guyot, calculated the deaf-mutes then in the world to be 933,000. (*American Annals of the Deaf and Dumb*, vol. xxi, p. 253.) It seems to be desirable to renew such estimates from time to time, as they are useful and convenient, if it be remembered that they should only be regarded as roughly approximating to the probable facts of the case. The latest detailed estimate of the population of the globe is that given by Mr. H. P. Hubbard. (*Newspaper Directory of the World*. New York: 1882.) In this the important results of the latest of the American census and similar enumerations are included. Mr. Hubbard calculates the total population of the globe to be 1,623,178,161. We may therefore suppose that the number of deaf-mutes in the world is now 1,082,132. Supposing they were all congregated, the City of Silence would be more than twice the size of Manchester and its immediate district.

* Read before Section F (Economic Science and Statistics) of the British Association, Southport, Sept. 21, 1883.

quires us not to assume much historical or scientific knowledge on their part, to enable them to understand allusions.

Of *manner*, comparatively little need be said. It should be clear, earnest, and reverent. The preacher, impressed with the importance of his theme, and remembering that he stands in the house of God as His messenger, will be free from the littleness of attempting to show off his own skill and elegance in sign-making. Especially will he be free from the exaggerated realism of pantomime that is in such danger of passing into vulgar buffoonery. At the same time he will remember that all his pains in the preparation of his matter is thrown away if equal pains be not taken with its delivery.

He should be sufficiently self-conscious, sufficiently master of himself, to "see himself as others see him," and to regulate his every gesture with reference to the eyes that are fixed upon him. The solemnity of the place and the occasion, the gravity of his responsibility for the souls to whom he is bearing the Word of Life, will impart suitable sobriety of demeanor. He should not allow excessive self-consciousness to produce timidity or constraint, a hurried, vague, wooden manner. Among hearing people, in our country, a repression of gesticulation in ordinary conversation may be considered evidence of culture and refinement; but great preachers have not shunned energy, yea, vehemence of action. Chalmers made the chandeliers ring. Luther broke an oaken desk with his fist. Whitefield "preached like a lion. Sometimes he stamped, sometimes he wept, sometimes he stopped, exhausted by emotion, and appeared as if he were about to expire."*

And if such vigor of gesture be a suitable accompaniment, a recognized element, of eloquence among the hearing, what folly to forbid it when it is the one means of making a lively and lasting impression upon the deaf! Who that ever saw David E. Bartlett preach or pray can forget his impassioned earnestness, drawing him entirely out of himself! I have seen him, in describing prayer, go down on his knees on the chapel platform before two hundred children, and every heart was thrilled and awed. Genuine emotion, finding natural expression, will not fail of instant recognition and sympathetic response. And every power of body as of mind, *the whole man*, is most fitly and nobly used in setting forth the glory and the love of the Lord God Almighty.

* *British Quarterly*, April, 1857, quoted in Hoppin's *Homiletics*, p. 667.

words and phrases with definiteness and precision; the archaic language of Scripture requires this especially; but it will hardly be believed by one unfamiliar with the deaf how many words there are in the passages we consider simplest, in the Bible and Prayer-book, which present difficulties to the deaf.

One winter I read Canon Wilkinson's "Instructions in the Way of Salvation" with a class preparing for confirmation, and was obliged to explain sometimes a dozen words in one small page. And with an average deaf-mute who had not attended our service frequently, and followed it closely with the Prayer-book, I should feel doubtful of his correct understanding of the Exhortation in Daily Prayer until by inquiry I had ascertained if he knew the exact meaning of the following words, either by themselves or *in the connections* in which they there appear:

Scripture—moveth—sundry—acknowledge—manifold—dissemble—cloak—lowly—penitent—to the end that—obtain—infinite—although—chiefly—assemble (cf. *dissemble*)—render—benefits—set forth—worthy (likely to be taken for "valuable")—requisite—as well as—beseech—as many as—accompany—the throne of the heavenly grace.

Minds of such a degree deal with the concrete rather than the abstract. Hence liberal use should be made of *illustrations*, and these should be *good*; not so long as to draw attention away from the point to be made; clear and apt; and appealing to the emotions and the intellect with convincing force.

In the choice of illustrations, the most obvious line of exclusion is indicated by the *deafness* of the congregation. They cannot appreciate illustrations drawn from or depending upon ideas of sound, of music, or of poetry—the last, so far as its beauty lies in its *form*, the flow and cadence and sound of the words. *Quotations* from the poets are often highly effective, owing to their condensed, pointed, dramatic manner of expression, which is capable of being well rendered in signs. The eye being the main channel of impressions, preference should be given to incidents which appeal to the eye; and the recital should be cast into a vivid dramatic or panoramic form. The imperfect acquaintance of the congregation with the English, or indeed any written language, bids us avoid illustrations and, in general, topics, whose interest lies in nice verbal distinctions; and quotations whose elegance and force prove, on close examination, to lie in the wording to such an extent that translation into signs dissipates their charm.

And the limited education of those we are addressing re-

Our Church Catechism with admirable wisdom defines the limits of elementary doctrinal teaching. Within these limits, in the Catechism itself, and in the Offices for Baptism, Confirmation, and Communion, and the Daily Prayer, with the scriptural selections arranged for the course of the Christian Year, ample choice of subjects may be found for almost all occasions and all varieties of congregations.

Thus much for the *subjects* of preaching.

In their *treatment*, the peculiarities of deaf-mutes indicate certain limitations.

Their minds are not highly cultivated, and hence are deficient in the power and the habit of *analysis* and *generalization*—the capacity of grasping the full meaning of a truth and tracing its developments, and of observing the analogy and proportion of the same; and the faculty of systematizing and expressing clearly what they do know and believe.

Hence strict *unity* should be observed; the divisions of the sermon should be few and simple, the logic clear, the deductions obvious and of immediate practical application.

Again, their knowledge of *words* is very imperfect. Their vocabularies are limited to the requirements of every-day life. They read slowly, with so much stumbling over individual difficulties, that they fail to get a connected and clear impression of the whole text, and still more of the connection and the course of the argument.

Hence it is well sometimes to treat individual *texts*, and at others to give familiar *expositions*; and even at times to limit one's self to *translations* into signs of connected passages, with little or no comment interspersed. They thus are both helped to *digest* a text, and also taught how to *read* connectedly. The translation or paraphrase of long passages is, however, more appropriate for Bible class than for the sermon. I have read through from one chapter to a whole epistle, as an introduction to or a summary of its detailed study, with the manifest result of awakening new interest and imparting stimulus and zest to the more careful and minute examination.

The tendency to take figurative language literally, and on the other hand to seek a mystical meaning in the most matter-of-fact expressions, may be encountered occasionally, and demands that care be taken in showing in the pulpit the correct application of the principles of interpretation.

It is highly important to bring out the meaning of single

existence of sin and suffering in the world around and in our own hearts; the conflict of good and evil, and the consequences of each; man's fallen state, inherent weakness, need of a Saviour and of a Helper; the sufficiency and preciousness of the Redeemer; the ever-ready sympathy and ample aid of the Comforter.

Following from these—our own part and duty: what we must do to be saved, and how we may keep God's commandments and abide in His love.

These great topics are ever apposite, ever fresh, as a new congregation is gathered, or new-comers appear, or the Spirit of God at length touches effectually hearts long exposed to His gracious influences.

In most places itinerant work is all that can now be done with our small corps of missionaries, and on account of the small number and the scattered state of the deaf themselves it is all that can ever be done. The missionary can come only at intervals of a month or two, for one or two services and a round of pastoral visiting. The friends of the deaf belong to various denominations, and though not over-careful themselves to meet their spiritual wants, yet they view with a jealous eye any appearance of drawing them within another fold than "the family church." Under these circumstances it is best to confine the preaching to these fundamental truths and elementary personal duties. Let the truths be acknowledged, the duties recognized and attempted, and the Lord will lead those who seek His face by the way they should go. In some cases we may have the privilege of leading our friends to find a home in the Church and to seek her sacraments. In others our labors may result, to the eye of the statistician, in swelling the ranks of other denominations rather than those of our own. So be it; our aim and our hope are that all may be found in the ranks of the redeemed.

In the great cities, such as New York, Philadelphia, and Baltimore, the work has been longer established, and is more fully recognized and appreciated, and we have congregations resembling those of ordinary parishes. With these it is not needful, nor is it advisable, to be forever dwelling on first principles. And as the work progresses in the smaller places the foundations may be taken as laid, and we may proceed to build up the Church—the body of Christ—by the consideration of subjects which are second in importance, though only second, to those already mentioned.

We may hope and believe that in almost all cases there is imparted to deaf children soon after they enter school a knowledge of God and of the Saviour. But starting from so low a point, and in so limited a time, it is evident that the religious instruction they are able to receive at school cannot be very extended; and as the institutions are supported by the State, this instruction is necessarily what is called "unsectarian."

Personal religion is certainly inculcated as to duties in society, at home, and in the closet; but not as to those in the Church and at church. When they leave school their deafness still excludes them from ordinary public religious exercises, and they have not learned to appreciate the sacraments; few denominations except our own have a printed liturgy, and the long intervals of "sitting still, doing nothing but *look* at the minister and *think*," as one expressed it to me, are very tedious; while their imperfect acquaintance with the English language hinders their enjoyment of the means available to them in the Bible, the Hymnal, the Prayer-book, and volumes suitable to read during the sermon.

Hence arises a state of things such as is well described by the Rev. Dr. Clerc, speaking of a certain place where there were sixteen or eighteen well educated deaf-mutes: "The need of definite teaching as to the history and claims of the Church, and of personal action associating themselves in the Church's membership, are very apparent. All are well-disposed, intelligent, moral, respected, industrious, and full of regard for the Name, Word, and Law of God, and yet entirely neglectful of the needful connection with His Church. This condition of things, general in the land, exemplified in a marked way here, calls for a remedy."

Yet the deaf have the same natural faculties of soul and spirit as their hearing relatives and their associates in their own rank in life; the same capacity for receiving and assimilating Divine truth; the same temptations and trials, duties and joys; the same need and the same Saviour.

Therefore the staple subject of the Ambassador of Christ to them should be the same as to others—the great message of the Gospel; and it should be set forth in the same manner, winning its way to their hearts by the simple reality and power and attractiveness of Redeeming Love.

The elements of the message are the same—the being of the One God, the All-Father, mighty, wise, beneficent, just; the

kept, after its loss, a familiarity with verbal language, and a consequent power of thinking in words and of mastering the higher ideas conveyed by words, which put them on a level with people who still hear.

Between these two extremes lies the main body of average educated deaf-mutes. These are precisely like their fellow-men in development of the physical nature and of the wants, affections, passions most closely related thereto. The culture of their intellectual, moral, and spiritual nature may or may not have progressed as far as with average hearing people.

At the institution where they received their education they doubtless lived in a wholesome Christian atmosphere. But the inevitable tendency of large institutions being to diffuse and weaken individual influence, very possibly they have never received much of that direct, personal, private care which the parent, the Sunday-school teacher, and the pastor give to other children.

The period of education has been quite limited—the actual average is five years; and if this seems to compare favorably with the school time of their hearing brothers and sisters, let it be remembered that the deaf are excluded from all that varied knowledge which the hearing unconsciously and without effort imbibe in daily life. They came to the institution at ten or twelve years of age, or even later, ignorant of the alphabet; ignorant, indeed, of everything, except what they may have perceived through other channels than the ear, much of which they have, most probably, imperfectly and even wrongly apprehended. They came in a moral and spiritual state for which there is no name short of *heathen*.

That this last assertion is not too strong has been fully and repeatedly established both by the testimony of intelligent and well educated deaf-mutes, and by that of observant and skilful teachers, as to their ideas and general intellectual development before receiving special education.

One instance will suffice both to illustrate this fact and to show with what profound and lively emotion the knowledge of our Heavenly Father is received. Massieu, who shared with Clerc the distinction of being the ablest pupil of the Abbe Sicard, gave the following account of his early impressions.*

* As the narrative of Massieu's infancy and first religious instruction has already been published in the *Annals* (vol. viii, p. 13, and vol. vi, p. 140) it is omitted here.—ED. ANNALS.

And in the meanwhile, while thankful for a modicum of support, we may hope for the time when England, which aspires to be in the forefront of the work of general education, shall show an equal amount of consideration for the "children of silence" as her eldest daughter, and that full enlightenment shall be as much the portion of the English as it is of the American deaf-mute. In the present session of Parliament the exceptional nature of the legislation has extinguished the hope there was of a provision being made forthwith. There are signs, however, that a more tranquil time is coming, and in that lies the hope of the emancipation of the deaf-mute. There is at least one earnest and faithful worker waiting for what his wisdom and experience deem to be a suitable opportunity of advocating the claims of the deaf. I refer to Wm. Woodall, Esq., M. P., and I can only look to his efforts with hope for the future, feeling, as all who know him must feel, that the cause is safe in his hands.

THE PREACHING ADAPTED TO DEAF-MUTES.*

BY REV. HENRY WINTER SYLE, M. A., PHILADELPHIA.

In that day shall the Deaf hear the words of the Book.—*Isaiah* 29: 18.

THE answer to the question, "What is the best kind of preaching for deaf-mutes?" is to be deduced from the condition and character of the persons who are intended to be addressed. These are an ordinary congregation of deaf-mutes, such as assembles every Sunday in New York or Philadelphia, or such as may be gathered in smaller cities, fewer in number, but of the same general composition. In such a congregation the preacher will find few children or uneducated adults—two classes which alike require such extreme simplicity of ideas, such energy and vividness of pantomime, that it is barely possible to preach satisfactorily to them and to educated adults at once. The probability of such persons being present is, however, sufficiently great to require of the preacher—even if he does not recognize their faces—to use simplicity of matter and perspicuousness of manner. On the other hand there will as probably be a sprinkling of semi-mutes, *i. e.*, those who retained their hearing to an age sufficiently advanced for them to have

* A paper read before the Second Conference of Church Workers among the Deaf, Philadelphia, October, 1883.

ing from £9 to £25 per annum for board and education. It should be said that the Local Government Board, which takes cognizance of all matters relating to the relief of the poor, never made any difficulty as to the payment of the larger sums given in payment for the cost of board and education.

In the beginning of the present year the committee of the Birmingham Institution determined to raise their charge for parish cases to a sum more nearly approximated to the real cost than that they had hitherto asked. The result of this was that some of the boards of guardians demurred to the payment of the increased rate, being, perhaps, doubtful whether the sum asked (£20 per annum) would be allowed by the central authority. This led to a reference of the question to the Board itself on the part of the Birmingham Institution. The result of this was a letter, of which the following is a copy:

LOCAL GOVERNMENT BOARD,
WHITEHALL S. W., *February, 1883.*

SIR: I am directed by the Local Government Board to advert to your letter of the 13th ultimo, and to inform you that in pursuance of the provisions of the statute 45 and 46 Victoria, cap. 58, section 13, they now sanction the maximum rate of payment by boards of guardians of the sum of twenty pounds per annum as the reasonable expenses incurred in the maintenance, clothing, and education of each child sent by them to the General Institution for the Deaf and Dumb at Edgbaston, near Birmingham.

I am, sir, your obedient servant,

C. N. DALTON,
Assistant Secretary.

WALTER CHARLTON, Esq., *Secretary.*

An attempt was made to limit the £20 allowed to the payment for maintenance and education, and to make the clothing a separate item of expenditure, but to this the Board would not consent.

It appears to me that this affirmation of the principle, which is not very strongly expressed in the acts, that the cost of educating the deaf and dumb poor should be borne by the rates, is most valuable at this juncture. The Board itself evidently thinks the sum allowed is a sufficient, if not a generous one. It is to be hoped that no institution will henceforward accept a smaller amount, and eventually we may be able further to inform the wisdom of the Board that double the amount now given will barely suffice to do the work in a satisfactory and efficient way.

lame, deformed, or idiotic persons, provided such school be duly "certified." They may pay for the "maintenance, clothing, and education of such child" a sum "not exceeding the total sum which would have been charged for the maintenance of such child if relieved in the workhouse during the same period." Subsequent acts in 1867 and 1868 include within the above provision "any *adult* pauper being blind or deaf and dumb," and remove the restriction as to certified schools.

Under these provisions a considerable number of "pauper" deaf-mutes have participated in the education provided by the institutions. But as the amount of payment has practically been left to the discretion of the different boards of guardians, and as the aim of these bodies is more often than not to keep down these payments to the very lowest level, it has happened that the governing bodies of institutions for the deaf and dumb, with the desire of benefiting as many as possible, have received children in many cases at merely nominal rates of payment, thus using their funds, obtained with great difficulty as charitable contributions, to make up for the niggardliness of public bodies. In the interest of the deaf and dumb themselves it is a happy thing that they have taken this view, for otherwise many who have received the benefit of the institutions would have remained outside of them, since it really rests with these boards of guardians whether they send or not such children as come before them to be educated. And niggardliness and carelessness, together with the prevailing ignorance of the necessities of the deaf and dumb, have, we fear, condemned many capable persons to a life of hopeless darkness. Under the operation, however, of the ideas which the universal diffusion of education has spread abroad, these cases can now hardly be ignored as they could have been—and, we fear, were—ten or twenty years ago. Cases of children sent to institutions by the guardians have increased in number, and it became practically a question with the committees whether they were to spend the money entrusted to them by charitable persons for educating the deaf and dumb as a fund in aid of parish rates. To do this would obviously be to depart from the principle on which the institutions were founded. The subject was brought before the Doncaster Conference of Head Masters, and it was shown by the Rev. E. Dawson, of the Catholic Institution in Yorkshire, that the amounts granted by Unions were in some cases as low as 3s. 2d. per week, while the institutions charged various amounts, rang-

ing to those who have some degree of readiness at learning, but to doom them to that entirely, and to shut out the sign-language, by which, and almost alone, they can acquire ideas or the sense of words spoken, seems to me little else than an outrageous wrong.

I may mention a case bearing on this latter phase of the question. Two years ago, while spending a few days at Des Moines, the capital of the State, a party of deaf-mutes assembled at a friend's to pass an evening. Among them was a lady, intelligent, well educated in written language, and a semi-mute. Of course I undertook to talk with her as with all the rest, and was surprised and sorry when she informed me that she had been educated in a purely oral school and did not know the language of signs. I was a little astounded at such heartlessness on the part of her teachers, whoever or wherever they were—I have forgotten both, if she informed me, and also her name. The evening passed pleasantly, and while conversation was lively and continuous, and all were more or less hilarious, this lady took no part, not even talking with the hearing portion of the company so far as I observed. She sat quietly, showing no ill-feeling, but it was plain that she was conscious of having lost something that ought to be hers. In a word, she, although a guest and a friend of the family, did not seem to feel at home in the company around her. Surely a system that thus forbids a knowledge of the sign-language to its pupils is *cruel*.

STATE AID TO THE EDUCATION OF THE DEAF AND DUMB IN GREAT BRITAIN AND IRELAND.

BY RICHARD ELLIOTT, M. A., MARGATE, ENGLAND.

An important step in this direction has been lately taken by a department of the Executive Government. Although we are still far off from the full and fair recognition of the educational claims of deaf-mutes, yet any measure or proceeding which lifts them out of the cold shade of contemptuous indifference and places them in a position where we may hope the warm sunlight of attentive consideration may fall upon them must be hailed with satisfaction.

By an act of Parliament, passed in 1862, the guardians of any parish or union "may send any poor child * * *" to any institution established for the instruction of blind, deaf, dumb,

Iowa. About eighteen miles distant there resided an elderly gentleman, a man of means, highly respected, married to a noble woman, but with no children. His age was apparently near sixty. He lost his hearing when about twenty-four, was tall, of large frame, had a benevolent and kindly face and head, the face tinged with an air of sadness. His neighbors repeatedly elected him to county conventions, and he was, as readily as any man, on committees at county fairs. I met him several times on these occasions. Of signs and the manual alphabet he was totally ignorant. Hence it was almost impossible for much conversation to pass between us unless he took the trouble to write. He had a wonderful faculty for lip-reading and I none at all. One day I saw him enter a convention when a speech was in progress. He stopped at the door, looked for his delegation, and moved on and among them. One arose to give him a seat. Before taking it he—Mr. E. Little, that being his name—put a question to his friend, and neither sat down till the friend had told Mr. Little what was being said. Here, again, it looked as though both sides had the full use of their ears.

In view of all these facts, and taking the case of Mrs. Martha Bailey and her daughter, of St. Louis; of Miss Salter, of Boston, (described in the *Annals*, vol. xxiii, pp. 181–185,) and others, I am fully convinced that some deaf persons have a *genius for lip-reading*. I can account for it in no other way. One person has a genius for writing poetry, another for painting, a third for sculpture, and so on, but to one without such genius the attempt to learn is labor lost. A lady once brought her two daughters to Miss Landon, the well-known poetess “L. E. L.” of half a century ago, and requested her to teach them how to write poetry. Leaving out those few who have a genius for lip-reading, is it not almost as absurd to expect the mass of deaf-mutes to acquire facility in that direction? The world has had teachers of all sorts of absurdities, and has not got over its credulous propensities yet. One has only to put forth a notion, make it a hobby, and ride it with all the earnestness or fury of a genuine Jehu, and he will have followers. And so we have throughout Europe the oral hobby, and in some parts of America it finds a hold on the unreasoning imagination, and deaf children who might be enlightened are kept in darkness lest that hobby might get a tumble and the rider a broken neck. Better would it be for the children if his neck were, metaphorically, broken. I do not object to teaching speech and lip-read-

ment were extreme when the two folded or dropped their arms, and, without motion of arms or hands, commenced a lively conversation by the movements of their lips. I had, in years previous, undergone numerous vexations and disappointments in trying to read lips, and here it seemed as easy and natural as though the two girls had never been deaf in their lives, and yet both were born totally deaf; and not only so, but they had also two brothers similarly afflicted. To me this readiness at lip-reading was a profound mystery. I asked them *how* they were able thus to understand conversation by sight. Elvira replied she did not know, but that it was all Almeda's doing in their younger years at home, Almeda being the eldest. And so, after a pleasant evening, we returned to the Institution, leaving Alice at home. Several years passed, and in travelling in Massachusetts I called at the residence of the two girls. There was an elder hearing sister, and seeing her and Almeda talking together, and to all appearance both in full possession of all their senses, I questioned the elder: "Does Almeda hear?" "No," was the answer, "Almeda speaks words, and I speak only by the lips." The mystery was as profound and as perplexing as ever.

Some months after the visit at Dr. Cogswell's I was passing a vacation in Springfield, Mass. There I met a then recent Hartford pupil, Benjamin W. Ball, brother of Danforth E. Ball, subsequently a teacher in the Ohio school. He invited me to visit with him his home at Leverett and I accepted. We sauntered leisurely along for an entire day—this was before railroads—talking on whatever occurred to our minds or sight, passing Mount Tom on one side and Mount Holyoke on the other, inspected the interior of Amherst college—it being then vacation—and reached Leverett late in the afternoon. While there, the next day, I observed Mr. Ball seated at ease in his chair, and a hearing sister before him sewing, her eyes being on her work, while his were directed in a careless way towards her. They were talking for all the world as though both had the full use of ears as well as of tongue. After some minutes I asked the sister the same question as in Almeda's case: "Does he hear?" She gave a similar answer: "He speaks and I move only the lips." Again I was confounded. I have forgotten the age at which he lost hearing, but remember it was not so early in childhood as is most common.

The third and last instance I have to relate occurred here in

and on every conceivable subject, but the lips are confined to small space. Their sphere is limited, and their most extravagant contortions cannot turn them into intelligible sign-makers.

When a person undertakes to talk to me by the lips alone I ask him, somewhat impatiently and with some feeling of disgust, if he can write? If not, then signs are the only substitute for words, and thus I have carried on conversation with Indians and men of various nations—European, Asiatic, and African—and am decidedly of opinion that in ability to use signs the English-speaking nations are the most stupid on the face of the earth. Of course those who have been accustomed to the society and converse of deaf-mutes are excepted.

To return to the subject in hand, as I go back fifty-five years, I may, perhaps, gratify the curiosity of some of this generation by giving localities and personal details that, otherwise, were best omitted.

One Saturday afternoon, in the summer of 1828, after supper at the Hartford school, and while some thirty or forty boys were standing or sitting in their study-room and engaged in the usual ways of boys, talking, etc., Miss Martha Dudley, the assistant matron—the real matron we always considered her—entered and asked me to go to Dr. Cogswell's residence in the city—then a mile away—and escort home three of the lady pupils, they having had permission to remain out until evening. Most of the city being new to me, Miss Dudley told me to go down State street, past the Hartford Hotel, turn into the first street on the right—Prospect street—and continue down this last-named street till I came opposite a large brick house on the left. That, she said, was the residence of Dr. Cogswell. I followed her directions, and came to the house indicated. Ascending the steps, at least six or more feet high, I was ushered into the parlor where were the three girls and Alice, the doctor's daughter, whose acquaintance Thomas H. Gallaudet had accidentally made in 1815, out of which grew the world-renowned Hartford school, miscalled Asylum.

Besides Alice, here in her home, the others were Almeda and Elvira Derby, sisters, and Elizabeth D. Stone. We were soon all engaged in lively talk; and at one time, while the three last-named were thus busy among themselves, and Alice and I were intent on our own conversation, the latter called my attention to them, and asked the two sisters to show me what they could do in talking by the lips alone. My astonishment and amuse-

ure in an exercise which not only taxes their ingenuity, but also increases their familiarity with written language.

There are many other points in connection with the instruction of the deaf and dumb in this country which might not be out of place in a report on a subject which has to deal with peculiarly interesting departments both of psychology and philology as well as of moral philosophy, but to touch upon them even lightly would add perhaps unjustifiably to the length of a document which, extended though it be, could hardly have been abridged without leaving imperfect impressions with regard to the magnitude and importance of a work which appeals so strongly to the hearts and consciences of those who desire to benefit their fellow-men.

A GENIUS FOR LIP-READING.

BY EDMUND BOOTH, M. A., ANAMOSA, IOWA.

THE article on "Deaf-Mutes and the Oral Method" by Professor R. S. Storrs, in the last July number of the *Annals*, brings to my recollection some curious instances of a faculty for reading the lips, which may be worthy of mention and consideration. I fully agree with Mr. Storrs in his conclusions, and cannot but admire his earnestness in searching for and setting forth the truth where is so much doubt and confusion of ideas. Being myself totally deaf and yet able to speak with considerable readiness, so as to be understood by acquaintances, I can thus more clearly appreciate the force of his statements and reasonings, for I never was able to understand the lips of a person speaking, save a word or two, and then only when I knew what he was talking about. For instance I ask him how old he is and he replies by only two words: Sixty-two or eighty-two. Whether it is the one or the other I can judge only by his looks, for the movement of the lips in either case is the same, and we cannot see the movement of the tongue nor the modulations of the air in his mouth or nose.

And here is the difficulty with thousands of words. The lips have the same movement for many such, while the different and varying positions of the tongue cannot be seen. How is one to tell the difference between *come* and *home* by the movements of the lips? The hands, arms, and fingers, aided or not by the expressions of the face, can carry on conversation to any extent

slowly, perfect pronunciation is produced. The powers of the consonants p, b, m, f, v, wh, and w, the enunciation of which depends upon the position of the lips, are taught first; then t, d, n, l, r, th (aspirated,) th (vocal,) s and z, which depend upon the movement of the tip of the tongue within the open cavity of the mouth; then y, sh, zh and dzh, which depend upon elevating the centre of the tongue; and lastly, k, g and ng, ks and gs, which are made visible by pressing the tongue back from the lower teeth.

The vowels formed in the anterior portion of the mouth, such as ē, ī, ā, ě, ǣ; those formed in the middle, as ū and er; and those formed in the posterior portion, such as oo, oo, ō, ä, aw, and ö, and the combinations ū, ī, oi, ou, are then successively taught. These elements of speech are repeated daily till the pupil is able to recognize instantly any one of them when articulated by his teacher, and to utter them himself with such distinctness as he can command.

When this task is completed the elements are combined in words, at first so very slowly and distinctly that the pupil cannot fail to recognize them, and then with greater and greater rapidity, till the difficult problem of lip-reading, without guess-work, has been absolutely solved. At present every one of the 400 pupils now under instruction in the New York Institution, with the exception of two that are blind as well as deaf, is exercised one hour daily in reading and repeating this alphabet and its combinations, and the result is becoming more and more striking.

Of course the phonetic spelling to which this alphabet gives rise is very different from that of written English words, and in order to give those pupils who have never heard or spoken the ability to translate from one form to another we have found it very convenient to adopt the phonetic alphabet devised by Prof. A. Melville Bell, under the title of Visible Speech, and introduced into this country by his son, A. Graham Bell, whose name has become a household word in connection with the telephone.

The characters of this alphabet correspond exactly to the elements of speech, and may be made use of in reproducing every form of articulation and in absolutely fixing the pronunciation of every word in every language. Easily acquired in connection with lip-reading our pupils learn to write in English, spelling the words and sentences given in these characters, and to take pleas-

the box?" "What did you touch?" "Did you touch the box?" and the like, and as each is asked the pupil is taught to make a correct reply in writing. Another object, the name of which has been already learned, being introduced, and the same verb being retained, he finds it comparatively easy to answer, with a new element, the same routine of questions. In this way all the pronouns, the prepositions, the adjectives which express qualities discernible by the senses, the numerals and many nouns, may be easily learned without recourse to signs.

A foundation having thus been established, simple sentences are spelled with the fingers by the teacher, and the pupil, who has meanwhile in the society of his schoolmates become an adept in gestural communication, is required to make a sign for each word as given. If there is a word for which he has no sign it is not an evidence that he does not know the sign, (for that, so to speak, belongs to the vocabulary of his mother tongue,) but it is an evidence that he does not know the word. When the meaning of this is explained by his teacher, through signs and other illustrations, he is tested as to the meaning of the whole sentence, and if he can give this in ideographic or pictorial signs, there is no question as to his perfect reception of the idea. He is then required to spell and to write the sentence. In this way, by mere dictation and conversation under appropriate circumstances and in favorable connections, every mood and tense of the verb, every kind of modification by phrases and clauses used adjectively and adverbially, and every form of idiom may be successfully taught, and grammar thoroughly, though unconsciously, learned. By this method the pupil becomes so conversant with language that signs become less and less a necessity with him, and words become his medium of thought and expression, and by his knowledge of their significance and use he is able to gather information from books and newspapers, communicate readily by writing and dactylology, and to become a member of the society from which he has been practically excluded, and, though still handicapped in many particulars, be a man among men.

It remains to give him the power of recognizing words as spoken by analyzing the motions of the lips and tongue, and, so far as possible, to utter them with sufficient distinctness of speech to be understood. This is done in the New York Institution by means of a phonic alphabet, which corresponds to the powers of the letters, and by the uttering of which, however

the use of the Rhodes' audiphone and of the ear trumpet, have been marked with such success that the friends of the deaf are watching them with more and more interest, and great credit is due to him for opening this special field for their benefit.

The other institutions employ what is known as the combined system of teaching language. This is a system which has grown out of an experience of 66 years in this country, and is the resultant of a careful comparison of different systems. It is one on which American instructors are substantially agreed, and is often called the American system, in contradistinction to that which obtains, with similar unanimity, on the Continent of Europe, and is there called the pure oral system.

It recognizes the fact that all words are mere signs to the profoundly deaf, and are representative of ideas and not of sounds—that it is the eye and not the ear through which the mind is reached, and that the language of gestures, which are the natural pictorial expressions of the visions in which the deaf-mute thinks and to which he invariably resorts when compulsion is not put upon him, is a valuable instrument in his instruction. It also recognizes the fact that alphabetic language—of which, when he comes to school, he is entirely ignorant—must be acquired by him in order that he may read understandingly and write idiomatically and correctly. It also recognizes the fact that the manual alphabet is the clearest and least ambiguous instrument of personal intercourse conducted in the language which hearing persons employ, and is the most easily interchangeable with writing. It also recognizes the fact that the fleeting motions of the lips are, for the purposes of instruction, obscure and uncertain.

At the same time it defers to the pardonable desire on the part of parents and friends that the deaf children so dear to their hearts should understand them when they speak to them, and should greet their ears in reply with spoken words.

The first steps in the instruction of the deaf show the correspondence between objects and their names written or spelled with the fingers. Practice with a dozen words will suffice to enable the pupil to form every letter of the manual alphabet, and also to write it. The next steps consist in teaching the pupils to obey a direction given in language and to answer questions concerning it. For instance, the direction "Touch the box" being given, and the pupil having obeyed it, the questions are successively asked: "What did you do?" "Who touched

the New England States, who pay a certain sum per annum for each of their pupils, the selection of pupils and the examination of the Institutions being entrusted to the Boards of Education. There is also a school supported by the State at Providence, R. I., and there are municipal day-schools at Boston, Mass., and Portland, Me. The two Institutions in Pennsylvania, at Philadelphia and at Turtle Creek, are on a basis similar to those in New York. The Columbia Institution at Washington, D. C., receives pupils whose fathers are employed in the army or navy of the United States, and also offers collegiate education to the graduates of all institutions who are able to pass the necessary examination for admission. Its expenses are defrayed by the General Government.

All the other prominent institutions in the United States are the property of the States in which they are located, and are governed by boards of trustees appointed by the governor and approved by the senate. These trustees make their own regulations for admission, and are aided by such additional supervision over the institution of which they have charge as the legislature may prescribe. Separate appropriations are made for buildings and improvements, and for the support of the pupils and for the salaries of employees, without requiring *pro rata* bills.

Five of the institutions to which allusion has been made, viz., the Clarke Institution, under Miss H. B. Rogers; the Institution for the Improved Instruction of Deaf-Mutes, under Mr. D. Greenberger; the Horace Mann School, under Miss Sarah Fuller; the Portland Day-School, under Miss Ellen L. Barton; and the Rhode Island School, under Miss Katharine H. Austin, claim articulation and lip-reading as the basis of instruction—the pupils being taught to read on the lips and then to speak *viva voce* every word uttered by the teacher before committing it to writing—and reject the sign-language and the manual alphabet. There is also an oral branch of the Pennsylvania Institution in Philadelphia, under Miss Emma Garrett, in which the same system is pursued.

In the Nebraska Institution, at Omaha, the principal, John J. Gillespie, has devoted much attention to the development of hearing by the education of the ear in cases where, though there is a partial hearing, the degree of deafness is such that there is either no recognition of differences in sound, or, if there be, no signification is attached thereunto. His methods, which include

to the institution, the supervision of his condition comes under the State Board of Charities. The great advantage of this early coming of the child to the Institution is that he may have time to develop slowly and naturally—not in advance of his strength, but surely and thoroughly—a good foundation for the more rapid work that may be expected in the future.

Children and youth between 12 and 20 are supported by the State treasury. They are selected by the State Superintendent of Public Instruction, who, on finding that their parents, or, in the case of orphans, their nearest friends, have been residents of the State for three years, and that they have mental faculties capable of development, issues a warrant for their admission into that one of the Institutions to which the friends give the preference, and for their continuance therein for the period of five years, which, upon the recommendation of the directors, he increases, by reselection, to three years longer. Special pupils who pursue a course of academic study may also be selected for three years in the high class.

Every three months a bill is rendered to the State Comptroller for the actual time these pupils have been inmates of the Institution, and this bill, before payment, is submitted for verification to the Superintendent of Public Instruction. The usual charge is at the rate of \$250 per annum for each pupil.

The Superintendent of Public Instruction is required by law to make every year a thorough examination of the classes, to investigate the system of instruction, and to make suggestions to the principal on points that may seem to him of importance. He requires an annual report from the principal, and himself reports to the legislature.

The Board of State Charities makes an annual examination, through one of its members, of the financial condition of each Institution, the industrial training of the pupils, its sanitary condition and regulations, the quality and cost of the food and other material consumed, and the character of the domestic service, and makes its report.

In addition to this the Board of Directors makes an annual report to the legislature, and appends thereto the documents necessary to give a complete exhibit of its affairs.

The entire number of deaf children thus provided for by the State is about 1,100.

At the American Asylum in Hartford, Conn., and at the Clarke Institution in Northampton, Mass., are received pupils from all

welfare, and are themselves apparently enjoying the rewards of intelligent labor.

From it we learn that in the United States there are in all 33,878 deaf-mutes ; that of these about 12,000 are of school age, of whom 7,155 are under instruction in 55 institutions, and about 5,000 ought to be in school. It is also estimated that over 15,000 have received an education and are engaged in the ordinary pursuits of life, and the remainder, between one and two thousand, are adults for whom, through the ignorance or wilful neglect of those responsible for their well-being, there remains the night of hopelessness till their change comes.

So far as the methods of education and the principles of the appointment of pupils are concerned, the practice of the State of New York furnishes a good illustration of the natural relation which the department of education and the department of charity respectively hold to an institution for the deaf.

Its six institutions have all been chartered as benevolent societies, the members of which elect the trustees or directors. The grounds have been purchased and the buildings erected and furnished with money presented or collected by the trustees, but must, by law, go to the State as its property if they or the proceeds of their sale are alienated to other purposes. The means of support and instruction are supplied directly or indirectly by the State at a certain *pro rata* for the exact time each pupil is in the Institution. Children between 6 and 12 years of age are supported by the counties. The theory of this is not education but care, the language of the law referring to them as "those children whose health, morals, or comfort may be endangered or not properly cared for." Originally, the indigent only were included, and the supervisors of each county were *compelled* to send to the only institution then existing in the State every deaf child found in alms-houses or public nurseries, a provision which has since been applied to the other institutions subsequently founded. By a liberal amendment of the law the word indigent was stricken out, and the richest, as well as the poorest, if they can show that outside of an institution the three fundamental requirements cannot properly be secured, have the *right* to send their children at the expense of the county. The selection of these pupils is made by one of the supervisors of the county or by the superintendent of the poor of the town where the child resides. Therefore, though practically the intellectual education of the child commences the moment he comes

In other respects, moreover, they exercise a salutary influence, not only by their oversight of economic administration and their ability to assure the legislature that the public money is wisely expended in the case of institutions for the deaf, both in the quality and preparation of the food furnished, so important with a class of persons who depend upon abundant and suitable nutrition to build up a constitution originally enfeebled by the physical causes which gave rise to their misfortune, and in that domestic care and watchfulness which will secure good habits of life and favorable sanitary conditions, but also by proclaiming the necessity, on high public grounds, of relieving the deaf, by education, of those disabilities which make them—

1st. Dangerous to the community, because, without education, they have no means of discriminating between right and wrong, and are, therefore, liable to yield to the influences of passion and of a mistaken sense of justice, and to confound their desires with their rights. In this sense, paradoxical as it may seem, uneducated deaf-mutes have been innocently guilty of every crime denounced by the decalogue, thinking all the while that, in following out the impulses of their nature, they were doing right, though thereby they inflicted fearful wrong upon their fellow-men.

2d. A loss to the community of a class capable of becoming valuable citizens, a condition opposed to all the theories upon which our peculiar form of government relies for its success.

3d. A burthen upon the community, dependent, through their lives, for support and protection, as well as liable to forcible confinement and restraint.

4th. A disgrace to the community, of which they are capable of becoming an ornament.

The value of the work which these commissions have conferred upon the deaf as well as upon other defective classes is admirably illustrated by the effective analysis of the census of 1880, made by our honored president, who was asked to do this work *pro bono publico* because of the special knowledge he had displayed as Secretary of the Board of Charities of the State of Illinois. By means of this the managers of every institution for the deaf may learn the name, age, residence, and condition of every deaf-mute in their State, whether educated or uneducated, whether under instruction or not, whether above or below the proper age for admission into school, and whether, as a result of education, they are contributing to the general

raises every kind of dwarf fruit tree, of grape-vine, of vegetables, and a great variety of flowers, the rosary being exquisite.

As this is a horticultural school, and what is raised comprises little more than specimens, no profit—not even that which arises from the house consumption—is derived from it, but the boys become consummate gardeners, obtain excellent situations in the country, and write him grateful letters after they leave the Institution, telling him how their hearts warm toward him when they reflect upon what a resource he has placed in their hands. He teaches them every branch of horticulture, including the preparation of the ground, the sowing of the seed, the budding, grafting, and pruning of trees and vines, and the gathering of vegetables and fruit. In the winter he teaches them the care of the greenhouse, and gives them a thorough course of vegetable physiology and botany. By means of diagrams he teaches them the principles of laying out grounds, and makes them describe, both by writing and by drawing, every plant and every part of the plant, and every tool employed, with the mode and philosophy of its use. Some of the pupils showed themselves superior draftsmen, and all of them manifested familiarity with the language appropriate to horticulture and other departments of agriculture. I was much gratified on the occasion of one of several visits to him to see the evidence of intellectual as well as technical development contained in their compositions, their letters, their herbariums, and their drawings.

These cases have been mentioned by way of illustration of what may be regarded as the best method of the simultaneous training of hand and mind, and are not intended to do injustice to other excellent men engaged in this kind of teaching, such, for example, as Mr. Parley Pratt, a graduate of the Ohio Institution for the deaf, now master of the shoe shop connected therewith, who has gained quite a reputation among his deaf-mute brethren for peculiar skill in industrial instruction.

It is in points like these that the State boards of charities can come to the aid of the institutions. They can, on the one hand, impress the managers with a sense of the importance of thorough work in this direction, and they can, on the other, educate public sentiment and influence legislation so that adequate means may be furnished for the accomplishment of this truest charity—a charity which will be more than repaid by the returns which the skilled artisan will make to the public weal.

of procedure, are the teacher of printing in the New York Institution and the teacher of horticulture in the Paris Institution. The former, Mr. E. A. Hodgson, is a thoroughly educated deaf man, who is perfectly familiar with every process, principle, implement, and machine employed in printing, and as a practical printer has few, if any, superiors. His aim is to make his pupils understand everything to be done and the reason for it. He teaches thoroughly the art of punctuating, of paragraphing, of capitalizing, and of the division of syllables. He gives thorough lessons on the different kinds of type and their relations to each other. He gives rules for type-setting which are never to be violated. He teaches those canons of good taste by conformity to which alone a pleasing effect can be produced and a page be made agreeable to the eye. He teaches every technical term employed in his art. Besides all this, he, by degrees, initiates his pupils into the practical work of type-setting, the cleansing of types, their distribution and care, the correction of proof, the setting-up and locking-up of forms, the preparation of paper, the adjustment of the press, the use of rollers, the even and exact application of the ink, and the setting in motion, the feeding, and the control of the press.

He makes his pupils experts in card printing, job printing, book printing, and newspaper printing. In furtherance of his design he edits a weekly paper, which has become the organ of the deaf-mutes of the country and exercises a healthful influence among them.

Through the appreciation by the directors of the practical value of what he is doing he has been supplied with everything he asks for, so that nothing is wanting to the completeness of his instruction. The result is that, year after year, he sends forth young men whose skill so recommends them that they find no difficulty in obtaining and retaining remunerative positions, and, what is incidentally gratifying, though not so essential, makes his office actually pay its own expenses.

The garden of the Institution in Paris, France, embraces about an acre. The buildings of the Institution border it on one side. There is an open fence on the south, and the other two sides are enclosed by a high wall which surrounds the premises, and there is a well-appointed greenhouse. About twenty boys are detailed to work in it a portion of each day. The gardener is an enthusiast, well educated, and, though a hearing man, conversant with signs. Within the limited area at his disposal he

Under this view the industrial education of the pupils is not to be regarded as a source of profit to the institution, nor even as carrying with it the elements of self-support. It must rather be considered a means to an end, and that end the converting of the learner into an accomplished workman, able to compete successfully with the most skilful and ingenious of those with whom he is hereafter to run the race of life. The contract system, whereby the labor of boys and girls is let out for a pecuniary consideration per day or week, is, therefore, to be specially avoided. The teachers of each trade and occupation to be learned must not only understand its scope and be recognized as masters of its details, but they must be able and anxious to impart the secret of their skill by a graduated course of exercises and by constant exemplification of their methods.

The best tools should also be furnished in all the variety required by first-class workmen, and the pupil trained, not only in their use, but in the care which is needed to keep them in proper condition.

In many of the institutions in this country the occupations attempted to be taught are, for the boys, cabinet-making, joinery, shoemaking, tailoring, printing, bookbinding, and gardening; and for the girls, domestic and ornamental sewing, both with and without the machine, dressmaking, shirtmaking, tailoring, and the folding and stitching of sheets for the bookbinder. To this might profitably be added millinery.

The faults of the system arise from the economy too often made inevitable by insufficient appropriations. The foremen and forewomen who teach are, in some cases, inferior to what their pupils ought to become; the tools and machinery are inadequate, and the work required has too often been of that rough character which can only be utilized in the institution itself, or be disposed of at less than the cost of the material.

This is probably a penny-wise and pound-foolish policy, for the greater the perfection of workmanship attained the more likely would the institution be to be at least partially remunerated for the cost of materials and of instruction, while, by the failure to turn out first-class workmen, it not only falls short of the end to be accomplished, but deprives itself of the most enthusiastic and sympathetic instructors in the persons of its graduates.

Perhaps the two most notable exemplifications, in this connection, of the right men in the right place and of their methods

There remains, therefore, as the great resource, that combination of ingenuity, knowledge, tact, and aptitude with nominal dexterity which characterizes the successful artisan and makes of him often the true artist. The length of time required to give a deaf child an available knowledge of language and of the ordinary subjects embraced in a good common school education hardly stops short of that period when the ordinary apprentice reaches his majority and his recognition as a journeyman, and hence it is desirable that those considerable intervals of time, which cannot be profitably utilized in intellectual culture and development, should be devoted to the acquisition of a mechanical trade.

Taken young and kept at study till the age of sixteen, a pupil might be so advanced that it would be possible to let him then graduate and be set to work at learning a trade. In these days of trades unions, however, where there is so much jealousy of apprentice labor that practically the number of apprentices as compared with the number of journeymen in the same establishment is extremely limited, it would be next to impossible, in this country at least, to find masters who would encumber themselves with the instruction of those with whom free communication would be comparatively difficult. The matter, then, resolves itself into the consideration of the question whether, on the one hand, separate institutions should be established for teaching trades to the deaf after a certain amount of education has been obtained, or whether these trades should be taught alternately with literary and artistic work in the schools already existing.

In the case of public schools for hearing children it would seem desirable that, upon the completion of a certain course of study, there should be a transfer to an industrial school supported by taxation, wherein different branches of industry were taught and wherein the youth admitted should be prepared for active usefulness in the world. With the deaf, however, there are certain advantages to be derived from their continued association with those who, familiar with their difficulties and with the best means of overcoming them, are accustomed to communicate with them; and also from that interchange of intellectual and manual occupation which leads them to apply the principles suggested by the one, and to seek for terms, definitions, and appropriate phraseology for the operations involved in the other, thus making theory and practice go hand in hand, and mind and body act and react upon each other.

whole, be dealt with less in the mass, and more as individuals. The mental idiosyncracies of each, involving failure on the part of one pupil to grasp what is easily understood by another; the treachery of memory, in one case demanding, as it does, constant repetition, and the tendency to carelessness in another; and the great variety of misconception and misconstruction, requiring individual correction in regard to everything written or spoken,—make it necessary for the teacher to divide the time allotted to him into almost as many parts as he has pupils, and consequently, with few exceptions, the larger the class the slower is the progress, and the smaller the class the greater the progress.

This is measureably true with regard to hearing children, and there is no question but that the classes in the public schools in great cities are often too large for the highest advancement. Still the hearing pupil *can* be taught to do more for himself than is ever possible for the deaf, and the knowledge imparted by oral lecture, or delved out of books under the necessity of preparing for public recitation, is sufficient to relieve the system of the charge of failure in the great majority of cases. In the class-room, moreover, even though the number gathered together be large, each pupil can, without effort, take in, through the ear, all that is said by his fellows in reply to the questions asked, and thus obtain the advantage of looking upon the subject from many points of view. When to this is added the greater amount of care which has to be exercised over the deaf child, especially in those early years when the institution is substituted for home, the proportionate expense of deaf-mute education is seen to be far greater than that of their more favored brethren.

Another element still, which it is a pity were not recognized as forming a part of all public education, is the industrial education of the pupils. A mere knowledge of language and of books would not elevate the deaf-mute above the condition of an unskilled laborer, and so overstocked is this particular form of employment that it is doubtful whether he would be able to support himself thereby. He might, to be sure, be prepared for business, for art, and for teaching in the ordinary curriculum, but the proportion of opportunity for self-support in these directions, even to those well fitted for them by talent and education, is so small that the great majority would seek in vain for remunerative employment.

was once said to the writer by your president, Mr. Wines, in conversation on this subject, "the ordinary child is like the *Æolian* harp, which is played upon by every breeze that blows; the deaf child is like the violin, whose strings respond only to the hand of the master."

In the school hearing children learn to recognize, in the form of written or printed words, the language they have already acquired through hearing, and to express, by pen or pencil, the words they have heretofore been accustomed to utter with the voice. So with all the studies to which their attention is afterward called. There is scarcely one for which they have not been prepared, and of which they do not know a considerable amount before they enter upon its serious prosecution under the direction of the teacher. In fact, so much is acquired through the ear that it would seem that the late distinguished president of Yale College, Dr. Dwight, was hardly guilty of exaggeration when he said that every hearing child learned more during the first three years of his life than during all the rest besides.

With the deaf child, however, the life outside the school is a blank. He has eyes, but he sees not. Nature and art present to him their choicest treasures, but, without the informing ear, he knows nothing of the true relations which subsist among them, or even of his own relation to them. He is isolated from kindred and friends, from the world in which he lives, and even from the divine Father, who, in the person of His Son, once said to him *Ephphatha*, and says it to him again, only, when in Christian lands he is admitted to the school where all that has been hidden from him is unveiled. The time to be spent here is not to be measured by the shorter course required by the hearing youth. In fact, it requires years to bring the deaf child up to the point where the hearing child begins, and then years must be added to bring about a corresponding advance.

Another peculiarity of this special work is the limited number that can be successfully taught by a single teacher. Twenty deaf-mutes are regarded as a large class even in this country, where the manual alphabet and the sign-language so effectually address the eye and compel the attention, while in Europe, where the subtle and less visible modes of expression and reception by means of articulation and lip-reading are sought to be exclusively employed in instruction, the classes range from five to ten. The reason for this is that, no matter how general the instruction of the deaf may be at times, they must, on the

instruction. To rescue these unfortunate children from the life of hopeless ignorance and helpless irresponsibility which impended over them, this philanthropic man presented their case before the London School Board, and succeeded in inducing that body to consent to set apart school-rooms in five of their school buildings, and to pay the salaries of fifteen teachers, or three teachers in each building, for the exclusive benefit of the deaf and dumb. In this way he secured provision for the instruction of a large number of pupils, but though the rooms set apart were in buildings situated in what might be called representative districts, he soon found that he could not reach even one hundred of his proposed beneficiaries. They were still too far off to admit of their regular attendance. He was, therefore, obliged to apply to the parish boards for appropriations to cover the cost of furnishing food to such of these children as he was able to concentrate in buildings which he hired in the vicinity of the different schools which had been designated. To pay the rent he drew largely from his own private means, and secured the balance by appeals to benevolently disposed persons. In this way, and in this way only, was he able to collect 200 out of the 300 deaf-mute children for whose education no other provision had been made. The remainder he hopes to reach in due time, but he is satisfied that the work has exceeded the resources of private benevolence and that it is the duty of the State to furnish both home and school for the uneducated deaf. In this view he is seconded by all the teachers of the deaf in the United Kingdom, and it is to be hoped that the time is not far distant when, in this respect as well as in other departments of popular education, the old country will find a favorable influence reacting upon her from the new, and that her policy hereafter will be to secure the benefit of the many as well as of the few.

Another feature in the education of the deaf is that the school is far more to them than it is to the hearing. With the latter it is in a great degree formulation. Through the ear they have acquired and are constantly acquiring a knowledge of the language of the country in which they live. Every one they meet is, to some extent, their teacher, and every variety of expression comes to them unsought. The ideas current in the community in which they live, the general stock of knowledge, the intellectual atmosphere which is characteristic of the place of their abode, are theirs without conscious effort to obtain them. As

the deaf. Here are attracted philanthropists and specialists, ready to impart and receive the information derived from years of thought, observation, and experience, and here are discussed the living questions and the current difficulties which have come up before the commissioners in their separate capacity. Here methods of practice and procedure are compared, and differences and coincidences noted; and here may be expected to spring up those broader conceptions of the work to be done, and those higher ideals, which will result, not only in the gradual elevation of the objects of their care, but also in arousing in public sentiment a spirit of humanity, which, in the economy demanded, shall insist, not on the diminution of the amount of money to be expended, but on its better and wiser application.

Before such a body it is a privilege to discuss the claims of the deaf to such assistance as shall enable them, notwithstanding the immense disabilities imposed upon them by nature, to take their place as useful and self-supporting citizens. Their case is one mainly of education, but still of education pursued under very different circumstances from those surrounding the average hearing youth. For the latter, the school is brought to their very doors. The former have to be brought to the school. The reason of this is obvious. Hearing children are the rule, deaf children the exception. Of the former, according to the most recent statistics, there are 1,482 to one of the latter. Hence, even in the same city, if of considerable size, only a small proportion can be taught in a day-school with any advantage, the distances from the school to the residences of the parents being such as to preclude the attendance of all except the few who reside in the immediate vicinity. The Rev. William Stainer, of London, England, has perhaps investigated this subject more thoroughly and practically than any other single individual. An expert in deaf-mute instruction, as well as a minister of the gospel, his attention was early awakened to the striking inadequacy of means to ends in the education of the deaf of the Metropolitan district. The Old Kent Road Institution, founded in the year 1792 by the Rev. John Townsend, and endowed by gradual accumulation of donations and bequests from year to year, had found itself with an income sufficient to support and educate 300 pupils, but no more. The vacancies occasioned by graduation were filled by ballots cast by the life-members and annual subscribers. There were then found to be 300 deaf-mutes of school age growing up without

AMERICAN ANNALS OF THE DEAF AND DUMB.

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GENERAL VIEW OF THE EDUCATION OF THE DEAF AND DUMB IN THE UNITED STATES.*

BY ISAAC LEWIS PEET, LL. D., NEW YORK.

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* A paper read before the Tenth Annual Conference of Charities and Corrections, held at Louisville, Kentucky, Friday, September 28th, 1883.

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[Continued on page 3 of cover.]

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