

In concluding this discussion, it may be observed that the census of mortality compared with the topography of the United States will tend to illustrate the advantages of intercommunication. Our magnificent railroads and steamboat lines traversing immense distances, while promoting an exchange of products, and accommodating alike the tourist and the man of business, constitute an important agency for relieving the mind and improving the health of the people. To those persons who find the sea-coast air injurious, to the sedentary professions and city residents wearied with the dust and heat of summer and the cares of business, a change of air, and the shifting panorama of new scenes open renewed sources of enjoyment, in which all members of the family should participate. A few mineral springs and "watering places" at the sea-side or among the mountains are liberally patronized. Yet the adaptation of our country to a more general system of travel and periodic resort, for sanitary objects, presents a most useful field of inquiry.

The mortality of cities still exceeds that of the country, especially among children. And in both town and country a vast amount of needless sickness exists, which is proved to be preventible by ordinary means. The sanitary improvement of cities must be chiefly intrusted to health officers on the spot, who are conversant with the localities. Yet many of the topics have a popular interest; such as the introduction of the water-supply, of which the Fairmount, the Cochituate, and the Croton water-works are examples, the difficult art of complete sewerage and drainage, the opening of public parks and gardens, and the construction of improved tenement buildings. The vaccination of children before admission to the large public schools has been proposed, on account of the loss and annoyance from irruptions of the small-pox, a requisite which parental duty should have anticipated. The universal practice of this safeguard is strenuously urged, for, besides frequent cases of unavoidable exposure, of loathsome sickness and entailed suffering, many lives are annually lost by the culpable neglect of vaccination.

A great improvement in the registration of deaths, beyond the bare enumeration of the old "bills of mortality," consists in noting the principal circumstances of disease. This prepares the way, in skilful hands, for special and instructive researches. The classification of deaths with reference to intemperance, to different occupations and trades, will determine *among what classes the mortality is the most excessive*, and aid to disclose the causes. The value of this statistical method is illustrated by several remarkable sanitary investigations which have appeared within the last half century in Europe and America. After the facts comes the demand for new improvements and inventions. Some are required in the line of Davy's safety lamp for diminishing casualties, and others for adapting the operations and processes of the work-room to the health of the operatives. The subject is one of special interest, and worthy of sustained examination by our physicians and inventors. In numerous ways the information is so important that an official registration of deaths, notwithstanding the first deficiencies, is gaining adoption among all civilized nations.

On a general Life Table.—Were the enumeration of deaths entirely correct, and were the record combined with that of population, and cast into the systematic form of a life table, the value of this part of the census would be very greatly augmented. The plainest and most advantageous mode of expressing the relations of mortality to the population is conceded to be the life table, devised by Dr. Halley. In its elementary form it shows at a glance the proportion of persons surviving from one age to any other given age; in another form it exhibits the average duration or "expectation of life."

The Carlisle table, which has chiefly been used in England and America, was constructed by Milne from the returns during nine years, 1779-'87, of two healthy parishes in the city and suburbs of Carlisle, in the north of England. That this table should represent life insurance risks with accuracy during half

a century is singular and remarkable. The coincidence is ascribed to what is termed "the selection of lives," since all the offices have required a medical examination of the assured.

The standard of longevity in the Carlisle table may thus be well adapted to life insurance, while it is too high for the whole population. Mr. Baily, a distinguished authority in London, forcibly remarks: "It must appear extremely incorrect to take the mortality in one particular town as a criterion for that of the whole country. The observations ought to be made on the kingdom at large, in the same manner as in Sweden; more particularly as, in the real business of life, the calculations are general and uniform, and adapted to persons in every situation. But till the legislature thinks proper to admit some efficient plan for furnishing these data, we must rest contented with the laudable exertions of public spirited individuals, and avail ourselves of the best light which they afford on this subject." (See continuation of chapter on mortality, p. 114.)

DEAF AND DUMB.

(APPENDIX—TABLE No. 7.)

Though the deaf and dumb, from the peculiar mental and moral phenomena which they display, have been objects of the curious attention of philosophers from the earliest dawn of science, it is only within three centuries that any successful efforts have been made to alleviate their misfortune by education, and only within the last forty years that an enumeration has been made of the deaf and dumb of any country. That deaf-mutes were quite numerous in ancient times is evident from the mention of them in the writings of that period. From the frequent mention of the restoration of the deaf to hearing and of the dumb to speech, in the history of our Saviour, the afflictions in question must have been common in Judea. And then, as now, congenital deaf-mutes were found in the highest as well as in the lower classes of society. The story of the deaf and dumb son of King Croesus is well known; and Pliny speaks of a painter* at Rome, deaf-mute from birth, who was a relative of the Emperor Augustus.

We have, however, no means of estimating what might have been the numbers of deaf-mutes in ancient times. We only know that the infirmity appeared often to force itself on the attention of the philosopher and of the lawgiver. The wisest of the ancient philosophers could find no remedy for the closing of the customary channel of communication among men, and abandoned the unfortunate deaf and dumb as utterly incapable of instruction in letters. The celebrated code of Justinian, the foundation of modern European jurisprudence, classed the deaf and dumb with those persons who, by defect or alienation of mind, were rendered incapable of the legal management of their affairs. In the middle ages deaf-mutes were held to be incapable of feudal succession; otherwise there might possibly have been deaf-mute sovereigns on record, for we are told that an uncle of one of the kings of Sardinia was one of the earliest examples of a well-educated deaf-mute.

The first recorded attempts to instruct this class of unfortunates were made in Spain, about three centuries ago, by Pedro Ponce, a Benedictine monk, who conducted, and, as we are assured on the testimony of several cotemporary writers, with remarkable success, the education of several deaf-mutes of noble families, including the brothers and sister of the constable of Castile. Ponce died in 1504. Spain also presents the name of Bonet, who, half a century later, taught a brother of another constable of Castile, probably a nephew of the pupils of Ponce, and who published, in 1620, the earliest known treatise on the art of deaf-mute instruction. Both Ponce and Bonet instructed their pupils in

* Quintus Pedius.

articulation. A highly-colored account of the success of the latter was brought to England by Sir Kenelm Digby, one of the companions of Prince Charles in his romantic journey into Spain, and probably prompted the efforts of the earliest English teachers of deaf-mutes.

The Germans, jealous of the honor of their fatherland, claim that Rodolph Agricola records the case of a deaf-mute who had been taught to read and write a full century before the time of Ponce, without, however, giving any information as to the mode of instruction; and that about the same time that Ponce began his labors, Pasch, a clergyman of Brandenburg, instructed his deaf-mute daughter by the aid of pictures. In the next century (the seventeenth) we find a few instances recorded in England, in which more or less success was attained in teaching deaf-mutes to write, and even to speak. Dr. John Wallis, the most distinguished of the early English teachers, left on record in the philosophical transactions an account of his methods, which served as a guide to later teachers; and engaged, towards the end of the century, with a younger teacher of deaf-mutes on the continent, John Conrad Amman, of Amsterdam, who is noted for the wild extravagance of his views respecting articulation. Amman ascribed to speech a mysterious efficacy in the operations of the intellect, holding it to be not merely the most convenient, but the only instrument of thought and reasoning; a theory which, carried out to its logical results, would make the instruction of the deaf and dumb from birth utterly hopeless; since speech, properly so called, is to them incommunicable, all they can acquire of it being limited to the visible and felt movements of the organs of speech. Nevertheless these absurd views of Amman on the exclusive fitness of speech as an instrument of thought still influence the practice of the German teachers of our own times.

During the two centuries that succeeded the first labors of Ponce we only find here and there, at long intervals, a teacher who, moved in some cases by philosophical curiosity, in others by the hope of gain, and in others by parental affection, undertook, with more or less success, the education of one or two deaf-mutes. In many cases these early teachers were ignorant of the labors of their predecessors; the teacher had to grope his own way, and the processes were invented over and over again. Thus the art made little progress till the time of the Abbé de l'Épée.

This justly celebrated man, while living in Paris a life of literary ease, had his sympathies interested in the case of two sisters, twins, whose privation of speech and hearing seemed to cut them off from the hope of religious instruction. He gave himself to their instruction with the zeal of a missionary, who believes the eternal welfare of immortal souls at stake. Succeeding beyond his hopes in this new vocation, he devoted his fortune and his life to the cause of the deaf and dumb; and in the school which he founded was seen a spectacle which the world had never seen before—a large community of deaf-mutes restored to the full enjoyment of social intercourse through a language of their own. Having collected more than sixty into his own school, and finding that numbers more existed beyond his reach, De l'Épée labored with success to impart some of his own zeal to others, and (while other early teachers made a secret monopoly of their art) freely communicated his method to the world. Teachers formed by his lessons founded schools in Germany, Italy, Switzerland, Holland, and even Spain. Flattered by the frequent presence at his lessons of eminent visitors, up to the rank of emperor, De l'Épée labored with success to make the institution of the deaf and dumb popular. The impulse given by his zeal and labors opened a new era for the deaf and dumb. It is only from his time that the duty of educating them began to take hold of the public conscience. The school which he founded, and long supported from his own means, was taken under the patronage of the government after his death.

De l'Épée began his labors in behalf of the deaf and dumb between the years 1755 and 1760. Just about the same time began the labors of two other remarkable instructors—Thomas Braidwood in Scotland, and Samuel Heinicke in Saxony. Each of these distinguished men founded institutions which were the parents of many others. Nearly all the schools in the British isles sprang from that of Braidwood, and most of those in Germany originated, directly or indirectly, from that of Heinicke. On the other hand, the school of De l'Épée was the parent of nearly all the existing schools for deaf-mutes in the other countries of Europe and in America.

This is not the place to describe the different methods of those schools. We may, however, observe generally that the great object of the German schools is the teaching of an articulation which, in most cases, is both a very uncertain and an unpleasant means of communication with the deaf. Articulation was also a prominent part of the method of Braidwood, more because the idea of restoring the dumb to speak is so attractive to their friends and to the public, than from any real advantages which the pupils taught to articulate derive in the intercourse of society from any attainments in speaking possible to the deaf and dumb. For many years past the tendency of the more correct public opinion in England has been to the disuse of the efforts to teach articulation, as producing, in most cases, results of very trifling value at an unreasonable expense of time and labor.

The main peculiarity of the French system, or that of De l'Épée as improved by his able successors, Sicard and Bébian, was the cultivation and expansion of the language of gestures—the natural language of the deaf and dumb—as the means of mental and moral development, and the principal medium of instruction, by which the meaning of written language is imparted, enabling the pupil to communicate with all who can read and write, and opening to him that world of knowledge found in books.

This system prevails in all the schools for the deaf and dumb in the United States, having been brought to this country in 1816 by the late venerated founder of the American Asylum, Thomas H. Gallaudet, father of the present worthy principal of the institution in the federal capital. Mr. Gallaudet having become interested in the case of a deaf-mute, daughter of Dr. Cogswell, of Hartford, went to Europe to acquire the method of instruction, and being providentially repelled from the British schools, whose teachers then made a secret and a monopoly of their art, proceeded to Paris, studied the methods of Sicard, the celebrated pupil of De l'Épée, and returning, brought with him Laurent Clerc, himself a deaf-mute, already distinguished as the best teacher in the school of Paris, from which he brought a more thorough knowledge of the art of deaf-mute instruction, in the best state it had then reached, than probably any other man at that time possessed. The American teachers had thus, at the beginning, the advantage of a long cultivated and improved system. Nor has the art been suffered to remain stationary in this country. It has been diligently cultivated among us by many men of eminent ability during half a century; and the results attained in our schools for the deaf and dumb are certainly not inferior, in point of practical utility, to those attained in any of the European schools.

NUMBER OF SCHOOLS.

The number of schools for the deaf and dumb has been rapidly increasing during the current century. At the beginning of the century there were hardly a dozen such schools. Thirty years ago the number of European institutions for the deaf and dumb was about 118, containing, at most, 3,300 pupils. Ten years ago the number of institutions was estimated at 180, and the number of pupils at 6,000. Of the European institutions there are about 80, mostly small

ones, in Germany, 45 in France, and 22 in the British isles. There are also two or three schools in British America. The three largest European schools are those of London, with about 300 pupils, Paris with about 170, and Groningen in Holland, with about 150.

The number of American institutions has also steadily increased. The American Asylum at Hartford is the oldest, having been opened in 1817. The New York institution is next in age, dating from 1817, and the Pennsylvania institution was opened in 1820. The Kentucky institution was opened in 1823, that of Ohio in 1829, and that of Virginia in 1839. The progress of the cause may be seen by the annexed table:

Date.	No. of institutions.	No. of teachers.	No. of pupils.
1834.....	6	34	406
1851.....	13	75	1,162
1857.....	20	118	1,760
1860.....	22	130	2,000

The New York institution is the largest in the country, and probably in the world, having 310 pupils. The asylum at Hartford has about 225, the institution at Philadelphia 206, and the schools of Ohio, Indiana, and Illinois from 140 to 170. The southern institutions are comparatively small, but their present condition cannot be ascertained. Of the 130 teachers, including the principals, about half are men of liberal education, about 15 are females, and about 50 are educated deaf-mutes.

The support of these twenty-two institutions costs not far from \$350,000 annually, of which as much as \$300,000 is appropriated by the legislatures of twenty-nine States. Provision for the education of the deaf and dumb, in some cases restricted to the indigent, in others made free to all, is made by law in all the States, except the sparsely settled ones of Florida, Arkansas, Minnesota, Kansas, and Oregon. All the New England States send their beneficiaries to Hartford, New Jersey sends hers to New York and Philadelphia, and Maryland and Delaware send theirs to Philadelphia, or to the institution at Washington, under the patronage of the President and Congress.

In the buildings and grounds of these several institutions, up to the date of our last information, over a million and a half of dollars had been invested. Except the necessary buildings and appurtenances, the institutions generally possess no permanent funds, being dependent on annual appropriations from the States; but there are three or four exceptions. The only considerable permanent fund is that of the American Asylum, derived from a grant of a township of land, made by Congress, through the generous aid of Henry Clay, as early as 1819. This fund now amounts to \$200,000. The Texas institution has been munificently endowed by the legislature of that State with a grant of 100,000 acres of land.

Some prominent notice is due to the Columbia Institution for the instruction of the deaf and dumb, and the blind, at the national capital, which commenced its operations in June, 1857, under the provisions of an act of Congress, approved on the 16th of February in the same year.

The objects of the institution as contemplated in its organization were twofold: First, to provide suitable instruction for the deaf and dumb and the blind of the District of Columbia, and for children thus afflicted whose parents are in the military or naval service of the United States; secondly, to establish at the national capitol an institution for the instruction of the deaf and dumb, which

should carry their education to a higher point than has yet been attained in other institutions. In other words to afford deaf-mutes in America an opportunity of obtaining a collegiate education, to qualify them as instructors, to enable them to engage in pursuits and occupations which are now (for lack only of the necessary training) beyond their reach.

The success of the institution has fully equalled the expectations of its founders. The first object has been entirely realized. The last annual report of the institution showed an attendance of forty-one pupils. The deaf-mutes are being carried forward in their education according to the French system, improved and introduced into this country by Doctor Gallaudet.

The blind are pursuing their studies in the manner adopted at the Boston institution.

A collegiate department will be organized as soon as the pupils of the institution are sufficiently advanced to enter upon the prescribed course of study. This stage will probably be reached in the year 1864.

The appropriations granted by Congress to the institution have amounted to \$38,509 51; and there has been received from private sources the sum of \$18,025.

The buildings of the institution, which will accommodate sixty pupils with the necessary officers and teachers, are healthfully located on an eminence commanding a view of the city, about a mile and a quarter northeast of the Capitol.

Mr. Kendall is the president of the board of directors, and has contributed liberally to the endowment of the institution, the immediate management whereof has been from the beginning in the hands of the principal, Edward M. Gallaudet, M. A., formerly instructor in the institution at Hartford.

The corps of instruction consists of the principal, two assistant instructors of the deaf and dumb, one instructress of the blind, and a teacher of drawing and the arts of design. Instruction is also given in mechanical labor.

In estimating the cost of instructing the deaf and dumb of the United States, it must be remembered that seven of the twenty-two institutions, those of Virginia, North Carolina, South Carolina, Louisiana, Michigan, California, and the Columbian Institution in Washington are also institutions for the blind as well as for the deaf and dumb, and that the support of their 136 blind pupils is included in the sum already given as the total annual expense of the twenty-two institutions. Allowing for these, the actual expense of educating the 2,000 deaf-mutes now in school may be estimated at \$330,000. The number now under instruction ought to be considerably larger, especially in the southern States, to give all the deaf and dumb that education which alone can raise them to the rank of intelligent and useful citizens. It is restricted less from the difficulty of obtaining appropriations from the State legislatures than from the apathy of unenlightened parents, and their unwillingness to part with their children.

STATISTICS OF THE DEAF AND DUMB.

The earliest known attempt to estimate the number of deaf-mutes in a given country was made by the benevolent De l'Épée, who states that there were, about the year 1773, two hundred of these afflicted persons in the city of Paris, whence he calculated that there must have been 3,000 in the whole kingdom. If this last number is not an error of the press, the calculation seems very erroneous, for we know that the population of Paris at that day little exceeded half a million of souls, while that of France exceeded twenty millions. If there were then two hundred deaf-mutes in Paris, a like proportion for the whole kingdom would give 8,000 instead of 3,000. It was not till 1853 that an enumeration of the deaf-mutes of France was actually made, and the result gave a proportion for Paris and its vicinity just about that estimated by De l'Apée eighty

years before—one in about 2,500 inhabitants; while the ascertained proportion for all France was one deaf-mute in 1,212 souls, more than twice as great as that for Paris.

The two earliest censuses known to us made by governmental authority, in which the number of deaf-mutes was noted, were that of the State of New York for 1825, and that of Prussia for the same year. The deaf and dumb of the United States were first enumerated at the national census of 1830, and at each census since. Enumerations of this class of the population have been made at different times within the last thirty years in several countries of Europe. In Great Britain they were first noted in the returns for the census of 1851.

The general result of these enumerations is that, except in a few extreme cases, the number of deaf-mutes in a given country is seldom more than about eight hundred in a million, or less than about four hundred. The later enumerations show a somewhat larger proportion than the earlier; but this may be owing to greater care in making the enumeration. The Prussian census for 1828 gave one deaf-mute in 1,548 souls; that of 1849 one deaf-mute to 1,364 souls. Thirty years ago the general average of all the European enumerations then made was about one deaf-mute in 1,500 souls. Ten years ago, according to a table prepared by Dr. Peet, of the New York Institution, there had been found 70,700 deaf-mutes, in those countries of Europe in which enumerations had been made, in a population of 92,710,000 inhabitants; a proportion of one deaf-mute to 1,311 souls. This proportion would have been reduced to about one in 1,360, had the result in England, which returned only one deaf-mute to 1,754 souls, then been known.

In this, as in other departments of vital statistics, we find, in any large district, a remarkable degree of uniformity from one period to another, showing that the prevalence of deaf-dumbness, as of other afflictions of mortality, is regulated by general laws. The proportion in the population of Prussia, as we have seen, varied less than a sixth part in twenty-one years; and that in the United States, according to our census returns, has only varied about one-tenth part in thirty years. The amount of variation will be seen from the annexed table, calculated for the white population alone for 1830, 1840, and 1850, and for the whole free population for 1860:

Years.	No. of deaf and dumb.	Population, 1 to—
1830.....	5,363	1,964
1840.....	6,682	2,123
1850.....	9,085	2,152
1860.....	14,269	1,925

The increased proportion for 1860 is probably owing, in part, to the fact that a considerable number of persons returned as "deaf" were counted with the deaf and dumb in making the abstract of the last census. This class of persons was carefully excluded in making the abstract from the census schedules of 1850, as it will be in the revision of the tables of the Eighth Census, which for want of time has not yet been effected.

The deaf and dumb, properly so called, are those who were born deaf, and in consequence grew up dumb, together with those who lost hearing by disease or accident at so early an age as to lose also the faculty of speech more or less completely. Besides these, there are many persons who lost hearing in childhood or youth, after acquiring the permanent power of speech, but who, incapable of being taught in ordinary schools, are entitled to the privileges of a special

institution for deaf-mutes. These are sometimes returned as deaf and dumb, especially if they are or have been pupils of an institution for deaf-mutes; sometimes they are returned as "deaf," and often, especially when their misfortune is recent, they are not distinguished at all. If none but this second class of persons (technically known as semi-mutes) were returned as deaf, there could be no hesitation in including them all with the deaf and dumb. But there are many people who become deaf in mature life, or with advancing age, and these are gratuitously marked as "deaf" on the census schedules, in so many cases as to materially affect, in some districts, the general accuracy of our calculations. None who become deaf after the age of ten or twelve should be included in tables of the deaf and dumb; but this distinction was not generally understood by the census-takers.

Another source of error of a different kind is the frequent return as "dumb" of persons who are dumb, not as a consequence of deafness, but from defect of intellect. If all who are thus returned were known to be idiots, all should be excluded from our tables of the deaf and dumb; but the same word appears to be used in many cases to designate the proper deaf and dumb, and we have no means of discriminating between those who are *dumb* because *deaf*, and those who are *dumb* from deficient intellect. To insure more perfect accuracy for the general report, the list of the deaf and dumb in the United States, made out in this office from the original schedules, will, as far as practicable, be submitted to the inspection of the conductors of the several institutions that their extensive knowledge of individual cases may be availed of to correct the returns in a sufficient number of cases to give a general average of corrections, and thus enable us to approximate much more nearly to accuracy in this branch of our statistics. A small expenditure for the printing of this list may be necessary to this end.

Though by including many returned as "deaf" only, and others returned as "dumb" only, the returned number of the deaf and dumb may be considerably increased; there is reason to believe this increase is not more than equal to the number of omissions. Dr. Peet has made it appear probable, for instance, that owing to the reluctance of parents to describe their children as dumb a large number of deaf-mute children under the age of ten or twelve were omitted;* that the returns of deaf-mutes from most of our larger towns are also deficient; and that, from the greater difficulty of obtaining information in the case of our foreign population, their deaf and dumb are not as fully returned as in the case of the native population. To these we should add many omitted by accident or through the hurry or carelessness of the marshals. Allowing for all these causes of omission, it is not improbable that the proportion of deaf-mutes in the white population of the United States is as great as that found in England and Germany.

Taking the returns as they are, we find the sources of error so uniform in their influence that the results will serve for the purpose of comparison between different classes of the population and between different sections of the Union. We may thus, in time, be aided in forming accurate conclusions as to the causes of deafness; a prospect that gives a higher interest to the returns, since a knowledge of the causes may lead to the knowledge of preventions, whereby the prevalence of this distressing infirmity may be diminished.

The particulars, however, to be gathered from our census, relating to the deaf and dumb, are not nearly as full as would be desirable in this point of view. They do not show, for instance, how many are deaf and dumb from birth, and

* In 1850 the proportion of deaf-mutes returned under 10 years was to the population of the same age (whites) only as 1 : 3,570 for males, and 1 : 4,200 for the females; while between the ages of 10 and 30 the proportion was 1 : 1,550 males, and 1 : 1,930 females.— (*Statistics of Deaf and Dumb*, by H. P. Peet, LL.D.)

how many from disease or accident, (the latter supposed to be nearly half the whole in this country, though only one-fifth of the whole in Europe;)* nor in how many cases there are two or more deaf and dumb children in the same family; nor in how many cases the parents were blood relatives; nor in how many cases the infirmity is transmitted from parents to children. The general laws to be gathered from our census returns are of another kind, and relate to the influence of race, of emigration, of climate, or of geological formation on the prevalence of deaf-dumbness, although they present facilities for the prosecution of inquiries which, if followed up, will enable us to throw much light on the subject generally.

We note *first*, that the white race appears from our census returns to be much more liable to deaf-dumbness than the black, and of course the free colored, which has a larger admixture of white blood, is more liable to that infirmity than the slave population; on the other hand, it is supposed that the colored population is more liable to blindness than the whites. This greater prevalence of deaf-mutes, (after allowing for errors in the two enumerations of 1830 and 1840, which appear to have risen from accidentally placing figures in the wrong columns,) is manifested in every one of the four enumerations from 1830 to 1860, and in the returns from every State. The general average of the census of 1860 gives only one slave deaf-mute to every 4,900 slaves, whereas there is one to every 1,925 among the free population. In 1850, excluding, as already observed, the "deaf," there was returned one deaf-mute to 2,152 whites, one to 3,151 free colored persons, and one to 6,034 slaves. The small proportion returned among the slaves may indeed be due, in part, to less care and particularity in making the enumeration; but it is difficult to believe in a carelessness so general as to account for so great a discrepancy as is here shown. It seems, therefore, safe to assume that the colored race is less liable to deaf-dumbness than the white race; and such, according to the testimony of missionaries, seems also the case with the Mongolian population of China as compared with Europeans.

The next fact to be noted is that there is a larger proportion of deaf-mutes among a population from which emigration has been large than among a population which is gaining largely by emigration. This fact is patent from the returns of every census, as will appear from the annexed table, calculated as before for the white population in 1830, 1840, and 1850, and for the whole free population in 1860:

	The Atlantic States, from Maine to Georgia, inclusive.	All the remaining States and Territor ^{ies} .
Number of deaf mutes in 1830	4,031	1,332
Proportion to population	1 to 1,864	1 to 2,235
Number of deaf mutes in 1840	4,475	2,297
Proportion to population	1 to 1,993	1 to 2,388
Number of deaf mutes in 1850	5,737	3,732
Proportion to population	1 to 1,961	1 to 2,245
Number of deaf mutes in 1860	7,619	6,450
Proportion to population	1 to 1,796	1 to 2,080

* Dr. Peet estimates that in Europe there are in a population of a million 615 deaf-mutes who are so from birth, and only 154 by disease or accident; while in the United States the former class number 278 in a million, and the latter 222.—(See the *Thirty-fifth New York Report*.)

This law is more strikingly exemplified by the returns from the extreme west. California and Oregon, for instance, returned in 1850 only 7 deaf-mutes in a population of 105,000, and in 1860 only 84 in a population of 432,000. Though it may be that the returns from sparsely settled districts are apt to be less accurate than the average, still there can be no doubt that a comparatively small proportion of deaf-mutes go along with the stream of emigration. Families with deaf-mute children have an inducement to remain in the older States, at least till their children can be educated; and it may be that such families, as a general rule, do not belong to the more energetic and restless part of the population. It may be owing in part to a similar cause that the proportion of deaf-mutes is smaller in America than in Europe.

The proportion of deaf-mutes among the slaves of the border States and that found in the extreme southern States offers a contrast even more marked, which is no doubt due, at least in part, to a like cause, the deportation of so many slaves southward, since we may assume that a deaf and dumb slave would be less desirable for a trader than one who can hear. In 1860 there were returned from the slave States north of the parallel of 35°, including North Carolina, but excluding Arkansas, 458 deaf and dumb slaves, one to 3,340 slaves; and from the more southern slave States only 350, but one deaf-mute to 6,920 slaves. This difference can hardly be due to climate, for the proportion of deaf-mutes among the white population of South Carolina was greater in 1830 than in any other State, except Connecticut and New Jersey; and at the last census the greatest proportion in the whole Union, allowing for the large number from other States collected into the school in Connecticut, was returned from the comparatively southern States of Virginia and Kentucky. We cannot, therefore, assume from the census returns that coldness of climate has any marked influence on the prevalence of deaf-mutes.

It has been supposed that mountainous and sterile countries have a larger proportion of deaf-mutes than those that are level and well cultivated. In Europe the greatest known proportion is found among the mountains of Switzerland, the smallest on the fertile plains of Belgium. But we have no such deep, dark humid valleys as those of some parts of Switzerland, where the population seems to deteriorate from generation to generation, and where cretinism, often allied to deaf-dumbness, prevails to a painful extent. Whether in our mountainous districts deaf-mutism is more prevalent than in more level regions can hardly be determined till our population becomes more stationary. We observe that, by the British census of 1851, the proportion of deaf-mutes was, indeed, smaller in level and fertile England than in the more mountainous and sterile countries of Wales and Scotland; but on the other hand, Ireland, a comparatively level country, presents a larger proportion than Wales, and about as large as Scotland. In our own country the proportion in Vermont and New Hampshire, though greater than in most of the other northern States, is less than in the fertile regions of Kentucky.

If we assume as a probable theory that congenital deafness is, in most cases, an arrest of development, owing in some cases to deficient vital power in one or both parents, and in other cases to a physiological unfitness of the parents for each other, and that the loss of hearing by disease or accident is more prevalent among children whose constitutional vigor is impaired, it is difficult to see why mountainous regions, that are found favorable to general health and to longevity, as many mountainous regions are known to be, should present more cases of deaf-mutes than other regions.

The inquiry as to the influence of the geological formation of a country on the prevalence of deaf-mutism is an interesting one, but partly from the difficulty of determining the geological character of a given district, partly from the labor requisite for the investigation, very little has yet been done to elucidate this point. Kentucky has returned at each census a large proportion of deaf-mutes,

and Kentucky is a limestone country. This statement embraces about all that may at present be hazarded on this point.

BLIND.

The first regularly organized establishment for the charitable relief of the blind is known as "*The Hospital Imperiale des Quinze Vingts.*" It was founded in Paris by St. Louis in 1260, and still exists. It contains, as its name implies, fifteen score, or 300 blind. It is an asylum only for adults, and does not attempt to instruct its inmates.

Although much had been done by celebrated blind persons and others in overcoming the privations of sight by ingenious contrivances for the touch, the first successful effort in systematic instruction was made by *Valentin Haüy*. Inspired by the success of the Abbé de l'Épée in the education of the deaf and dumb, M. Haüy conceived that equal results could be effected for the blind, who were deemed more helpless. He reflected upon the fact that the touch of the blind is so exceedingly sensitive as rarely to be deceived in distinguishing the different coins. Why might they not distinguish letters if made tangible? Letters were printed in relief; maps with raised lines were made; a class of blind children was collected and instructed, and the experiment was successful. Such was the simple basis of the system which has been followed over the civilized world.

A house was procured in 1784, in Paris, under the patronage of the Philanthropic Society, which may be regarded as the cradle of the present Imperial Institution for the young blind.

In 1791 "the Liverpool school for the blind" was founded, which was the first in Great Britain.

The following table exhibits the institutions and asylums for the blind in Great Britain and Ireland, the dates of their foundation, and the number of inmates in each:

No.	Location.	Founded.	Inmates.
1	Liverpool.....	1791	60
2	Edinburg.....	1792	115
3	Bristol.....	1793	66
4	London.....	1799	154
5	Norwich.....	1805	26
6	Dublin, ("Richmond," for males).....	1809	20
7	Dublin, ("Molyneaux," for females).....	1815	35
8	Glasgow.....	1828	106
9	Belfast.....	1831	13
10	Yorkshire.....	1835	60
11	Limerick, (for females).....	1835	12
12	Manchester.....	1837	75
13	Newcastle.....	1838	41
14	London, ("Society for teaching the blind to read").....	1838	56
15	Liverpool, (Catholic, for females).....		17
16	Exeter.....	1838	26
17	Aberdeen.....		30
18	Bath.....	1840	24
19	Brighton.....	1841	21
20	Nottingham.....	1842	30
21	Birmingham.....	1846	59
22	*Plymouth.....		

TABLE—Continued.

No.	Location.	Founded.	Inmates.
23	*Bath, (blind school-house) .....	.....	.....
24	*Edinburg, (Abbey Hill).....	.....	.....
25	*Dublin, (Catholic) .....	.....	.....
26	*Cork .....	.....	.....
27	*London, (Milton Institution) .....	.....	.....
28	*Midland Institution .....	.....	.....
Total in twenty-one institutions.			1,076

* Schools and asylums more recently established, and of smaller size; the dates and numbers not ascertained.

Associations and societies for the relief of the blind in Great Britain.

1. London.—“Association for Promoting the General Welfare of the Blind.” The object is to supply the adult blind with employment. It has six branches in other parts of the kingdom, viz: in Bradford, Davenport, Leicester, Liverpool, Sheffield, and Surry.
 2. London.—Society for Printing and Distributing Books for the Blind, 1854.
 3. London.—Indigent Blind Visiting Society, 1837.
 4. London.—Christian Blind Relief Society, 1843.
 5. London.—Society for Supplying Home Teachers.
 6. London.—“The Blind Man’s Friend, or Day’s Charity.” (Founded by the late Mr. Day, who left £100,000 for the benefit of persons suffering under loss of sight.)
 7. London.—Rev. Wm. Hetherington’s charity (1774) appropriates £10, yearly, each to 50 blind persons over 60 years of age.
 8. London.—The Painters and Stainers’ Company (1780) for the relief of blind persons above 61 years of age.
 9. London.—The Cordwainers’ Company (1782) distributes £5, annually, to 105 blind persons.
 10. London.—Society for Improving the Social Position of the Blind.
 11. London.—The Cloth-workers’ Company.
 12. London.—The Drapers’ Company.
 13. London.—The Goldsmiths’ Company.
 14. London.—The Society for Granting Annuities to the Blind.
- The last six grant small annuities for the relief of blind persons.

Institutions for the blind on the Continent of Europe.

No.	Location.	Founded.
1	Paris, Hospital Imperiale des Quinze Vingts.....	1260
2	Paris, Imperial Institution for the young blind.....	1784
3	Vienna, Austria.....	.....
4	Prague, Bohemia.....	1804
5	Amsterdam, Holland.....	1804
6	St. Petersburg, Russia.....	1806
7	Berlin, Prussia.....	1806
8	Milan, Sardinia.....	.....
9	Dresden, Saxony.....	1809
10	Zurich, Switzerland.....	1809
11	Copenhagen, Denmark.....	1811
12	Brussels, Belgium.....	.....
13	Lausanne, Switzerland.....	.....

Institutions for the blind on the Continent of Europe—Continued.

No.	Location.	Founded.
14	Breslau, Prussia	1816
15	Konigsburg, Prussia.....	1816
16	Stockholm, Sweden.....	1817
17	Barcelona, Spain.....	1820
18	Naples, Italy.....	1822
19	Germund, Wurtemberg.....	1823
20	Lintz, Austria.....	1824
21	Pesth, Hungary.....	1825
22	Friesingen.....	1828
23	Bruchsal, Baden.....	1828
24	Hamburg, Holland.....	1830
25	Antwerp, Belgium.....	
26	Bruges, Belgium.....	
27	Brunswick, Brunswick.....	
28	Frankfort-on-the-Mayn.....	
29	Friedberg, Hesse.....	
30	Lille, France.....	
31	Berne, Switzerland.....	
32	Stuttgardt, Wurtemberg.....	
33	Friedberg, Switzerland.....	
34	Liege, Belgium.....	
35	Christiann, Norway.....	

Institutions for the blind in the United States, with the number of pupils and blind persons employed by them.

No.	Location.	State.	Founded.	No. of pupils and blind employed.
1	Boston	Massachusetts	1833	111
2	New York.....	New York.....	1833	167
3	Philadelphia.....	Pennsylvania.....	1833	177
4	Columbus.....	Ohio.....	1837	120
5	Staunton.....	Virginia.....	1838	44
6	Louisville.....	Kentucky.....	1842	54
7	Nashville.....	Tennessee.....	1844	36
8	Raleigh.....	North Carolina.....	1845	18
9	Indianapolis.....	Indiana.....	1846	72
10	Jacksonville.....	Illinois.....	1847	50
11	Cedar Springs.....	South Carolina.....	1848	17
12	Janesville.....	Wisconsin.....	1850	40
13	St. Louis.....	Missouri.....	1851	29
14	Macon.....	Georgia.....	1851	31
15	Baton Rouge.....	Louisiana.....	1852	14
16	Jackson.....	Mississippi.....	1852	10
17	Iowa City.....	Iowa.....	1853	40
18	Baltimore.....	Maryland.....	1853	25
19	Flint.....	Michigan.....	1853	35
20	Austin.....	Texas.....	1855	12
21	Washington.....	District of Columbia.....	1857	6
22	Little Rock.....	Arkansas.....	1859	10
23	San Francisco.....	California.....	1860	8
	Total pupils and inmates.....			1,126

Proportion of blind persons in the several States, and to the whole population in the United States.

States.	Free, blind.	Slaves, blind.	Free, one in—	Slaves, one in—
Alabama	204	114	2,594	3,816
Arkansas	118	26	2,749	4,273
California	63	.....	6,032	.....
Connecticut	192	.....	3,027	.....
Delaware	42	.....	2,629	.....
Florida	15	21	5,245	2,940
Georgia	297	188	2,003	2,458
Illinois	476	.....	3,617	.....
Indiana	530	.....	2,548	.....
Iowa	192	.....	3,515	.....
Kansas	10	.....	10,711	.....
Kentucky	530	144	1,755	1,565
Louisiana	112	118	3,365	2,811
Maine	233	.....	2,696	.....
Maryland	264	34	2,272	2,564
Massachusetts	498	.....	2,472	.....
Michigan	254	.....	2,585	.....
Minnesota	23	.....	7,044	.....
Mississippi	147	116	2,413	3,764
Missouri	388	60	2,727	1,915
New Hampshire	142	.....	2,296	.....
New Jersey	203	.....	3,230	.....
New York	1,768	.....	2,199	.....
North Carolina	302	189	1,687	1,751
Ohio	890	.....	2,602	.....
Oregon	9	.....	5,829	.....
Pennsylvania	1,187	.....	2,448	.....
Rhode Island	85	.....	2,054	.....
South Carolina	171	120	1,761	3,353
Tennessee	437	117	1,908	2,356
Texas	119	31	3,535	5,889
Vermont	165	.....	1,903	.....
Virginia	557	232	1,984	2,115
Wisconsin	220	.....	3,520	.....
Dakota Territory .....	.....	.....	.....	.....
District of Columbia	47	.....	.....	.....
Nebraska Territory	3	.....	.....	.....
New Mexico Territory	149	.....	.....	.....
Utah Territory	17	.....	.....	.....
Washington Territory	2	.....	.....	.....
Total	11,125	1,510	.....	.....

Proportion of blind slaves to all slaves, one in 2,616

Proportion of blind to the whole population, one in 2,470

For the advantage of comparisons the following statistics of the blind in Europe are given :

According to the census of 1851 the whole number of blind persons in Great Britain and Ireland was 29,074, viz :

In England and Wales	18,306; 1 in 979
In Scotland.....	3,010; 1 in 960
In islands in the British sea	171
Total in Great Britain.....	21,487; 1 in 975
In Ireland	7,587; 1 in 878
Total in Great Britain and Ireland	29,074; 1 in 950

A larger proportion of blind persons is found to exist in the agricultural districts of Great Britain than in the manufacturing and mining districts and large cities. There is—

In London	1 blind to every 1,025 persons
In Birmingham	1 blind to every 1,181 persons
In Leeds	1 blind to every 1,203 persons
In Sheffield	1 blind to every 1,141 persons.
In the whole kingdom	1 blind to every 950 persons.

The British census of 1851 gives some remarkable facts in regard to the ages of blind persons, widely different from estimates hitherto received. Of the 21,487 blind persons in England, Scotland, and Wales, there were—

Under 20 years of age, only	2,929, or 14 per cent.
Between 20 and 60.....	8,456, or 39 per cent.
Above 60.....	10,102, or 47 per cent.

While less than one-seventh were under 20, nearly *one-half* were at the advanced age of 60 and upwards; showing the small proportion blind in infancy, the large number blinded by old age, and also the longevity of the blind.

In Prussia (1831) it was estimated that, out of 9,212 blind persons, 846, or nearly $\frac{1}{11}$, were between the ages of 1 and 15. In Brunswick, out of 286 blind, $\frac{2}{5}$ were under 7.

We have no authentic information of the blind in France. But if the proportion is the same as that of adjoining countries, there were in 1836 24,675 blind, or 1 to every 1,360 inhabitants.

Comparative portion of blind persons to the whole number of inhabitants in Europe and in the United States.

Great Britain and Ireland, (1851).....	1 in 950
France, (census of 1836,).....	1 in 1,360
Belgium, (1831,).....	1 in 1,316
Level portions of the German States.....	1 in 950
More elevated portions of Germany.....	1 in 1,340
Prussia, (average of census in 1831, 1834, and 1837,).....	1 in 1,401
Alpine regions, (1831,).....	1 in 1,500
Sweden	1 in 1,091
Norway	1 in 482
United States, (1850,).....	1 in 2,470

The remarkable fact is given by this table that the blind in the United States but little exceeds *two-fifths* of the number in Great Britain and Ireland, and are less than *three-fifths* of the number in France, in proportion to the populations of those countries.

The proportion of the blind in each of the United States to the population, considered in relation to geographical position, shows that whatever causes may have modified these proportions, *climate* has had little or no influence; and that

the tables of Dr. Zenne, of Berlin, so much referred to as showing the proportions of the blind according to *latitude*, are entirely inapplicable to the United States.

According to those tables the proportion is—

In latitude 20 to 30	1 in 100	In latitude 50 to 60	1 in 1,400
In latitude 30 to 40	1 in 300	In latitude 60 to 70	1 in 1,000
In latitude 40 to 50	1 in 800		

The following contrary results appear in certain geographical districts of the United States:

Southern States.

Louisiana, latitude 29 to 33	1 to 3,365
Mississippi, latitude 30 to 35	1 to 2,413
Alabama, latitude 30 to 35	1 to 2,594

Northern States.

Maine, latitude 43 to 47	1 to 2,696
Massachusetts, latitude 42 to 43	1 to 2,472
Michigan, latitude 42 to 46	1 to 2,595

In other respects, and from other causes, large differences occur in the proportions of blind persons in some of the States. In Texas (latitude between 26 and 30) there is 1 blind to 3,535; Oregon, 1 to 5,829; California, 1 to 6,032; Minnesota, 1 to 7,044; Kansas, 1 to 10,711. These are distant and thinly-populated States, to which blind persons would rarely emigrate, and contain comparatively few aged persons, among whom a larger portion of the blind are found.

The extraordinary exemption from blindness in the United States compared with Great Britain, according to the census returns, which give the latter about two and a half times more blind than the former country, is a fact of great importance, and suggests inquiries into the causes. We have too little data to warrant any certain conclusions. Sufficient exists, however, to show that *small-pox* has been a prolific cause of blindness in Great Britain, but not in the United States.

Of 1,456 blind persons received into the Liverpool School for the Blind, from 1791 to 1860, 250, or more than *one-sixth*, were blinded by *small-pox*.

Of the pupils in the Glasgow Asylum nearly *one-fifth* were blinded by *small-pox*.

In the Pennsylvania Institution, of 476 pupils received, only 21, or about $\frac{1}{22}$ part of the whole were blinded by *small-pox*. Of 118 pupils in the Ohio Institution, to a certain date, only *one* was blinded by *small-pox*. Dr. Crampton, of Manchester, England, estimated that between 4,000 and 5,000 were blinded by *small-pox* in Great Britain.

SYSTEM OF PRINTING FOR THE BLIND.

The blind of necessity read by the touch. The method of printing in raised letters originated, as stated, with *Valentin Haüy*, in Paris, in 1784. Since then various kinds of embossed letters and characters have been adopted. The alphabetical systems are known as the *Roman capitals*, as in the books printed at the Glasgow and Pennsylvania institutions; the combined *capital* and *lower case*, as in books from the Bristol, Paris, and some of the German institutions; and the *angular lower case*, of the Massachusetts institution.

The arbitrary systems are known as Braille's in France; Carton's in Belgium; *Lucas's*, *Frere's*, and *Moore's* in England. Both systems have their peculiar advantages. While some institutions adopt the principle that the alphabets and all tangible apparatus should conform as nearly as possible to those universally

in use by the seeing, it must be conceded that the simple arbitrary characters of Braille, Lucas, and others, are more readily learned by the adult blind and those whose touch has become less sensitive by work.

Books for the blind are quite limited in number and dear. Of the principal works of this character may be named: the whole Bible, printed at the Glasgow Asylum, in 19 volumes, quarto, price \$48; the whole Bible, in 8 large volumes, price \$20; A cyclopaedia, 8 large volumes, (unfinished;) Milton's Poetical Works, 2 volumes; Paley's Evidences, 1 volume; Combe on the Constitution of Man, 1 volume; Philosophy of Natural History, 1 volume; Rudiments of Natural Philosophy, 1 volume; Lardner's Universal History, 3 volumes; Common Prayer, 1 volume; Pope's and Diderot's Essays, 1 volume, and other works from the Boston Institution. A dictionary of the English language, 3 large volumes; Select Library, 5 volumes; Church Music, 3 volumes; Student's Magazine, 6 volumes, and other works from the Philadelphia Institution. History of the United States, 3 volumes, and several other works from the Virginia Institution. These and some volumes of moderate extent from the Bristol and London presses are all in the alphabetical type. The New Testament, and portions of it and part of the Old, have been printed and duplicated several times in the three arbitrary characters of Lucas, Frere, and Moore, used in England.

While these various arbitrary systems do credit to the ingenuity of the inventors, two of whom are blind, it is unfortunate, considering the paucity of embossed books, that the efforts of the friends of the blind have not been concentrated upon some one or two kinds of print.

GENERAL VIEW AND OBJECTS OF THE INSTITUTIONS FOR THE BLIND.

The great object of all institutions for the education of the blind is to remove the disabilities under which they labor, as far as possible, by substituting the sense of touch for the lost sight; by a correct system of moral, and mental, and physical training, and by giving them a knowledge of music or some useful mechanic art to prepare them for the active duties and enjoyments of life. Without deciding how their mental and physical condition will compare with the general standard, it is demonstrated that they have capacities for receiving a good education in the various departments of useful knowledge, and of becoming church organists and piano instructors. The largest number become practical workmen in several branches of plain handicraft. While the cultivation of music is to them a source of the greatest delight, and is almost universally taught to the younger blind as affording a benevolent compensation for the loss of all that is beautiful in nature, the exercise of the industrial powers supplies to the mass of the blind the great necessity of their condition. Occupation of mind and body in all these respects gives to the blind in the public institutions that tone of cheerfulness which is considered so remarkable in their condition.

But the great result is the preparation of the blind for *self-support* when they return to become members of the community. It is for this end that private bounty and legislative aid have been so generously granted in the United States. While the young blind are admitted for a term of years to receive an education in the school and music departments, in connexion with handicraft, adults at all ages under 50 are received in some of the institutions for a period of one or two years to acquire a simple trade, when they go on their way rejoicing in their ability to support themselves, or at least to remove the necessity of an entire and hopeless dependence on their friends or the public.

In Europe thousands of blind persons are paupers in the poor-houses or burdens upon friends who would be able, if instructed in simple trades, to earn a large part of their support. Many adult blind in the United States are in the same dependent condition. This number is being partially provided for by those institutions which receive adults.

The employment of the graduate blind by existing institutions is a subject of interest in the United States as in Europe. It is certain that many worthy and industrious blind persons fail to support themselves fully. How far and in what way they may be aided by existing institutions or by others organized for their welfare is an important question claiming and receiving serious attention by those prepared to judge practically upon the subject.

INSANE.

Among the many evidences of progressive science and enlightened philanthropy furnished by the history of the last three-quarters of a century, none are more characteristic, and perhaps no one appears in bolder relief, than the system of treatment of the insane which, adopted within that period, now widely prevails among civilized nations. In a civil, social, and moral point of view, the space is broad which separates the gloomiest cell of a prison, with its bolts, bars, and chains, from spacious apartments furnished with the conveniences and comforts as well as many of the luxuries of life. Yet this space has been traversed by the insane within the seventy years next preceding the present time. It is proposed to give in this place a brief sketch of the history, more especially in respect to the United States, of this important amelioration of the condition of a large class of our fellow-men.

About the middle of the eighteenth century some philanthropists of Philadelphia took preliminary measures for the foundation of a general curative institution in that city; and in 1751 the provincial assembly of Pennsylvania passed an act of incorporation under the title: "The Contributors of the Pennsylvania Hospital." This charter provided not only for the relief of persons suffering from general diseases, but also for the "reception and cure of lunatics."

It is believed that this was the first legislative provision in the American colonies for the restorative treatment, in a public hospital, of persons afflicted with mental alienation. The hospital was opened on February 11, 1752, and henceforward one of its departments was specially appropriated to that class of patients.

The next practical movement in a similar direction was in Virginia; and to her belongs the honor of being the pioneer of all the colonies in the establishment of an institution exclusively devoted to the insane. An act providing for the lunatics and idiots of the colony passed her legislature on November 10, 1769. A hospital was erected at Williamsburg at the expense of £1,070, and opened on or about September 14, 1773. In the course of the war of independence the building was evacuated and used as barracks for the colonial troops. Subsequently, but at what precise period we are not informed, it was re-opened, and has since been conducted in accordance with its original purpose.

In 1771 the Earl of Dunmore, then governor of the colony of New York, granted a charter for the institution now known as the "New York Hospital," in the city of New York. The intervention of the war with England prevented the opening of this hospital until January 3, 1791. Insane patients, so far as appears by the records, were not admitted until 1797.

Such, and such alone, according to present knowledge, were the completed provisions for the care and treatment of the insane in the hospitals of the United States prior to the close of the eighteenth century. But the character of the treatment was more custodial than curative; and the means employed, including as they did, the severest forms of bodily restraint, were better adapted to felons than to persons laboring under disease.

We have now arrived at the period of initiation in another country of an enterprise which, whether we regard the boldness of its beginning, the rapidity of its progress, the extent of territory over which it has spread, the success

which it has achieved, or the amount of good to mankind of which it has been the minister, challenges the admiration of every advocate of human improvement and every lover of his race.

In the midst of all the horrors of the French revolution, Dr. Pinel walked the reddened streets of Paris a minister of benevolence, a physician with a heart. He was connected with the Bicêtre Hospital, in which many of the insane were confined in cells and loaded with manacles and chains. After repeated solicitations he at length, in the latter part of the year 1791, obtained permission from the public authorities to remove these torturing implements of bodily restraint. The first person upon whom the experiment was tried was an English captain, who, being subject to paroxysms of extreme violence, had been chained there forty years. A promise of good behavior having been obtained from him the chains were loosed, and the man, returning as it were to the joys of life, kept his promise, rendered himself useful, and had no recurrence of maniacal fury during the two additional years of his residence in the hospital. Twelve inmates of the hospital were thus relieved from their irons on the first day of the experiment, and in the course of a few days forty-one more were similarly released. History furnishes few sketches of more touching interest than the account of these proceedings given by M. Scipion Pinel, son of the chief actor in them.

Nearly simultaneously with the early measures of Pinel, and, as is believed, without any knowledge of them, William Tuke, of York, England, conceived the plan of founding a hospital for the treatment of the insane upon principles more enlightened and humane than had theretofore prevailed in Great Britain. His plan was carried into execution by the construction of the Friend's Retreat for the Insane at York, which was opened in the year 1796.

Such was the twofold source of the movement which, though compelled to contend with the precedents and the prejudices of ages, and though for this and other reasons its progress was slow for many years, was destined fully to triumph over established usage in the countries of its origin.

Before the close of the eighteenth century German students in the medical school of Paris had carried home the new theory and practice of Pinel, and had begun that work of reformatory regeneration of the institutions for the insane in their native land, which, though small at its beginning and repressed by hindrances similar to those already alluded to, has since been prosecuted with perhaps no less vigor or success than in France or England.

The spirit of the enterprise crossed the Atlantic more slowly than it traversed the boundaries of the German States. The first decennium of the current century furnishes no new movement on behalf of the insane in the United States, except the erection for their accommodation of a separate though nearly adjacent building at the New York hospital. This occurred in 1808.

As early as 1797 Mr. Jeremiah Yellot, of Baltimore, gave seven acres of land to the State of Maryland, on condition that the government should found a hospital for the treatment of insanity and general diseases. In 1798 an appropriation for the purpose was made, and increased by private contributions as well as by an appropriation by the municipal government of Baltimore, applied to the construction of a suitable building. But the hospital was not opened until 1816.

The success of the retreat at York having become known upon this side of the Atlantic, some members of the Society of Friends, in Pennsylvania, desiring to provide hospital accommodations for the insane, formed an association in 1812, obtained a charter, erected a building near the village of Frankford, but now within the limits of the city of Philadelphia, and under the title "Asylum for

the Relief of Persons deprived of the use of their Reason;" the institution was opened in May, 1817.

In the course of these proceedings in Pennsylvania measures for the attainment of a similar end were taken by the trustees of the Massachusetts general hospital, in Boston. A distinct establishment, though a branch of that institution, was constructed near Charlestown, now in Somerville, and designated as the "McLean Asylum for the Insane," was opened on the 6th of October, 1818.

Five institutions for the care and curative treatment of the insane in the United States went into operation in the course of the decennium, terminating with the close of 1830. In 1815 preliminary measures were prosecuted by the board of governors of the New York hospital for the foundation, at Bloomingdale, of a branch of that institution. A grant from the State legislature of an annuity of ten thousand dollars for forty years was obtained, an edifice erected and opened for patients in 1821, under the title of "Bloomingdale Asylum for the Insane." The retreat for the insane at Hartford, Connecticut, and the Kentucky Eastern Lunatic Asylum, at Lexington, first received patients in 1824; and the Western Lunatic Asylum of Virginia, at Staunton, as well as the State Lunatic Asylum of South Carolina, at Columbia, in 1828.

Earliest in the next succeeding period of ten years was the State Lunatic Hospital, at Worcester, Massachusetts, which was opened in 1833. The Vermont Asylum for the Insane, at Brattleboro', followed in 1836; the Central Ohio Lunatic Asylum, at Columbus, in 1838; the City Lunatic Asylum, at South Boston, Massachusetts, and the New York City Lunatic Asylum, on Blackwell's Island, both pauper institutions, in 1839; and the Maine Insane Hospital, at Augusta, and the Tennessee Hospital for the Insane, at Nashville, in 1840.

It was during this decennium that the greatest impulse was given to the scheme for ameliorating the condition of the insane in the United States. In the production of this impulse no man exerted greater influence than the late Doctor Samuel B. Woodward, who was at that time superintendent of the State Lunatic Hospital, at Worcester, Massachusetts. The zeal and hopefulness with which he illuminated a sphere thitherto almost universally regarded in the popular mind as shrouded with clouds and involved in darkness, and the elaborate and interesting reports which, emanating from his pen, were scattered broadly through the country, all contributed to the awaking of an interest in the subject which had never previously been manifested.

In the course of this period, also, that eminent philanthropist, Miss Dorothea L. Dix, began a series of benevolent and beneficent labors to which female biography, throughout the history of the world, probably exhibits no equal. Beginning in Massachusetts, and subsequently proceeding to other States, she traversed the counties and townships within their several jurisdictions, visited all the public receptacles for the insane, together with all the private hovels, dens, garrets, and cellars for solitary maniacs to which access could be gained. She stimulated individuals to exertions and contributions in the cause, and in memorials to legislatures and by appeals to Congress called upon the governments to extend the assistance of the commonwealth to this class of its suffering people.

In 1839 a pamphlet entitled "A visit to Thirteen Asylums for the Insane in Europe," by Dr. Pliny Earle, was published in Philadelphia and extensively circulated among physicians and others interested, or likely to become interested, in the subject. As the first somewhat comprehensive account of the European establishments which appeared in this country, it had no small influence in the promotion of the cause.

The Pennsylvania Hospital for the Insane, situated about two miles west of the old State House in Philadelphia, and a branch of the Pennsylvania Hospital, was opened in 1841. The New Hampshire Asylum for the Insane, at Concord; the Mount Hope Institution, at Baltimore, Maryland; and the Lunatic Asylum

of the State of Georgia, at Milledgeville, commenced operations in 1842; the New York State Lunatic Asylum, at Utica, in 1843; the first hospital disconnected from the almshouse for the insane poor of Kings county, New York, at Flatbush, in 1845; the Butler Hospital for the Insane, a corporate institution, at Providence, Rhode Island, in 1847; and the New Jersey State Lunatic Asylum, at Trenton; the Indiana Hospital for the Insane, at Indianapolis, and the Insane Asylum of the State of Louisiana, at Jackson, in 1848. About the middle of the decennium the patients with general diseases were removed from the Maryland Hospital, at Baltimore, and that institution was thenceforth devoted to the treatment of insanity alone.

Such were the completed results of the increased activity of the enterprise in the fourth decade of the century. Among the most important agencies in the promotion of the cause, in the course of this period, was the "Association of Medical Superintendents of American Institutions for the Insane," which held its first meeting in Philadelphia, in 1845.

The propositions relative to the construction, arrangements, and organization of hospitals for the insane, drawn up by Dr. Thomas S. Kirkbride, of the Pennsylvania Hospital for the Insane, and adopted by this association, have generally been received as the highest authority upon the subjects. Although the idea may have occurred to others, yet Dr. Francis T. Stribling, superintendent of the Western Lunatic Asylum of Virginia, was the first to take the active measures which led to the promotion of this useful association, which has greatly contributed to a uniformity of views and practice among the superintendents of American institutions for the insane.

The first number of the American Journal of Insanity was issued in July, 1844. It was edited by its originator, the late Dr. Amariah Brigham, at that time superintendent of the New York State Lunatic Asylum at Utica. Intended not for the benefit of professional readers alone, but also for the dissemination of more accurate views of insanity among the people, its editor endeavored to adapt its contents to the attainment of this twofold object. The Journal is still continued under the editorship of Dr. John P. Gray and the officers of the asylum at Utica. It has assumed a more purely scientific and professional character, and has done great service in the cause to which it is devoted.

In the course of this decade Dr. Luther V. Bell, of the McLean Asylum, Dr. Isaac Ray, of the Butler Hospital, Dr. H. A. Buttolph, of the New Jersey State Lunatic Asylum, and Dr. Pliny Earle, for several years connected with the Bloomingdale Asylum, visited the rapidly improving institutions of Europe. Among the fruits of their observations we have the design of the Butler Hospital, by Dr. Bell; an elaborate résumé entitled "Observations on the Principal Hospitals for the Insane in Great Britain and Germany," by Dr. Ray; some articles in the Journal of Insanity, by Dr. Buttolph; and a descriptive work entitled "Institutions for the Insane in Prussia, Austria, and Germany," by Dr. Earle.

No less than eighteen new institutions were put in operation during the decennium from 1851 to 1860, inclusive. The State Lunatic Hospital of Pennsylvania, at Harrisburg; the State Lunatic Asylum of Missouri, at Fulton, and the Illinois State Hospital for the Insane, at Jacksonville, were organized and first received patients in 1851. The new building of the Tennessee Hospital, a few miles from Nashville, was so far completed as to be occupied in 1852. The State Insane Asylum of California, at Stockton, and the Hamilton County Lunatic Asylum, a pauper institution, now at Mill Creek, near Cincinnati, Ohio, and called the Longview Asylum, were opened in 1853; the Massachusetts State Lunatic Hospital, at Taunton, and the Western Lunatic Asylum of the State of Kentucky, (since destroyed by fire,) at Hopkinsville, in 1854; the United States Government Hospital for the Insane, near Washington, District of Columbia; the new building of the Kings County Lunatic Asylum, at Flatbush,

New York; the Mississippi State Lunatic Asylum, at Jackson; the Northern Ohio Lunatic Asylum, at Newburg; the Southern Ohio Lunatic Asylum, at Dayton, and Brigham Hall, a corporate institute at Canandaigua, New York, in 1855; the Insane Asylum of North Carolina, at Raleigh, and a department of the Western Pennsylvania Hospital, at Pittsburg, (soon to be transferred to an extensive establishment, and called the Dixmont Hospital for the Insane,) in 1856; the Massachusetts State Lunatic Hospital, at Northampton, and the New York State Asylum for Insane Convicts, at Auburn, in 1858; the Michigan Asylum for the Insane, at Kalamazoo, and a department of the Marshall Infirmary, at Troy, New York, in 1859; the Alabama Hospital for the Insane, at Tuscaloosa, and the Wisconsin State Lunatic Asylum, at Madison, in 1860.

In January, 1860, the Pennsylvania Hospital for the Insane separated the sexes, by placing them in two distinct establishments, about one quarter of a mile apart, but on the same grounds and under the same general medical superintendence. The buildings of the department for males are as large as the original buildings which now constitute the department for females, and were erected and furnished wholly by the contributions of private citizens, most of Philadelphia. This is the first example, in America, of a system for the treatment of the sexes in separate, independent, but united establishments.

A valuable work entitled "A Manual for Attendants in Hospitals for the Insane," by Dr. John Curwen, of the State Lunatic Hospital of Pennsylvania, appeared in 1851; and in 1854 Dr. Thomas S. Kirkbride published a treatise "On the Construction, Organization, and General Arrangements of Hospitals for the Insane," which has become a standard authority.

So far as our knowledge extends, the only hospital which has gone into operation since the commencement of the current decennium is the Iowa State Hospital for the Insane, at Mount Pleasant, which was opened in 1861. A State hospital at Austin, Texas, was begun several years since, and a superintendent appointed, but no intelligence of its opening has reached us.

Inasmuch as the people of all the States have a community of interest in one of the public hospitals above mentioned, it is proper that we should give a more particular account of that institution than of those of a more local character.

The Government Hospital for the Insane was specially intended for the insane of the army, the navy, the revenue cutter service, and the indigent of the District of Columbia. It is situated on the eastern shore of the Potomac river, within the limits of the District of Columbia, and about two miles south of the Capitol, in Washington. The principal building, constructed of brick, is seven hundred and twenty feet in length. Its architectural plan and internal arrangements are among the best which have resulted from the experience and the studies of many able men employed in the specialty. A farm of one hundred and ninety-five acres belongs to the establishment.

The first appropriation by Congress for this institution was made in August, 1852. Dr. Charles H. Nichols was soon afterwards appointed as superintendent, and under his direction and supervision the building was begun in May, 1853. A section of it was completed and opened for the reception of patients in January, 1855. It is now (1862) complete, with the exception of the internal finish of a small section. The aggregate amount of appropriations for the purchase of the farm and the construction of the buildings is \$473,040.

The number of patients on the first of July, in each year since the hospital was opened, was as follows: in 1855, 63; in 1856, 92; in 1857, 110; in 1858, 117; in 1859, 138; in 1860, 167; and in 1861, 180. The number of *persons* treated, prior to the 1st of July, 1861, was 439. Of these 261 were natives of the United States; 169 of foreign countries, and the place of birth of 9 is unknown.

The hospital is under the general supervision of the Department of the Interior. Since it was commenced four different men, representing as many shades

of political opinions, have held the office of secretary, and all of them have manifested an intelligent, liberal, and benevolent interest in the success of the enterprise. In no instance has the department sought to control the patronage of the institution, or in any degree to cripple its usefulness by making it contribute to the especial advantage of the political party in power. Congress has been liberal in its appropriations; and among its members the hospital, in every stage of its progress, has found warm and earnest supporters, whose aid was honorable to themselves and a cause of gratitude in the heart of every American philanthropist. The hospital remains in the charge of Dr. Nichols, under whose supervision it has been wholly created.

Aside from the public institutions, a few private establishments for the treatment of the insane have been opened in the United States in the course of the last forty years. Although some of them which have been discontinued were directed by able and humane men, and several others still in operation are considerably patronized and well conducted by men of high character, yet a consciousness of the undeniable tendency to abuse involved in a purely private pecuniary enterprise of this kind as shown in the history of similar establishments in Europe, has operated to discourage their multiplication and prosperity in this country.

Since the opening of the public institutions nearly all of them have been enlarged, some to the extent of doubling or trebling their original capacity. With few exceptions, chiefly among those most recently founded, the buildings have been undergoing changes of internal architecture and arrangement in conformity with progressive knowledge. They differ very materially in plan, extent, structure, and means and facilities for the prosecution of curative treatment. A large proportion of them will not suffer in comparison with the better class of similar institutions in Great Britain, France, and Germany. It is believed that in executive administration they are governed with prudence, benevolence, and kindness; that their officers are generally earnest laborers, emulous of improvement; and that the unfortunate insane may be committed to them in full confidence of immunity from cruelty or abuse.

Inasmuch as mind can be perceived and studied in its manifestations alone, its essential nature cannot be understood. It is consequently impossible to reduce to a positive demonstration any answer to the proposition whether insanity is really a disease of the mind itself, or merely the effect of corporeal disorder. Much has been written upon the subject, especially by the psychologists of Germany. Among the physicians making insanity a speciality in the United States we know of no one who believes it to be a disease of the spiritual part of our nature. They are unanimous in the opinion that it is the result of corporeal impediments to the free evolutions of the operations of the mind, as irregularity in the movements of a watch may be the effect of some small substance placed among the internal works, and thus preventing the gradual but continual development of the elasticity of the main spring. The watch indicates false time, but the spring is unimpaired. The insane man talks incoherently and fantastically, but his spiritual being is in its normal condition. The fact that a single portion of appropriate medicine has more than once entirely cured a paroxysm of violent mania is, perhaps, of itself a sufficient proof of the truth of this theory; for is it not absurd to suppose that the essential structure of nature of the spirit can be reached and modified by a cathartic?

The causes of mental alienation are various. They have been divided into classes, as the predisposing and the exciting, the remote and the immediate. Some causes are difficult of classification, and the subject in this brief sketch is of but trifling importance.

Among the manifestly remote causes are hereditary predisposition, constitutional organization, and descent from parents nearly allied by consanguinity. Like many other maladies, insanity is disposed to propagate and perpetuate

itself in the line of family descent, and instances are not unfrequent in which several children of an insane parent have become insane. The peculiar organization, whatsoever it may be, which favors an attack of mental alienation, often arises, *de novo*, in one person or more of a family theretofore exempt from the disorder.

The disposition to degeneracy, in some form, in the offspring of marriages of cousins, or others near of kin, has long been known, but comparatively recent investigations in both Europe and the United States, and particularly those of M. Devay, in France, and Dr. Bemiss, of Kentucky, have more fully illustrated the subject and more satisfactorily demonstrated the fact. It is very clearly proven that sterility attends, and that bodily malformation, tubercular consumption, spasmodic diseases, epilepsy, blindness, deafness, idiocy, and insanity follow in the offspring of such marriages much more frequently than in matrimonial alliances between the parties to which there is no traceable affinity by blood. Researches have not hitherto been sufficiently extensive to demonstrate the comparative proportion, but it is sufficient for the purpose of the philosopher, the philanthropist, or the statesman that the predominance of those unfortunate results in the marriages of cousins and other near relatives is placed beyond a reasonable doubt.

The subject has already commanded the attention of the legislatures of some of the States, but no law, so far as we are informed, has as yet been enacted in regard to it.

The prevailing system of education acts, perhaps, as both a remote and an immediate cause of insanity. The early age at which children are placed in school, their confinement often to ill-constructed seats, in imperfectly ventilated rooms, and the burdens which, in the multiplicity of lessons, are thrown upon them, tend to an undue development of the brain, enfeeblement of all the other vital organs, and exhaustion of the nervous power, which is the essence or basis of vitality.

Immunity from these results can be secured only by making general physical development and energy keep pace with mental education. As a general rule, whatever exhausts the power of the brain and nerves, depresses vitality, or debilitates the body, may, through these effects, become the causative agent of insanity. Hence ill health, the intemperate use of spiritous liquors, debauchery, self-abuse, excessive and prolonged labor, either manual or mental, night-watching, or great loss of sleep from any cause, excitement upon religious subjects, domestic and pecuniary difficulties, disappointment and grief, are among the most prolific causes of the disorder. It is a disease of debility, and not of a superabundance of strength, as was in former times generally, and is still, to a wide extent, believed. It is almost unknown among aboriginal races, whose habits and customs promote corporeal development, strength, and vigor, and make no detrimental strain upon the nervous system. It increases with advancing civilization, and abounds to the greatest extent wherever man is most enlightened, because there the artificial habits and customs which call the brain most powerfully into action are the most prevalent.

The treatment of insanity, as pursued at the present day, is properly divided into two parts or systems. One of these might be termed the *direct*, the other the *indirect*, but they are generally called the *medical* and the *moral* treatment. The medical treatment consists in the use of such medicines as in each particular case will be likely to restore the body to a healthy condition. This treatment, as a system, has undergone a radical change within the last fifty—mostly within the last thirty—years. Formerly, based upon the theory that insanity is a disease of strength, or of active inflammation, it chiefly consisted in the liberal employment of blisters, purgatives, cupping, and blood-letting. Now, founded upon the well-supported theory that the disorder originates in debility, its principal

remedies are stimulants and tonics. The success of the present method demonstrates not only the excellence of the practice but the truth of the theory.

The moral treatment includes the exercise of a mild but firm directive and disciplinary power over the actions of the patient, by which he is gradually restored to healthful habits and wholesome self-restraint, and the attempt to win him from the vagaries of his delusions to those mental and manual pursuits which give solidity, strength, and activity to the normal mind. The means adopted for the attainment of these ends, the regular hours of hospital life, appropriate manual labor, walking, riding, athletic and other games, attendance upon religious services, reading and other literary pursuits, lectures upon scientific and miscellaneous subjects, dramas, concerts, balls, and other recreations, entertainments, and amusements. In the method of moral treatment the change has been no less than in that of medical treatment. This change may be comprehended in two brief, generic statements: first, the almost absolute disuse of mechanical appliances for bodily restraint; and, secondly, the introduction of the conveniences, comforts, and to some extent the luxuries that appertain to civilized life, into the apartments of the patients, and to all parts of the hospital establishments where such means will benefit them. This change has been gradual, and the detailed history of its progress would occupy more space than is compatible with our present purpose.

In 1838 Mr. Hill, house surgeon of the Lincoln Lunatic Asylum, England, published a work in which he advanced the following proposition as a principle: "In a properly constructed building, with a sufficient number of suitable attendants, restraint is *never necessary, never justifiable*, and always injurious, in *all cases* of lunacy whatever." This proposition appears to have been founded upon Mr. Hill's experience at the asylum mentioned. At that institution, in 1830, of 92 patients, 54 were placed under mechanical restraint a total of 2,364 times, during an aggregate time of 27,113 hours. The sum of this restraint was diminished in succeeding years until, in 1836, with 115 patients, 12 were thus restrained a total of 39 times, and during an aggregate time of 334 hours; and in March, 1837, all mechanical restraint was abandoned.

The doctrine of Mr. Hill found many advocates and followers in England, but in France, Germany, and the United States it has been almost universally rejected. All men of experience in the specialty are well aware that there are occasional instances in which the true interest and welfare of the patient are best promoted by restraint, *of some kind*, upon the limbs. Even Mr. Hill admits this as a truth; and the great defect, as appeared to us, in the practical working of his principle is that, in order to secure this restraint, the hands of an attendant are substituted for some mechanical appliance. What man, sane or insane, would not be more restive and violent if held by another man than if confined by a leathern muff upon his hands?

While, therefore, the superintendents of American hospitals reject the arbitrary rule of Mr. Hill, they adopt the safer one of employing mechanical restraints only when they are required by the best interests or true welfare of the patient.

If subjected to proper treatment in its early stages, insanity, in a very large proportion of cases, may be cured. Many statistics upon the subject have been published, but in some instances they were collected under conditions so restrictive that they conveyed an erroneous impression.

It may perhaps be safely asserted that, in cases placed under proper treatment within even one year from their origin, from sixty to seventy per cent. are cured. But the earlier the treatment is adopted the greater is the probability of restoration, and a delay of three months is a misfortune, as it is a detriment to the patient.

Of all the cases, both recent and chronic, received at our public institutions, the average of cures is not far from forty per cent. At thirty hospitals in the

United States, in 1859, the number of cases admitted was 4,140, and the number discharged as cured 1,728, equal to 41.7 per cent. Of 57,978 cases received, in a series of years anterior to 1860, at twenty-nine of our hospitals, 24,573 had been discharged cured; this is equal to 42.38 per cent. It must be remembered, however, that in mental alienation, as in other diseases, many patients suffer from relapse, or recurrence of the disorder, and hence, in the reported number of cures last given, there are many instances of two or more cures of the same person. The statistics of our hospitals are still crude, the only thorough analysis hitherto published being that of the cases at the Bloomingdale asylum prior to 1845. By those it appears that, although the *admissions* or *cases* had been 2,308, the number of *persons* was but 1,841. The number admitted twice, each, was 280; thrice, each, 81; four times, each, 33; five times, each, 18; and thus the number diminished until it ends with one patient who was admitted twenty-two times, and discharged cured every time. Of the 1,841 persons, 742, or 40.3 per cent., were cured.

In cases where the disease has existed more than one year, the average of cures varies at different hospitals and in different periods. Some reports state it as below *fifteen*, others as somewhat above *twenty*, per cent. At many institutions no distinction between old and recent cases is made in the reports.

The foregoing facts appeal strongly to the friends of the insane to permit no delay in placing them under curative treatment. They address themselves also, in connexion with the subject of pauper insanity, to the political economist and the legislature. The indigent man becoming insane may, if soon restored, preserve his pecuniary independence; if not restored he becomes a charge for life, to his friends or to the public, generally to the latter.

Of twenty *recent* cases treated and cured at the Western Lunatic Asylum of Virginia, the average period during which they were at the asylum at public cost was 17 weeks and 3 days; the total, \$1,265, and the average cost, \$63 25. Of twenty *chronic* cases at the same institution the average time during which they had been supported from the public treasury was 13 years, 4 months, and 24 days; their total cost, \$41,653, and their average cost, \$2,082 65.

The disparity in expense is great; but the actual sum of pecuniary difference does not wholly appear in the figures. The twenty persons cured had again become producers instead of mere consumers, the twenty persons with chronic insanity still lived at the public expense, and so would continue through life. Similar comparative statements showing like results have been made in the reports of several of our hospitals.

Intemperance has been mentioned as one of the most prolific causes of insanity. It is probably the most productive of all. Hence, whatsoever diminishes intemperance reduces, indirectly, the number of the insane. In connexion with this subject it may be stated that delirium tremens, often a somewhat immediate effect of excessive potations, is not generally included under the term "insanity;" yet persons laboring under that disease are treated in many of our institutions for the insane. But they are out of place, and almost invariably are a detriment to the other patients, and notorious infringers of the rules of the hospital.

For these reasons, among many others, special institutions for inebriates are among the greatest of public needs. The subject has been discussed to some extent for thirty years, and yet but one institution of the kind has been founded. This is near Binghamton, New York.

Insane convicts constitute another class of patients who, for many and mostly obvious reasons, ought not to be received at the ordinary public institutions. The superintendents of many of the hospitals have earnestly protested against the practice, but hitherto with comparatively little effect. New York is the only State which has a hospital specially intended for the class in question.

The laws, both civil and criminal, relating to insanity and the insane are still

imperfect in all the States, perhaps less so in Maine than in any other part of the Union.

So far as relates to the treatment of patients in the public institutions, those of Ohio are well adapted to the attainment of the great ends of the restoration of curable cases and the reduction of the amount of insanity. Still, a general code embracing all the rights, privileges, immunities, necessities, and responsibilities of both the insane and sane, in relation to the disease, is a thing of the future and not of the present.

Table showing the number of insane in the United States and Territories according to the Eighth Census, 1860.

States and Territories.	Insane.		States and Territories.	Insane.	
	Free.	Slave.		Free.	Slave.
Alabama	225	32	North Carolina.....	597	63
Arkansas	82	5	Ohio	2,293	.....
California	456	.....	Oregon	23	.....
Connecticut	281	.....	Pennsylvania	2,766	.....
Delaware.....	60	.....	Rhode Island	288	.....
Florida	20	5	South Carolina	209	18
Georgia.....	447	44	Tennessee.....	612	28
Illinois.....	683	.....	Texas	112	13
Indiana	1,035	.....	Vermont	693	.....
Iowa.....	201	.....	Virginia.....	1,121	58
Kansas.....	10	.....	Wisconsin.....	283	.....
Kentucky	590	33	District of Columbia	204	.....
Louisiana.....	132	37	Dakota .....	.....	.....
Maine.....	704	.....	Nebraska.....	5	.....
Maryland	546	14	New Mexico.....	28	.....
Massachusetts	2,105	.....	Utah	15	.....
Michigan.....	251	.....	Washington	3	.....
Minnesota.....	25	.....		
Mississippi.....	236	36		23,593	406
Missouri.....	750	20			23,593
New Hampshire	506	.....		
New Jersey.....	589	.....		
New York.....	4,317	.....	Total.....		23,999

IDIOTIC.

The number of those unfortunate beings who constitute this class, while numerically greater, has decreased slightly in ratio to the population. As but little has been effected for the elevation of these imbeciles, and as it is conceded that their condition has rendered them, for the most part, incapable of mental improvement, the efforts of humanity have been mainly directed to their personal comfort and physical requirements.

Among the numerous attributed causes of idiocy, none is more generally conceded by those who have investigated the subject, than the intermarriage of near relatives.

The following table represents their number, and their proportion to the free and slave population:

Table showing the number of idiotic in the United States and Territories.

States and Territories.	Idiotic.		Free, one in—	Slave, one in—
	Free.	Slave.		
Alabama	403	134	1,312	3,246
Arkansas	152	24	2,133	4,629
California	42	.....	9,047	.....
Connecticut	226	.....	2,036	.....
Delaware	67	.....	1,648	.....
Florida	52	16	1,513	3,859
Georgia	541	183	1,099	2,525
Illinois	588	.....	2,911	.....
Indiana	907	.....	1,488	.....
Iowa	289	.....	2,335	.....
Kansas	17	.....	6,306	.....
Kentucky	903	155	1,030	1,454
Louisiana	143	104	2,631	3,189
Maine	658	.....	954	.....
Maryland	243	62	2,468	1,406
Massachusetts	712	.....	1,729	.....
Michigan	333	.....	2,249	.....
Minnesota	31	.....	5,608	.....
Mississippi	193	76	1,837	5,745
Missouri	447	63	2,387	1,824
New Hampshire	336	.....	970	.....
New Jersey	365	.....	1,841	.....
New York	2,314	.....	1,677	.....
North Carolina	739	241	895	1,373
Ohio	1,788	.....	1,308	.....
Oregon	15	.....	3,497	.....
Pennsylvania	1,842	.....	1,577	.....
Rhode Island	101	.....	1,728	.....
South Carolina	282	191	1,068	3,325
Tennessee	732	149	1,139	1,850
Texas	164	37	2,571	4,933
Vermont	263	.....	1,198	.....
Virginia	1,065	214	1,037	2,293
Wisconsin	257	.....	3,018	.....
District of Columbia	27	.....	2,662	.....
Dakota	1	.....	4,837	.....
Nebraska	3	.....	9,608	.....
New Mexico	40	.....	2,337	.....
Utah	5	.....	8,048	.....
Washington .....	.....	.....	.....	.....
Totals	17,226	1,579	1,590	2,503
		17,226		
Total		18,865		

In 1850 there were of the free population 14,666 idiotic, or one in 1,366.

In 1850 there were of the slave population 1,040 idiotic, or one in 3,081.

Total free and slave

15,706 idiotic, or one in 1,476.

In 1860 there were total free and slave....

18,865 idiotic, or one in 1,666.

PRODUCTS OF INDUSTRY.

The returns of MANUFACTURES exhibit a most gratifying increase, and present at the same time an imposing view of the magnitude to which this branch of the national industry has attained within the last decennium.

The total value of domestic manufactures, (including fisheries and the products of the mines,) according to the Census of 1850, was \$1,019,106,616. The product of the same branches for the year ending June 1, 1860, as already ascertained in part and carefully estimated for the remainder, will reach an aggregate value of *nineteen hundred millions of dollars* (1,900,000,000.) This result exhibits *an increase of more than eighty-six (86) per centum in ten years!* The growth of this branch of American labor appears, therefore, to have been in much greater ratio than that of the population. Its increase has been 123 per cent. greater than that even of the white population by which it was principally produced. Assuming the total value of manufactures in 1860 to have been as already stated, the product *per capita* was in the proportion of sixty dollars and sixty-one hundredths (\$60 61) for every man, woman, and child in the Union. If to this amount were added the very large aggregate of mechanical productions below the annual value of five hundred dollars—of which no official cognizance is taken—the result would be one of startling magnitude.

The production of the immense aggregate above stated gave employment to about 1,100,000 men and 285,000 women, or one million and three hundred and eighty-five thousand persons. Each of these, on an average, maintained two and a half other individuals, making the whole number of persons supported by manufactures four millions eight hundred and forty-seven thousand and five hundred, (4,847,500,) or nearly one-sixth of the whole population. This was exclusive of the number engaged in the production of many of the raw materials, and of food for the manufacturers; in the distribution of their products, such as merchants, clerks, draymen, mariners, the employes of railroads, expresses, and steamboats; of capitalists, various artistic and professional classes, as well as carpenters, bricklayers, painters, and the members of other mechanical trades not classed as manufacturers. It is safe to assume, then, that one-third of the whole population is supported, directly and indirectly, by manufacturing industry.

These general facts, therefore, plainly indicate that, in point of productive value, and far-reaching industrial influences alone, our manufactures are entitled to a front rank among the great interests of the country. Indeed, the collection and classification of facts relating to the material progress of the people periodically intrusted to the Census Office, furnish in general, valuable milestones in the pathway of the nation's greatness. But among the facts so collected, none are more instructive—none have more numerous or intimate relations to every department of the public economy, to the general welfare of the people, domestic, social, industrial, or moral—than these records of their productive capacities in the automatic and handicraft arts. However uninteresting to many, the details are full of instruction to the statist. As the mountain rill, minute and inappreciable in its source, is constantly swelled by other streams, and goes on widening and deepening in its course until it is swallowed up and loses its identity in the ocean, so these streams of knowledge, pouring in towards a common reservoir from every factory, hamlet, town, and State, appear at length to be merged in one vast and useless aggregate, devoid of either individual, local, or general interest. But the great collection of truths which they serve to swell may bear up the ark of a nation's hopes and confidence. The result may form a subject of national pride and gratulation, and may, like the ocean itself, become impressive to all nations from its grandeur. The mental eye may also follow back each separate stream to its source, and dwell with pleasure and instruction upon

the scenes fertilized, refreshed, and gladdened in its progress. Such emotions of pride and pleasure cannot fail to be generally awakened by the evidences which a just appreciation of the wisdom of Congress has enabled the proper department to accumulate and classify, with greater accuracy and completeness than heretofore, of the progressive development and present stature of this important interest. The subject is grand in its outlines; but contemplated in its pervasive influence upon the welfare of the whole people, the dry and repulsive skeleton of mere facts and figures, presented in the official tables, gradually takes on the form, substance, and habiliments, and becomes animated with something of the life, activity, and beauty of a living economy. The statistics of looms, spindles, and factories, of furnaces and forges, of steam-engines and sewing-machines, and of a thousand other instruments of creative industry, become the representatives of almost every form of national and individual happiness, exertion, aspiration, and power.

The mechanic arts—particularly in our country, where they are most diffused, and all but universal—appear to contribute more directly than any others to the general comfort and improvement of the people. All others are dependent upon them for the principal agents and instruments of their success. They are scarcely more subservient to the primary wants of mankind than to the higher ministrations of taste and refinement. The acquisition and diffusion of knowledge, the means of intercommunication and transportation, the comforts, enjoyments, and security of the fireside, and even the honor and integrity of the nation itself, are dependent upon the skill and enterprise of the manufacturer and the mechanic; but the results of their labors are, from their nature, less obtrusive or obvious to the general apprehension than some others. The annual movements of our immense crops of grain, cotton, and other bulky staples, are easily appreciated. The pulsations of commerce may be counted by a superficial observer, in the arrival and departure of ships, and upon the records of the custom-house and the Exchange; but in the hands of the manufacturer a modicum of crude material undergoes a process of division, transformation, and elaboration, and then silently and unobtrusively disappears—diminished in bulk, but augmented, it may be, many hundredfold in value—in the ordinary channels of distribution, where it is often undistinguished from its foreign rival. It is only when the nation decennially takes its account of stock that any approximate idea is obtained of the value of this item in the general account.

And who can justly estimate the influence upon the general happiness and prosperity—upon the progress in civilization of the sum total of effective labor, capital, and skill represented by such an aggregate as we have stated? What an amount of fixed capital—of labor, enterprise, ingenuity—of resources, material and immaterial—involved in the creation of nearly two thousand millions worth of manufactures in a single year! The addition of nearly one thousand millions to the annual product of domestic manufactures—an amount almost equal to the total home consumption thereof in 1850—implies also vast additions to the permanent wealth of the Union and to the elements of a progressive civilization. The increased support given to agriculture, commerce, and the mining interests by the consumption of hundreds of millions of dollars worth of raw material, and to hundreds of thousands of men, women, and children, who would have been otherwise unemployed, or forced into competition with the farmer and planter, instead of being consumers of their produce, form but a part of the benefits conferred upon the community at large. The independence and security contributed by the large body of intelligent manufacturers and mechanics capable of ministering to every want, whether of supply or defence, cannot be overestimated. As might have been expected from the revelations of the Census, the country has been able to lean with confidence upon this arm of its strength in the trying emergency which has put the nation in armor for the defence of its dearest interests.