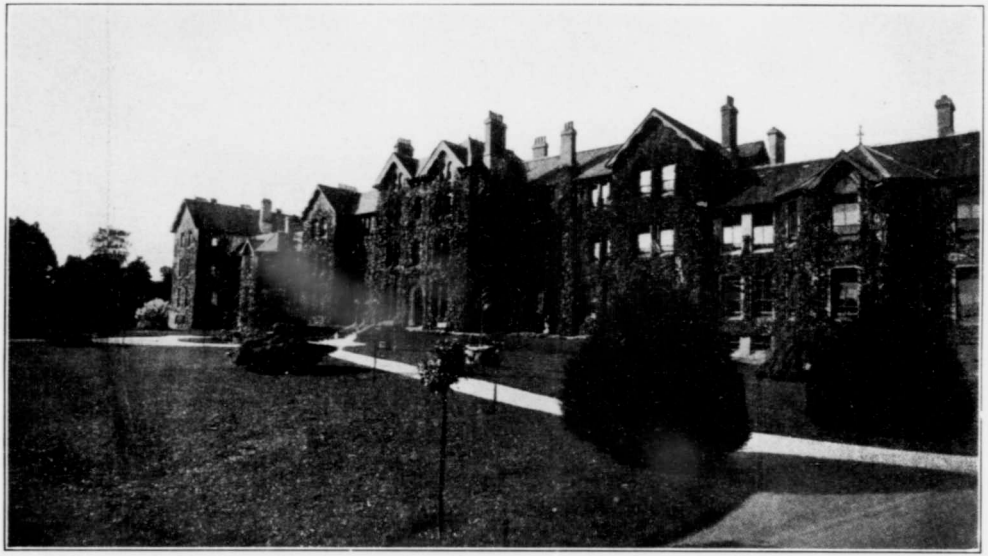
Department of Education, Ontario

ORGANIZATION AND MANAGEMENT OF

Auxiliary Classes

1915



THE TRAINING SCHOOL FOR MENTALLY-DEFECTIVE CHILDREN, STARCROSS, DEVONSHIRE, ENGLAND

DEPARTMENT OF EDUCATION, ONTARIO

EDUCATIONAL PAMPHLETS, No. 7

1915

ORGANIZATION AND MANAGEMENT OF AUXILIARY CLASSES

BY

HELEN MACMURCHY, M.D.

INSPECTOR OF AUXILIARY CLASSES FOR ONTARIO

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

Printed and Published by
L. K. CAMERON, Printer to the King's Most Excellent Majesty
1915

PREFATORY NOTE

THIS Pamphlet is the seventh of a series which the Department of Education publishes from time to time. The other Pamphlets are:

The Montessori Method, 1912;
Industrial, Technical, and Art Education, 1912;
Reports of Visits to Schools in the United States, 1913;
Visual Aids in the Teaching of History, 1913;
List of Reproductions of Works of Art, 1914;
Reports of Visits to Schools in the United States, 1914.

CONTENTS

CHAPTER V

CHAPTER VI

CHAPTER VII

CHAPTER VIII

APPENDIXES

LIST OF ILLUSTRATIONS AND DIAGRAMS

Human nature is a thing to which we can set no limits and which requires to be treated with unbounded hopefulness.

—Sir Arthur Helps

Education can only develop and form, not create. It cannot undertake to form a being into anything other than it was destined to be by the endowments it originally received at the hand of nature.

—Lessing

AUXILIARY CLASSES

CHAPTER I

It is twenty years since the needs of children who for various reasons were unable to profit by the education given in the Elementary Schools began to receive public attention in Ontario. Philanthropic citizens and the relatives and friends of these children, as well as educators who knew what was being done for such children in other countries, had realized the need long before that. Experienced teachers and inspectors who take an interest in the relationship between the school and the community know that there are defective, disabled, and neglected children who are not at school, and from time to time they also find children in school for whom the ordinary class can do little or nothing on account of some mental or physical defect. What becomes of these children?

Those who conduct and supervise the work of Refuges, Orphanages, and other public charities; those who care for the blind, deaf, dumb, and other disabled persons; who try to prevent unemployment, poverty, and pauperism; who relieve the destitute or try to rescue the fallen and reclaim the vicious; and those who, as judges, magistrates, and police authorities, have to do with criminals, find that a large proportion of all those persons (probably at least twenty-five per cent.) on whom the State and private citizens expend enormous sums of money, and who are unprofitable to themselves, their families, and the State, are defective in mind or body, or both.

We are now beginning to put two and two together. It is now being realized by every one that the meaning of these

two situations is the same. The problem of the school-room reappears as the problem of the taxpayer, the magistrate, the gaoler, and the philanthropist. Penal and charitable institutions swallow up about one third of all our revenue. Mentally-defective children become mentally-defective men and women—mentally-defective parents, paupers, criminals. Disabled and handicapped children, unless we take pains to give them the chance which shall enable them to overcome this handicap, may be pauperized and may, perhaps, become degraded men or women.

There are many disabled and physically-defective persons whose personality and character have triumphed over every disadvantage. But, unless when they are under permanent care in a suitable institution, the mentally-defective are never self-supporting; they are always dependent, usually, indeed, far worse.

Teachers who have followed the career of such pupils know this. Investigators who have traced back the history of the ne'er-do-weel, the loafer, the tramp, the pauper, the drunkard, the incendiary, the vicious, and the criminal, have often found that in the elementary schools they were recognized as mentally-defective children.

THE CHILD WHO NEEDS INSTRUCTION IN AN AUXILIARY CLASS

Did the teacher think that it did not matter much about the one boy or girl in the two hundred who could not learn the Multiplication Table, or who could not learn to read? We are beginning to see how much it matters. The career of this one child will probably affect the community more for evil than the career of any one of the other one hundred and ninety-nine children will affect it for good, even from a financial point of view, not to mention the far more important consideration of the degradation and deterioration of the national character.

The child who cannot learn the lessons of school cannot begin to understand the far more important lessons of life. The mentally-defective child, neglected, drifting, tempted, weak, incapable, leaves school soon to re-appear as an object of public charity, continually degenerating, unable to keep from vice and crime.

The school must take its place as the greatest preventive agency against this great menace to society. We must go back to the school with the knowledge we have gained in social service, in public health, in medical science, and say, "This evil you must help us prevent." Teachers and all other public servants, as well as those engaged in social service or philanthropic work of any kind, should understand about mental defect. All who have to do with schools, colleges, universities, churches, hospitals, public health, legislation, the courts, the police, immigration, charities, and the care of infancy and early childhood should realize that our duty to our neighbour includes our duty to posterity. Recent researches have shown that, in about seventy-five per cent. of mental defectives, the cause of that mental defect is hereditary, descending from one or both of the parents, or from their direct ancestors. The Mendelian laws apply to this as definitely as they do to anything else. Hence, while it is our duty to be kind to the mentally-defective, to protect them from wrong, insult, injury, and injustice, to do our very best for them by training, education, and opportunity, we are wronging them if we go on allowing them to become parents, as we have done in the past in Ontario, wronging their miserable children who should never have been born, and wronging our country and the community by entailing on them that heavy burden of expense, and that heavier burden of crime, vice, misery, and degeneracy which mental defectives always cause.

If it is of sufficient importance to the community to record and control outbreaks of contagious disease, such as scarlet fever and measles, surely it is of more importance to the com-

munity to record and control mental defect, now that we know it is transmitted and is a far more important cause of expense, trouble, and inefficiency than scarlet fever and measles put together.

PERMANENT CARE NECESSARY

The protection and care of all mental defectives must be continued as long as it is necessary for their own good and for the good of the community; that is, during the whole course of their lives. In order that this protection and care may be given, the first step is to ascertain, with due regard to family rights and affection, who and where the mentally-defective are. This information may be and should be obtained through the schools.

THE SCHOOL CENSUS

The powers conferred upon the school authorities by The Education Act, The Compulsory Education Act, and The Auxiliary Classes Act, enable them to make a complete register of all the children of school age under their jurisdiction, including all children who may be unable to reach the school or to benefit by the instruction given in the ordinary classes.

THE OPINION OF THE TEACHING PROFESSION

Many teachers would say at once that the mentally-defective condition of one or more of the pupils they have taught in former years was perfectly obvious to them. But what could be done for such children? Every one says, "Something ought to be done." The Auxiliary Classes Act now enables us to do something.

The teachers themselves have had no small share in bringing about this legislation. The following letter, dated December 9th, 1905, was written by a teacher in the Toronto Public Schools:

It just occurred to me to speak to you of the Feeble-minded. In my work of teaching here I have several times come in contact

with feeble-minded children, and I invariably found they were clever mechanically—well, as clever as the other children, and sometimes more so. They can draw easily and write, and do anything in the cutting line. I remember one child who could not speak so that a stranger could understand him, and could not read a line or spell a word, though he was twelve years old; but he could copy a head-line splendidly, and do the drawing better than any of the other pupils.

Do you not think that these children should be taken from the regular classes in the Public Schools, where they are only a drag, and where they feel their incapacity most keenly, and given special instruction along mechanical lines, so that they might develop and enter into a larger life through what might be said to be the only possible door of entrance for them?

The late Inspector Fotheringham of South York wrote in 1905:

I come across not a few children lacking mentally as I go my rounds through York County. One, sometimes two in a school—but not in all schools. Without keeping a record, I should say one in ten schools. That would be about four per thousand. If I guess at that, then there will be about forty or fifty in York County. I am inclined to think that the number of such is increasing, but I have no exact data. I greatly wish something could be done to provide suitable training for such unfortunates. They get little good in school—sit moping and brooding over what little they know, but learn very little.

FINANCIAL CONSIDERATIONS

The establishment of Auxiliary Classes means expenditure of public funds, but it really comes under the head of irreducible public expenditure. Unless cared for permanently in a suitable institution of the Farm Colony type, where they are partly self-supporting, the mentally-defective are always maintained at the public expense, or by private benevolence.

Residential Training Schools such as are sanctioned by The Auxiliary Classes Act are well adapted for the care of those whose relatives are able to pay all the expenses of such

training. The fees thus properly available would be a source of income to the School. A number of children of this class have been sent to Training Schools in the United States because there was no such School in Ontario. Besides, there are many mentally-defective children who, if they are properly trained at an early age, can, after the age of fourteen, earn more or less by their work in a Training School or Colony, and thus help to pay their way.

Neglecting the question, and letting the mentally-defective multiply, means an appalling expense for public charities and penal institutions alone. The only way to reduce this enormous expenditure is to begin at the beginning and not allow mental defectives to drift into drunkenness, pauperism, vice, and crime. They need to be cared for. They cannot stand alone. They inevitably succumb to temptation. But care for them, prevent these expensive evils, and the cost will be reduced.

THE MENTALLY-DEFECTIVE ARE MAINTAINED AT THE PUBLIC EXPENSE

The mentally-defective who have thus far come to the notice of the authorities in Ontario are being maintained now, in almost every case, at the public expense.

In the first census of the Feeble-minded, September 30th, 1906, 1,505 persons were enumerated, and of these 1,094 were adults, and 411 were children. Of the 1,094 not one was self-supporting, and over 1,000 were supported by public charity. Most of the remaining 94, so far as is known, have become the objects of public charity since. Of the 411 children, one was the daughter of a well-to-do farmer, two others the sons of lawyers, one the daughter of a physician, one the daughter of an artisan earning very good wages, one the son of a house painter, one the son of a church officer, two the sons of merchants, one the son of a small farmer, one the son of a

business man, one the daughter of a clergyman—twelve in all. Almost without exception the rest were the children of labourers, mechanics, artisans, small shopkeepers, teamsters, and others who were unable to pay anything at all for the care and education of the defective child. Indeed, it was only by care, good management, and self-sacrifice that they were able to feed and clothe their normal children.

MENTAL DEFECTIVES IN THE HOME

So much as to the question of public expenditure. What about the influence of the mentally-defective on family life and interests?

In a great many of the cases above referred to, the family and friends made application for the admission of the mentally-defective child or adult to some institution where he would be properly cared for, being usually driven to this course because they and their neighbours could not longer endure their affliction. The presence of the feeble-minded makes normal and happy family life impossible. As a result families are often broken up or reduced to pauperism, and the older the feeble-minded person grows the greater the danger and the burden become.

"I have no home," said the affectionate and devoted father of a feeble-minded girl. It was true. She had ruined the home. Families find it out after having spent twenty or thirty years trying to keep the feeble-minded child in the home. "Our lives have been ruined," they say. They will all tell you then what a mistake it has been—how it has cut them off from social pleasures and from the higher relationships of life. Any one who is placed in the same position should take warning and make use of the experience of others who have bought that experience so dearly.

It is only too evident in such cases that the defectives must be cared for during their lives and prevented from becoming

parents. Where the family are unable to do this at home (and it means the loss of proper family life and happiness to attempt to care for a mental defective in an ordinary home), then the community must be protected from the feeble-minded and the feeble-minded must be protected from many in the community who would lead them into evil ways.

THE NUMBER OF MENTAL DEFECTIVES IN ONTARIO

In comparison with older countries Ontario probably has few mental defectives. This gives us a great opportunity. We should prevent any increase in the number by every means in our power. Taking our population as 2,500,000, and having regard to the information available in Ontario, and the statistics published by the Royal Commission in Great Britain, as well as to American statistics, it would seem probable that at least one in every four or five hundred of our population, or a total of five thousand, is more or less mentally defective. There is no doubt that the number of mental defectives in Ontario is increased by our large immigration, which for this reason alone requires much more careful supervision.

In England, it is thought that about one in every two hundred and fifty of the population is mentally defective. In the State of New Jersey and other States, it has been estimated that the proportion of mentally-defective persons to the total population is about one in every three hundred.

EFFORTS FOR THE BENEFIT OF MENTAL DEFECTIVES

Efforts have already been made in Ontario not only to care for the mental defectives but also to obtain accurate information as to the number of such children in our schools. A brief account of some of these efforts will now be given.

THE ORILLIA HOSPITAL FOR THE FEEBLE-MINDED

Immediately after Confederation, in 1867, the Hospital for the Feeble-Minded at Orillia was set apart for the mental defectives. This Institution has been of inestimable importance and benefit to the Province, and in recent years it has admitted, trained, and cared for a number of higher grade mental defectives. It is intended to enlarge this Institution and increase its usefulness.

FIRST ANNUAL REPORT ON THE FEEBLE-MINDED IN ONTARIO, 1906

The Hon. W. J. Hanna, Provincial Secretary, in 1905 had his attention directed to the care of the feeble-minded as a question of great importance to the Province and to the municipalities, and ordered a Special Report and Census to be prepared. This Report was completed September 30th, 1906, and published by order of the Legislature, being the first of a series of Annual Reports on the subject. This preliminary and incomplete inquiry of 1905-6 recorded 1,505 mental defectives, 411 of whom were children.

THE INDUSTRIAL SCHOOLS

The Provincial Secretary also ordered a Report to be made in 1912 of the mental capacity of all the pupils in the Victoria and Alexandra Industrial Schools. At the Victoria School there were two hundred and ninety-one boys in residence, one hundred and twenty-five of whom belonged to Toronto and one hundred and sixty-six to other municipalities in the Province. Of these two hundred and two might be regarded as normal. Among the other eighty-nine, about twenty-nine might be temporarily classified as border-line cases, and should be re-examined before any definite statement is made as to their mental capacity, especially as some of them were

very young children. The remaining sixty are definitely feeble-minded, and unable to care for themselves. The mental age of a number of these was found to be from four to seven years (imbeciles), and there were some whose mental age is still lower, about two years (idiots).

At the Alexandra School one hundred girls were found in residence. Thirty-eight of them belonged to Toronto, and sixty-two to other municipalities in Ontario. Of these fifty-four might be regarded as normal, twenty-two should be re-examined and might be temporarily classified as border-line cases, and the remaining twenty-four were mentally defective.

These facts, and the attention given to this question by the Government and the people of Ontario, have caused it to be generally known that the recognition of mental defect is largely an educational problem, that the proper care and training of mental defectives is necessary, not only in their own interests but in the interests of the whole community, that if this training is to be useful it must begin at an early age, and that although there are not many mentally-defective children in our schools, there are more than most of us think, and they are unhappy and untrained, as well as a serious hindrance to the other children and the teachers.

THE NATURAL INCREASE OF MENTAL DEFECTIVES

The success of Auxiliary or Special Classes and Schools, and especially of Residential Country Schools and Farm Colonies in Great Britain and the United States has had a marked effect on public opinion in Ontario. People now realize that feeble-minded children often inherit mental defect from some immediate ancestor, and that unless they are permanently cared for they become a curse to the community. The fact of the rapid natural increase of mental defectives is also well known in Ontario. There is, for example, in one of the

Juvenile Courts of Ontario, a record of a feeble-minded man and a feeble-minded woman who are the parents of twelve children. The brother of the man acknowledges that all these children are feeble-minded, and this is confirmed by the reports of the school authorities. These parents were both born in Ontario and attended a Public School in —— County.

THE SPECIAL CLASSES ACT, 1911

On March 10th, 1911, the Honourable Dr. Pyne, Minister of Education, introduced "An Act respecting Special Classes," which was passed on March 20th, 1911. This Act gave power to the Board of Education or Board of Public School Trustees or Separate School Trustees in any city to cause a register to be made of all children who are backward or abnormally slow in learning, or who from physical or mental causes require special training and education. It also made provision for their admission to such classes and for the course of study needed, and the inspection and apportionment of grants.

THE NATIONAL COUNCIL OF WOMEN AND OTHER ASSOCIATIONS

Meantime private individuals and public associations had been taking action. In 1897 Dr. Rosebrugh addressed a letter on the subject of the problem of the feeble-minded to the Annual Meeting of the National Council of Women, then in session at Halifax. A Committee on the Feeble-minded was accordingly appointed, which has been continued every year since as a standing committee. The National Council has done much to educate public opinion in Ontario, especially since 1903, when a large deputation, organized by the Council, waited on the Provincial Government.

Teachers' Associations, Young Men's Christian Associations, the Canadian Clubs, the University Women's Club, the Women's Institutes of Ontario, several City Councils, and

other public bodies have considered the subject, and passed resolutions asking for legislation.

THE PROVINCIAL ASSOCIATION FOR THE CARE OF THE FEEBLE-MINDED

The organization of the Provincial Association for the care of the Feeble-minded on November 8th, 1912, marked a new era in Ontario. Representatives from Brantford, Chatham, Guelph, Hamilton, Kingston, London, Lindsay, Niagara Falls, Ottawa, Peterborough, Whitby, and other municipalities, were present by invitation of the City Council of Toronto and assisted in the formation of the Association.

THE TORONTO PUBLIC SCHOOLS

In an investigation undertaken in 1910 by order of the Toronto Board of Education there were reported for examination by the teachers of fifty schools, one hundred and seventeen children who were very backward. The number of children from each grade and their average age as compared with the average age of the normal children in the regular classes were as follows:

	Average Age of Normal Children	Average Age of Backward Children	No. of Backward Children in each Class
Kindergarten....	5.5	8.6	8
Junior I.....	7.6	9.7	48
Senior I.....	8.8	11.7	18
Junior II.....	9.8	11.2	18
Senior II.....	10.5	13.5	13
Junior III.....	11.5	14.0	5
Senior III.....	12.5	13.8	6
Junior IV.....	12.9	20.0	1
			117

Nearly all the children and their parents and guardians were interviewed. Only one parent declined to have his child examined; three children had moved away and could not be found; three had gone to work; and ten were absent from school on account of contagious diseases and could not be examined—seventeen in all. Of the remaining one hundred nearly all needed some medical attention. Mentally-defective and very backward children have usually about three times as many physical defects as normal children have. Forty-five of the children were suffering from adenoids, and the sight of thirty-nine was so poor that it seriously interfered with their educational progress. Speech was deficient in twenty. Twelve had very defective hearing, but were not mentally defective.

If there were twelve deaf or semi-deaf children among the one hundred and seventeen who were reported as possibly mentally defective, what was the total number of deaf or semi-deaf children in the schools? Auxiliary Classes for deaf children are urgently required.

Ten children were backward only on account of long and frequent illness of an infectious character. Thirteen were backward on account of illness not of an infectious character; five from parental neglect; and five from too frequent changes of teachers and schools.

These five children were normal but greatly needed stimulus and efficient oversight. Of the one hundred examined three were too young to be definitely classified and it was advised that every assistance should be given to them, and that, in the meantime, they should be regarded as normal. Two others had good abilities, but their school history had been unfortunate. Forty-three urgently needed special instruction in Auxiliary Classes, but were probably normal children. Fifty-two were mental defectives.

Three recommendations were made in this Report:

First—That a specially qualified "Visiting Teacher" be appointed on the staff in one or more of the schools, whose duty it should be to make a special study of retarded pupils, visiting their homes and otherwise helping them, in order to enable them if possible to regain their school standing.

Second—That Special Classes be established in different parts of the city.

Third—That special consideration be given to individual cases referred to in the Report.

As a result two Special Classes were opened by the Board on September 19th, 1910.

In 1912 a Special Committee appointed by the Board to report *re* mentally-defective children, stated: "That thirty-two children at present in attendance at the schools are so defective mentally that they should not be allowed to attend any of the regular classes, and that 120 other children in attendance should be in small special classes."

In January, 1914, the Chief Inspector, R. H. Cowley, presented a Special Report on *Mentally-defective Pupils in the Public Schools of Toronto,* in which he stated that there are apparently between two hundred and fifty and three hundred mentally-defective pupils in these schools.

OTHER INVESTIGATIONS

Other special investigations have been undertaken in Hamilton, Brantford, and Ottawa at the request of the Boards of Education and other authorities.

In September, 1911, the Supervising Principal of the Public Schools at Fort William, having observed some pupils in the same class year after year, advised the opening of a Special Class for them. This class was accordingly opened.

In Hamilton, in September, 1911, a Special Class was established for the benefit of a number of pupils, some of

whom were mentally defective, and others normal, but suffering from severe deafness, or some serious defect in speech or sight.

THE JUVENILE COURT AND THE SOCIAL SERVICE PSYCHOLOGICAL CLINIC

Public School teachers in Charitable Institutions almost always find among their pupils a larger number of mental defectives than are found in other classes of the same grade. In large cities the Managers of Orphanages and the Judges of Juvenile Courts find it necessary to have some place where, under expert medical advice, a private examination can be made as to the mental capacity of children who are brought before the Courts, or who, on account of their mental defectiveness, can neither remain as inmates of an Orphanage, nor can they be sent out, even if any one were willing to take them, as apprentices, or as adopted children. Such an examination is often made by a specially trained physician or psychologist, acting as adviser to the Judge of the Juvenile Court.

In Toronto, on April 8th, 1914, a Social Service Clinic was opened for this work under the direction of Dr. Charles K. Clarke, in connection with the Social Service Department of the Toronto General Hospital, and upwards of one hundred children and adults have already been referred to it.

The Children's Court, or Juvenile Court, of Toronto, has records of a large number of mentally-defective children, including, in the opinion of the late Commissioner Starr, about eighteen per cent. of the total number.

THE OFFICIAL GUARDIAN

Those in official positions are frequently confronted with the problem of the care of the feeble-minded. For example, the Official Guardian, Mr. Harcourt, always has some under

his care. In 1911, a farmer in Ontario died intestate leaving a family whose ages varied from thirteen years to three years, the youngest being twins. This man had married a feeble-minded woman, and the children were all reported as being somewhat feeble-minded. Their property was being dissipated and the Official Guardian was asked to interfere.

THE DISTRICT OFFICERS OF HEALTH

The new District Officers of Health in Ontario, who were appointed in 1912, had their attention directed to this subject. One of them reported, a few weeks after entering upon his duties, that he had found mental defectives in eight different localities within his district.

THE DIAGNOSIS OF MENTAL DEFECTIVENESS

It now remains to make some attempt to indicate what is meant by a mentally-defective child.

The most important elements in the diagnosis of mental defect are, in the case of the general public, time and opportunity, and in the case of a physician or psychologist, much experience and special professional training. Children and grown persons make an impression on the minds of all who are constantly associated with them, and where the general verdict is that a boy or girl is "simple," "wanting," or "not quite right," that verdict is usually correct. This is also true of a similar opinion expressed by a kindly disposed teacher. It is necessary, however, to beware of teachers who lack proper qualifications, and of thoughtless persons who start rumours, and, of course, the responsibility of the final diagnosis of mental defect should rest with a physician.

There is reason to believe that, in the ordinary class, about one quarter of the time of the teacher is taken up with efforts on behalf of the pupils who cannot profit by the instruction

given. No argument is needed to prove that this is a loss to the normal children. Backward pupils need special consideration and training, which cannot be given in a large class. While a certain proportion are backward on account of illness or some physical defect, there can be no question that the most important cause of backwardness in school children is mental defect.

"The diagnosis of the high-grade feeble-minded is, at the same time, the most important and most difficult of all. It is the high-grade feeble-minded who constitute the majority; it is the high-grade feeble-minded that we must learn to recognize in the schools where they are confounded with normals; it is they who cause the greatest difficulty in the work of education." —*Binet.*

In rare instances teachers have hinted without sufficient reason that "disciplinary cases," or other troublesome pupils, must be mentally defective. This is very often a great wrong to the child. The ordinary "bad" boy or girl, who is merely troublesome, is more likely to be above than below the average of the class in mentality. It is, of course, quite a different matter when children are found sadly lacking, for example, in a sense of decency, as compared with others of the same age. Some children are naturally slow, and others are naturally dull or so shy that in early childhood they can scarcely make good their place with others of their age. Usually it may be said of such children that they "come honestly" by their characteristics. Usually also their mental power is good enough, but the mental field is hard to work. It must never be forgotten that the normal nervous reflex in all children is slow. It takes a good deal longer for the afferent and the efferent nervous impulses to pass in and out, to and from the central nervous system in children than it does in adults, and the lightning-like, automatic response to a question or command is obtained only after long practice. Many children

also are easily frightened and some become so terrified that they temporarily lose the power of thought or speech. They pull down the blinds of the mind, nobody can see in. Others are paralysed by mistaken treatment, such as sarcasm. A sympathetic study of all the circumstances at home and at school, and the friendly treatment of the child will set all this right, and therefore great latitude must be allowed to the teacher of Auxiliary Classes, and to the Visiting Teacher, whose special work requires simple and roundabout methods. She should be allowed her own way as far as possible. Often she needs to have the child all to herself.

We should never consider the question of any child being mentally defective until, first, every other possible reason for backwardness has been considered and eliminated, and until, second, we have absolute evidence of such mental defect. Perhaps the child "has not got a good start" in school. He may, to use the common phrase, "have got in wrong" with somebody or something, or he may be suffering from some serious misapprehension, which he is unable to state in words or bring to the notice of those who could and would help him; and the trouble the teacher has is probably nothing to the disappointment felt at home, or to the mental agony of the child who somehow "is not getting on like the other children."

Intelligence is "a general capacity of an individual consciously to adjust his thinking to new requirements: it is general mental adaptability to new problems and conditions of life." Sometimes children who are not lacking in intelligence cannot, as it were, "lay their hands on it." They cannot get their minds into action until some terror or dread is removed and the teacher saves them from themselves.

BACKWARD CHILDREN

In the case of children who may be backward it is a matter of great urgency that every effort should be made by

the teacher and the School Medical Inspector to discover, and if possible, remove or lessen the cause of such backwardness. If any physical defect or any disease is reported, the School Medical Inspector, the School Nurse, teacher, and family should co-operate to secure treatment by the family physician or other proper person. The backwardness may be due to defects of sight or hearing which can be partly or wholly cured. Adenoid growths in the nose and throat, word-blindness or letter-blindness and lack of proper sleep and nutrition are also causes of backwardness. Flat foot, curvature of the spine, and slight chorea often escape notice in children who are otherwise defective. They need every improvement we can secure for them.

The help of the School Nurse is invaluable in Auxiliary Classes. The attention of the School Nurse and School Doctor should always be drawn to any child who seems to be in need of special care and attention. Parents and teachers have often omitted to do this because they "thought the doctor could not do anything." Nearly always this is a mistake. Many physical defects can be greatly improved or even removed. One rare condition (cretinism) which prevents proper development of mind and body can be wonderfully improved by treatment.

ADMISSION TO AUXILIARY CLASSES

The teacher should pay special attention to any child whose age is two or three years above the average age of the rest of the pupils, and should privately consult the School Medical Inspector before nominating the child to the Principal for admission to an Auxiliary Class. Opportunity should also be taken by the School Medical Inspector to see the parents. They may be invited by the School Nurse to meet him at the school at a convenient time. The parents should be consulted in every possible way and treated with the greatest

consideration, but they should be frankly told that the child is not getting on well at school, and that without special help and teaching in an Auxiliary Class he will get farther and farther behind. If there is any reasonable ground for doubt as to the needs and mental condition of the child, then a physician who is a specialist in such matters should be called in. But at the first meeting with the parents it is not well to make any dogmatic statement as to the child's mental capacity, unless the case is a very marked one. The child should have the advantage of Auxiliary Class teaching for a reasonable time, say three or six months, and should then be re-examined. Moreover, any statement as to the child's mental condition should be made by a physician, not by the teacher.

FORMS AND RECORDS

Blank forms for making records of such examinations and interviews and of applications for admission should be filled out by the teacher and the School Medical Inspector. It is important to have these forms as simple and practical as possible. Careful records of each child's work in the Auxiliary Classes must be kept, and each child should be re-examined by an expert every six months, to ascertain what progress has been made, and whether the child is correctly placed and being taught to the best advantage. The following is a simple outline of the information which it is advisable to have in every case:

Home Record:

1. Heredity.
2. Age of child; when he walked, talked, etc.
3. History of any illness.
4. Address, house, social history.
5. Character of child, habits, disposition.

School Record:

1. Age, classes, school work, what he can do.
2. Relation to other children.
3. Conduct and behaviour.
4. Habits and disposition.
5. Intelligence.
6. Interests, memory, ability to learn.

Physical and Medical Examination:

1. General health and appearance, height, weight, condition of eyes, ears, throat, and nose.

Mental or Psychological Examination:

Somewhat more detailed form, specially prepared.

Mentally-defective children may be of so low a grade mentally that any one can see at a glance they belong to the class formerly called idiots, or imbeciles, or they may be of so high a grade that they appear normal until we try to teach them in school. Then we discover that what a normal child readily masters they cannot learn. The limit of their mental age may be ten or twelve—but they cannot climb the ladder any higher.

THE FUTURE OF THE MENTALLY DEFECTIVE

Perhaps the best way to describe the difference between a normal child and a mentally-defective child is to say that the normal child will, when grown up, be independent and able to care for himself, to make a home, or help to make a home, and to carry on work without continual direction and supervision. This the feeble-minded child cannot do. Mental defectives never grow up. They are always dependent. Even their own parents recognize this, though naturally one does not press them to say it in words. But discuss with them sympathetically the future of the feeble-minded child, and they at once acknowledge that "Somebody must always look

out for John." This is what must be done for the feeble-minded. The community must provide a permanent home for them where the best may be made of them, where they may be trained to good and useful work and so be made happy and at least partly self-supporting, where no one is allowed to tempt, tease, or wrong them, and where some wise and kind person will always know where they are and what they are doing. One of the greatest advantages of this plan is that mental defectives so cared for would have no posterity.

THE BEST TIME FOR TRAINING

The earlier these children are taken into Auxiliary Classes the more can be done for them, and the more can be done by them. When they are in their teens much more can be done for them than when they are over twenty, but the best time for training is before they enter their teens. Numerous investigations by experts have shown that the mental age of nearly all the feeble-minded is less than twelve years. They age early, sometimes appearing to be sixty years old when they are less than forty.

The higher faculties are the last to develop. Parents and friends express this in speaking of their normal children by saying that they hope the boy or girl of thirteen years, for example, will soon "get more sense." Normal children do so, but the mental defective never does "get more sense." The higher faculties never develop at all, or only in a childish or rudimentary form. It is characteristic of the mental defectives that they lack judgment, foresight, understanding, self-control, regard to the future, and the capacity to adjust themselves successfully to the social and economic conditions of their environment.

DEFINITIONS

The Mental Deficiency Act gives legal definitions of the different grades of mental defect as follows:

1. Idiots: That is to say, persons so deeply defective in mind from birth or from an early age as to be unable to guard themselves against common physical dangers.

2. Imbeciles: That is to say, persons in whose case there exists from birth or from an early age mental defectiveness not amounting to idiocy, yet so pronounced that they are incapable of managing themselves or their affairs, or, in the case of children, of being taught to do so.

3. Feeble-minded persons: That is to say, persons in whose case there exists from birth or from an early age mental defectiveness not amounting to imbecility, yet so pronounced that they require care, supervision, and control for their own protection or for the protection of others, or, in the case of children, that they by reason of such defectiveness appear to be permanently incapable of receiving proper benefit from the instruction in ordinary schools.

4. Moral imbeciles: That is to say, persons who from an early age display some permanent mental defect, coupled with strong vicious or criminal propensities on which punishment has had little or no deterrent effect.

Moral imbeciles are sometimes recognized as such in school, but frequently their defects are more evident in later life. Their vanity, lack of affection, anxiety to attract attention, and desire to display the little they know, as well as the absence of moral sense, are characteristic. They usually do well in institutions and should always be under permanent care; otherwise they are a great danger to the community.

There are mental defectives who appear to be normal. Sometimes they talk long and well. Even expert judgment in such cases must be delayed sometimes for a year. In the end the question that must be answered is, "Can he or she take the place of a normal man or woman in the community?" With a helping and directing hand high-grade mental defectives can stand, but the moment that hand is withdrawn and

they have to stand upon their own feet, the first temptation, however childish, or the first situation, however simple, where judgment is required, proves too much for them, and they fall into vice or crime.

CLASSIFICATION

The following table shows the industrial work which different grades of the mentally-defective can perform. The term "Mental Age" indicates the mental capacity of the individual. Thus, "Mental age, 10 years," means that the mental capacity is equal to that of a normal child of ten years of age.

Mental Age	Industrial Classification		
Under 1 year...	(a) Helpless, (b) Can walk. (c) With voluntary regard ..	Low	Idiot
1 year	Feeds self. Eats everything..	Middle ...	
2 years	Eats discriminatingly	High	
3 years	No work. Plays a little.....	Low	Imbecile
4 years	Tries to help.....	Low	
5 years	Only simplest tasks	Middle ...	
6 years	Tasks of short duration. Washes dishes	High	
7 years.....	Little errands in the house. Dusts	High	
8 years	Errands. Light work. Makes beds	Low	Moron
9 years	Heavier work. Scrubs, mends, lays bricks, cares for bathroom	Low	
10 years	Good institution helpers. Routine work	Middle ...	
11 years	Fairly complicated work with only occasional oversight..	High	
12 years	Uses machinery. Can care for animals. No supervision. Cannot plan	High	

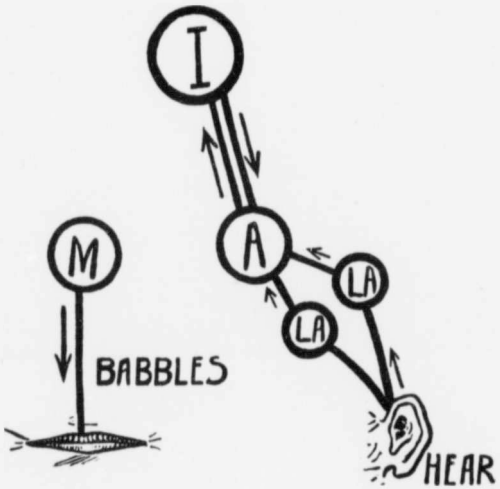
MENTAL DEFECT VS. INSANITY

There is a great difference between mental defectives and insane persons. Mentally-defective persons never had normal mental powers, even in infancy or childhood. Insane persons once had normal mental powers, but on account of some mental disease, or illness, or other cause, these powers have become impaired. Mental defectives may become insane.

CONCLUSION

Finally, it is evident that those, who on account of mental defect cannot (on attaining the age of twenty-one years, or at any subsequent age) perform the duties of citizens, should be trained and educated accordingly. They should be afforded special protection and training by the community. But the community should also be protected from the expense, immorality, crime, and national degeneration caused by them and by the posterity they bring into the world unless they are under permanent and proper care.

It is equally evident that as a matter of justice and national welfare children who are capable of any degree of education and training should receive the education and training best fitted for them even though special classes and special instruction may be necessary in order to secure this.



SPEECH CENTRES IN CHILD FIFTEEN MONTHS OLD

—*C. J. Thomas*

(A) Auditory word-centre

(M) Motor speech-centre

(I) The group of memories associated with any particular word revived and forming the idea which the word represents

(LA) (LA). Lower hearing centres

AUXILIARY CLASSES FOR CHILDREN WHO ARE PHYSICALLY-DEFECTIVE

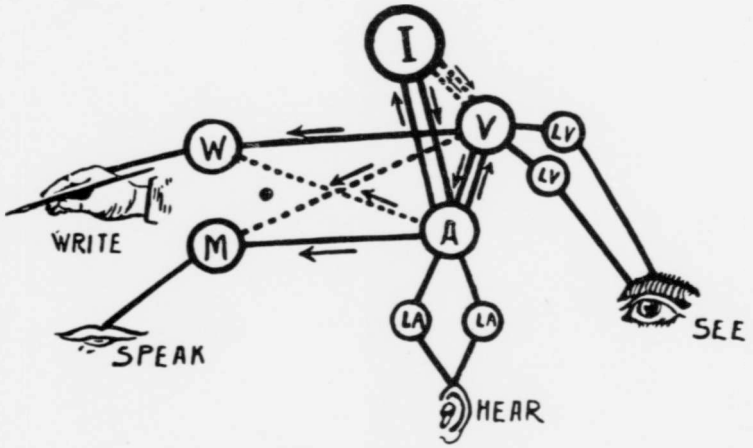
CHAPTER II

WORD-DEAFNESS AND WORD-BLINDNESS

CHILDREN who have great difficulty in learning to read and spell may be suffering from some form of word-deafness or word-blindness (alexia). The knowledge we now possess of the localization of brain functions has enabled us to understand more about the difficulties of children. Word-deafness is rare, but word-blindness is not infrequent. It is stated that about one in every 2,000 of the children attending the Elementary Schools in London, England, is word-blind. Such a child has normal vision, but is unable to interpret written or printed language, or interprets it with great difficulty. He looks at the printed word "cat," for example, and sees the black marks made by printer's ink, and nothing more. He cannot learn to read the word.

LEARNING TO READ AND WRITE

What happens when we learn to read? Medical study and research have gained some knowledge of the localization of brain functions. We have learned that a definite part (centre) of the brain regulates the movement of the lips and other parts of our articulatory apparatus; that another centre enables us to recognize words when we see them; and that a third centre enables us to recognize words when we hear them; and so on. In other words, normal persons who can



CENTRES OF NORMAL SPEECH

(A). Auditory word-centre (V). Visual word-centre (M). Motor speech-centre (W). Writing centre (I) The group of memories associated with any particular word revived and forming the idea which the word represents (LA) (LA). Lower hearing centres (LV) (LV) Lower visual centres.—*Bramwell Thomas*

read have four special places in the cortex of the brain which are known as speech-centres, or word-centres, as shown in the accompanying diagram. These are the Auditory speech-centre, the Visual speech-centre, the Motor speech-centre, and the Writing-centre. These centres are on the left side of the brain in right-handed persons, and on the right side of the brain in left-handed persons. If the centres on the left side of the brain are destroyed by disease or accident it is probable that those on the opposite side of the brain are organized and brought into use, being gradually educated, as it were, to take the place of the damaged centres; and it is often noticed that the patient, though unable to speak for some little time, gradually acquires again the power of speech, but does not speak as well as before. These centres are closely connected or associated so that they may be said to work together. When a normal child, for example, hears the teacher say "cat," says the word "cat" himself, and looks at the black marks which the teacher tells him mean "cat," he uses first of all his auditory speech-centre and motor speech-centre, the latter being controlled or set in action by the former. He has heard the sound of "cat" before, he knows it again (auditory speech-centre), and he knows what animal is denoted by that sound, that is, he thinks of the furry, mewing, moving pussy (the idea which the word represents). He remembers how to say the word aloud, and says it (motor speech-centre). The auditory speech-centre is the first to be organized; usually it is the chief speech-centre, though there are some people who remember a word better by looking at it than by hearing it.

The child now takes another step. He learns from the teacher that the black marks on the page of his book also denote "cat," and with no small effort he makes and stores away the first word memory in his visual speech-centre. That is, he has begun to organize that centre, and by some mysteri-

ous and wonderful means the auditory word-memory, the motor word-memory, and the visual word-memory are all joined and associated not only with each other, but with the whole group of memories and the connected knowledge about a cat that he has, thus laying a foundation which is destined to have more information and ideas built upon it or connected with it in his future life. Finally the teacher goes on helping him to develop his visual speech-centre and writing-centre by showing him how to make these black marks or somewhat similar ones, with writing materials, and how to hold his pencil, and move his fingers. If this is the first word he has written, it will be the first word-memory in the writing-centre, and thus the organization and association of that centre will also be begun, under the direction and control of the visual speech-centre, and in association with the other speech-centres.

WORD-BLINDNESS

To return to the child who is word-blind. His auditory speech-centre is all right. He hears the word "cat" and knows what it means. He has the idea. He can say the word himself, for his motor speech-centre is all right, but when the teacher tries to get him to understand about certain black marks on the book or black-board meaning "cat," he tries to use his visual speech-centre and cannot. It is imperfect and will not work. He cannot make a word-memory of "cat" in it, or more likely, because all children find this an easy word, he can make a poor sort of word-memory for "cat," but not for other words. It is therefore very difficult to teach him to read, write, and spell, and this is a serious matter, since reading, writing, and spelling are indispensable in modern life, and rightly occupy a great deal of time in primary school work.

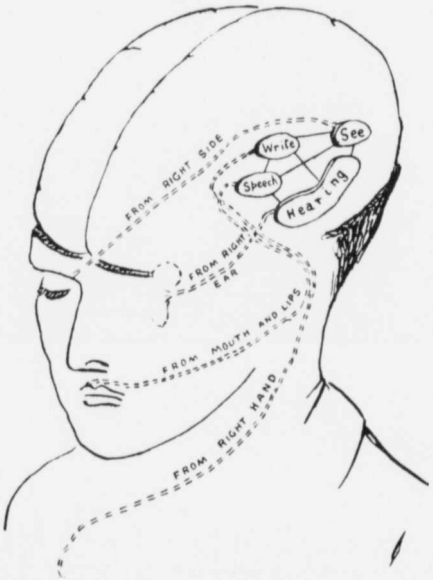
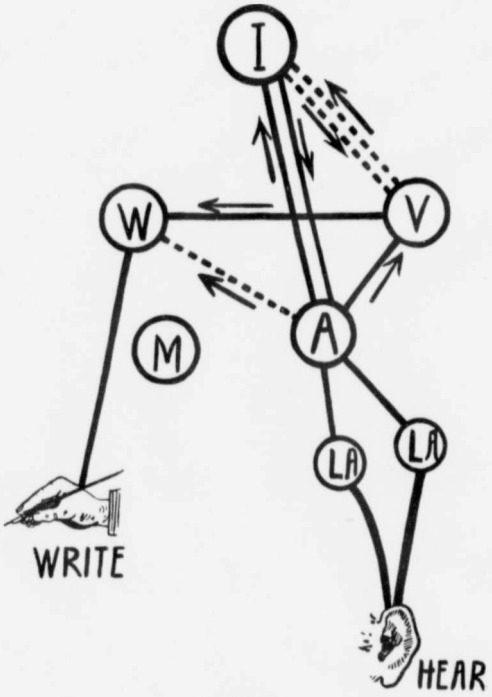


Diagram to show the position in the brain of the four centres that have to do with the reception, the production, and the storing up of memories of speech, reading, and writing.

Note the association fibres joining up the four centres, each with the other three.—*Lapage*



DICTATION

(A). Auditory word-centre

(V). Visual word-centre

(M). Motor speech-centre

(W). Writing centre

(I). The group of memories associated with any particular word revived and forming the idea which the word represents

(LA) (LA). Lower hearing-centres

(LV) (LV) Lower visual-centres

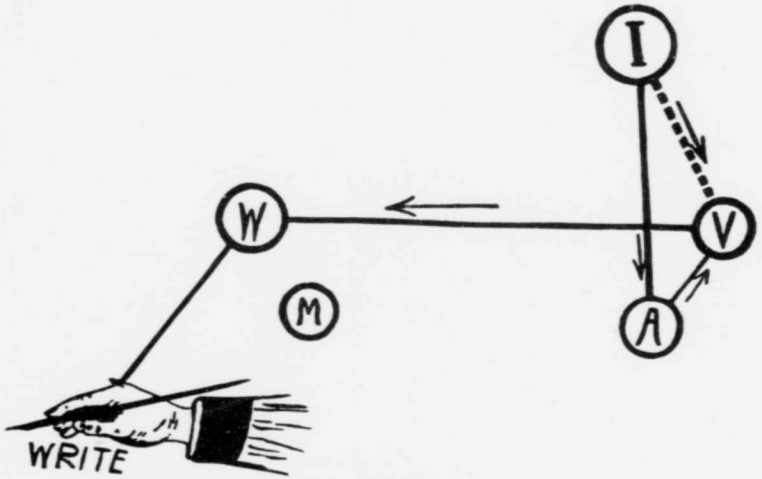
—*C. J. Thomas*

Letter-memories appear to be stored in close proximity to word-memories, and the memories of figures are also probably recorded in some adjacent area of the brain.

It is important to note that, as a rule, a child suffering from word-blindness recognizes Arabic numerals readily, and uses them intelligently. When this is the case, we are confident that the child has normal mental powers and can and must be taught to read in some way. The "look and say" method of teaching to read, for example, is not the best method for such a child, though it is physiologically correct, and helps to organize the visual speech-centre, which is the most important one in learning to read. But a child whose visual speech-centre is imperfect must be taught to make the letters for himself by putting together pieces of wood, straight and curved, or by tracing letters in the sand with his finger, or by handling fairly large models of them made in wood and attractively painted. The muscle-memories thus gained will help him to recognize the letters. When some letters are learned, then small words can be built with them, and so on. He should also be taught to write the letters, paying attention to the way his hand and fingers move in making them.

DICTATION

Great difficulty arises when we attempt to give a dictation exercise to a pupil in whose brain one or more speech-centres are weak or defective. The knowledge of the real reason why children spell "water" as "watter," "was" as "saw," etc., will not only make the correction of dictation papers extremely interesting, but will show us how to help the pupil to overcome his special difficulties. The following examples, quoted in an article by Dr. C. J. Thomas, show this clearly. In dictation three of the speech-centres are used—auditory, visual, and writing. The sentence dictated by the teacher



SPONTANEOUS WRITING

(A). Auditory word-centre
(V). Visual word-centre
(M). Motor speech-centre
(W). Writing centre

(I) The group of memories associated with any particular word revived and forming the idea which the word represents

was: "That morning he saw a woman with a cat in her arms. He asked her if she would sell him the animal."

1. Thomas A.—That morning he "was" a "woman what" a cat in her "rams." He asked her if she "wold sel" him the "anile."

A clever boy. He partly supports himself by selling papers, and can calculate his profits very quickly. He can write far better than he can read or spell and, when he wants to read a word, he traces over the letters which he has written with the tip of his finger and then he recognizes the word by his muscle-memory of it. He is word-blind and has to guide or manage or "work" his writing speech-centre through his auditory speech-centre. His motor speech-centre and his writing-centre (both motor) are the best ones he has, and must be used to teach him to read and write.

2. Robert C.—That "mornong" he saw a "women" with a cat in her "ares"; he "arket" her if she would sell him the "amelem."

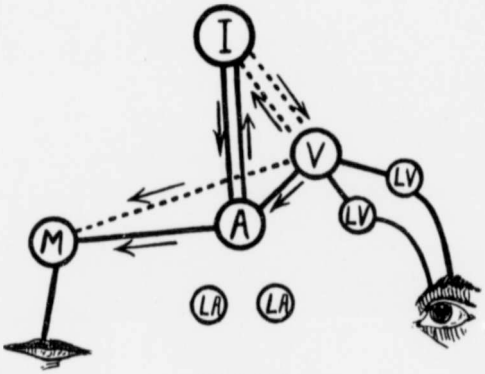
He has a fairly good visual-centre, but the associations between it and the writing-centre are poor. He needs special teaching along that line.

3. Percy T.—That morning he saw a woman with a cat in her arms. He "arsked" her if she "wood sel" him the "amimal."

He has a fairly good auditory-centre, but it needs training. Articulation and speech education are probably poor and the boy needs special exercises in these.

4. William W.—That "moring" he "swo" a "wnoynes" with a cat in "haer sheer," He "sis" her if she "worlt sels" him the "nulen."

A marked case of word-blindness. Needs special instruction, so that the other speech-centres may be able to help the imperfect visual speech-centre. A capable and self-reliant boy, perfectly normal in every other way.



READING ALOUD

(A). Auditory word-centre

(V). Visual word-centre

(M). Motor speech-centre

(W). Writing centre

(I). The group of memories associated with any particular word revived and forming the idea which the word represents

(LA) (LA). Lower hearing-centres

(LV) (LV). Lower visual-centres

—*C. J. Thomas*

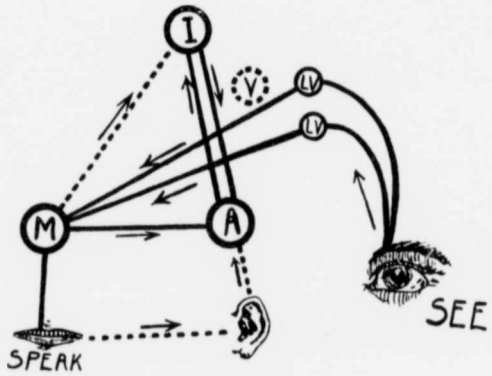
The correction of dictation, when one sees what these mistakes mean, and what a flood of light they throw on the secrets of brain action, is far removed from drudgery.

THE WORD-BLIND CHILD MUST BE EDUCATED

We must remember that these children can be taught to read, write, and spell. Three of the speech-centres out of the four are nearly always good, and we must use the proper means to "get into their heads" enough of word-memories to enable them to acquire an education.

The word-blind child is often rather above the average in mental power, and only needs teaching and encouragement. He must begin with easy words. The word "cat" is easy to learn, probably on account of the number of associations children have with this word as the symbol of a furry, warm, living, moving, mouse-hunting creature with ears, eyes, four legs, and a tail, of a certain colour and habits, and making a definite noise, and perhaps also on account of the form of the letters which make the word. Once the child has felt out the letters, watched himself say the letter sounds and the word in the looking-glass, and has written the word, attending to the way he makes his fingers go, a new path has been opened up in his brain, and his progress simply depends upon travelling this path so often that he feels confidence in his own power. Such a child specially needs short lessons, (1) often repeated, (2) with plenty of rest between, (3) by himself, (4) at home as well as at school.

It is important to distinguish word-blindness from defective eyesight. This can readily be done by noticing, in word-blind children: (1) That the size of the letters makes no difference to the power of reading; (2) that the child can copy words or letters; (3) that figures are recognized, and also a few words. It is also important to notice that the intel-



THE PHONIC SYSTEM OF READING

(A). Auditory word-centre

(V). Visual word-centre

(M). Motor speech-centre

(W). Writing centre

(I). The group of memories associated with any particular word revived and forming the idea which the word represents

(LA) (LA). Lower hearing-centres

(LV) (LV). Lower visual-centres

—*C. J. Thomas*

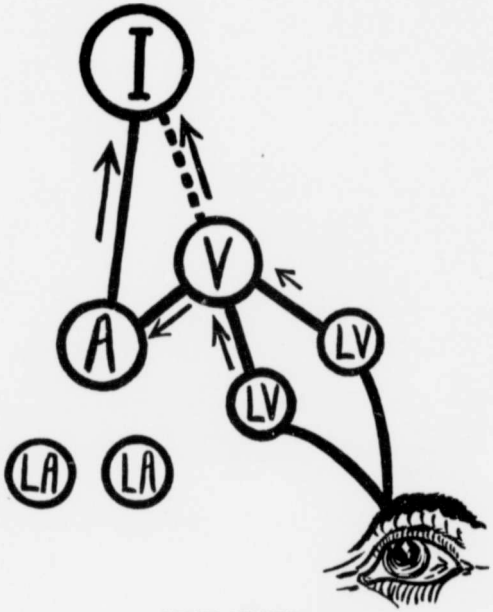
ligence of these children is quite normal. They should not be kept back in other subjects because of their inability to read.

Since in right-handed persons the speech-centre used is that on the left side of the brain, and in left-handed persons that on the right side, it has been suggested that the special training of the left hand might stimulate the progress of some children who are word-blind, because it may be the speech-centre on the left side of the brain that is imperfect, and if so, the training of the left hand would help the speech-centre on the right side of the brain, which is possibly being used by the child, just as the training of the right hand helps the speech-centre on the left side of the brain. This is an interesting suggestion.

Boys are more often word-blind than girls, and Sydney Stephenson reports six cases in three generations of the same family. It occurs most frequently in the children of the working classes.

It has been supposed that bright-coloured letters help children to learn the alphabet. Occasionally, persons see and "hear" certain letters as of a certain colour. This was the case, for example, with Huxley. Whether this is a useful suggestion or not, there can be no doubt that the main thing is to arouse a strong interest in the child's mind. Hinshelwood, who has written a book and many valuable articles on this subject, makes this point clear. He tells of a boy who was at school seven years and had not learned to read a word, but after he had left school he taught himself to read in four years by studying football reports in the newspapers, which he worked at for hours every evening—he was a football devotee.

The study of word-blindness is comparatively recent. The discovery of the speech-centre was made by Broca in 1861.



SILENT READING

(A). Auditory word-centre

(V). Visual word-centre

(M). Motor speech-centre

(W). Writing centre

(I). The group of memories associated with any particular word revived and forming the idea which the word represents

(LA) (LA). Lower hearing-centres

(LV) (LV). Lower visual-centres

—*C. J. Thomas*

The first case of word-blindness was described by Broadbent in 1872, and the term word-blindness was used for the first time by Kussmaul in 1877. Morgan in 1896 described the first congenital case.

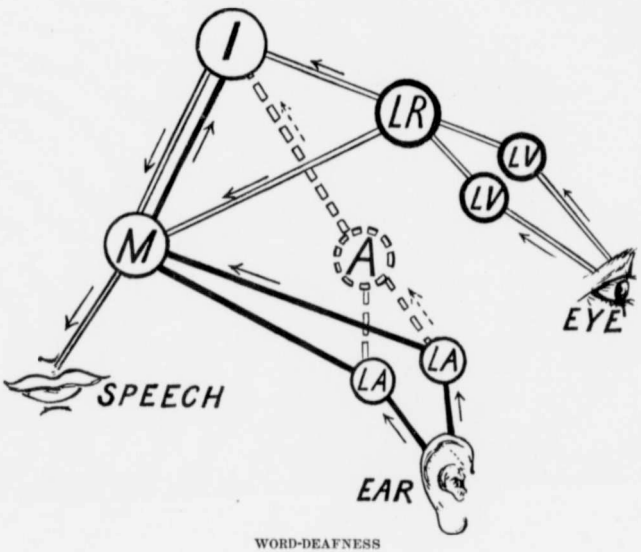
WORD-MEMORIES

It is, of course, impossible on account of the myriads of associations between our speech-centres to isolate their action. Yet it might be noted that we have distinct visual word-memories which have no corresponding auditory word-memory. Many people have an excellent visual word-memory of Przemysl from to-day's press despatches, but few have an auditory word-memory of it.

We often know that we have distinct word-memories, both visual and auditory, of some word that we cannot recall at the moment. This is due to fatigue or nerve exhaustion. Sometimes the visual-centre stirs first and informs us, for example, that the first letter of the word is "L" and that the word is short, having only two syllables (auditory). After a time, when our thoughts are elsewhere, the whole word comes suddenly into the midst of our thoughts. These facts emphasize an educational principle too often forgotten, namely the supreme importance of learning well what little we do learn —making a sharp, distinct, perfect word-memory. This cannot be done unless we acquire and teach good habits of study and attention, and, equally important, unless we use the brain for very short periods, and then have a rest period.

WORD-DEAFNESS

Congenital word-deafness is fortunately a very rare condition. The first case was described by Dr. James Kerr in Bradford, England, about 1898. The boy was considered a mental defective because he did not understand a word said



WORD-DEAFNESS

(M). Motor speech-centre

(LA) (LA). Lower auditory-centres

(A). The undeveloped weak auditory speech-centre

(LV) (LV). Lip-reading centre

(I). The seat of consciousness diagrammatically represented

Eye, (LV) (LR) (I). The most direct route to the understanding of speech (lip-reading)

Ear, (LA) (M) (I). The preferred route to the understanding by the ear

Ear, (LA) (A) (I). The normal route from the ear to the understanding; in this case weak or absent

Ear, (LA) (M). Speech—Echolalia

From the Report of Dr. James Kerr, Medical Officer (Education) to the London County Council, 1907 *and* 1908.

to him. Dr. Kerr was able to show that he was really above the average in intelligence, and thus restored him to his proper place in the school and in the community.

Most children have dominant word-memories of the visual type and the auditory type, the motor-speech and muscular word-memories being of secondary importance. But in deafness of any kind the order of importance is reversed. When the visual-centre, the higher auditory-centre, the lower auditory-centre, and the other speech-centres are all working perfectly, the child hears the word "cat," repeats it, connects it in his mind with a picture shown to him, or with his memory of seeing the animal itself, furry, warm, living, purring, moving, four-legged, and black or variously coloured, and understands the word. The word-deaf child hears the sound of the spoken word "cat," but can make no use of it. It does not reach his understanding, because he has nothing stored up in his brain to correspond with it. He cannot understand it that way. He literally cannot "get it into his head." He must therefore "get it into his head" by the visual-centre, and by seeing (lip-reading) or by feeling, the movements of his own and the teacher's organs of utterance (motor-speech). The word-memory of "cat" to him is not a sound but a certain movement felt by his fingers, or some word-memory stored in his visual speech-centre. He should learn lip-reading, and should acquire the necessary word-memories in other ways, especially by using the other three speech-centres, since the auditory speech-centre is defective.

Word-deafness, then, may or may not be associated with mental defect, and we should always begin by taking for granted that it is not, and should endeavour to rescue the child from his disability by using lip-reading and motor speech-memories and visual word-memories.

PSYCHICAL WORD-DEAFNESS

Sometimes children who do not speak, and do not understand what we say to them, are really suffering from the effects of severe fright or some other great emotion, or they may be in a condition of physical debility. In such a condition the brain is no more capable of working than it is in the case of severe typhoid prostration, where the patient can think slowly but not fast enough to answer a question; or than Macduff's brain was in *Macbeth* when he was told of the murder of his wife and children. In one case seen by Dr. Kerr, a boy seven years old who had not spoken for three years, was regarded at school as a deaf-mute and a mental defective, until the School Medical Inspector was called in. He found that he was neither deaf-mute nor mentally defective, but was suffering from the effects of a bad fright when he was three and a half years old. A child that can hear but cannot understand what he hears resembles in some respects a mental defective, but may not be one.

The importance of ordinary deafness and its terrible and unnecessary consequences to the child have never yet been adequately realized. So, too, with the much rarer cases of word-deafness. Ordinary deafness (see below) may be prevented almost altogether. The salvation of the deaf person is in learning lip-reading and audible speech.

In cases of psychical word-deafness from fright or other cause, the treatment is suggestion, improvement of the general health, kindness, patience, and individual teaching.

The teacher or school nurse or school doctor who recognizes the needs of the child and is successful in restoring the power of speech in psychical word-deafness, or in developing the use of other centres in congenital word-deafness so that the child is saved to himself, his family, and the State, has rendered a great service to the child and to the community.

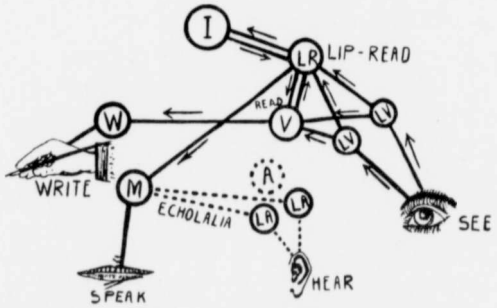
MINOR DEGREES OF WORD-DEAFNESS

Word-deafness may vary from a want of comprehension of the meaning of spoken words to a condition in which the person does not know he is listening to speech, when spoken words are uttered in his presence. There are doubtless minor degrees of this defect which we do not recognize, and we should always remember that a strong visual-centre will often co-operate with and help a weak auditory-centre. Where children are not learning to read well, it is always worth while to vary the methods of instruction with this in mind. In order to read we must be able to (1) receive, (2) retain or store up, (3) recall impressions of spoken or written language.

SPEECH AND SPEECH DEFECTS

The power of learning to read is closely connected with the power of speech. The congenital lack of the power of speech (congenital aphasia) is so rare as to be almost unknown (except in the case of the lowest grades of the mentally-defective). "A congenital aphasia implies a faulty development of the centres concerned with language, an atrophy severe enough to be clearly pathological in character, and to present a contrast between the arrested development of the language-centres, and the much greater development of the other centres."

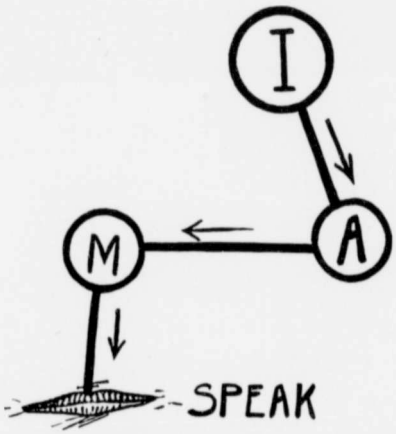
Echolalia is a serious affection of speech in which words and questions are continually repeated in a parrot-like way; for example—Question: "How old are you?" Answer: "How old are you?" This usually, but not always, indicates serious mental defect, and shows a lack of development of the higher auditory speech-centres; that is, of those parts of the brain which enable us to recognize and get the ideas which the words stand for. The mechanism of hearing is perfect and the mechanism of articulation is perfect, but the part of the brain



ECHOLALIA AND WORD-DEAFNESS

(A). Auditory word-centre (V). Visual word-centre (M) Motor speech-centre (W). Writing centre (I). The group of memories associated with any particular word revived and forming the idea which the word represents (LA) (LA). Lower hearing-centres (LV) (LV). Lower visual-centres

—*C. J. Thomas*



SPONTANEOUS SPEECH

(A). Auditory word-centre
(M). Motor speech-centre
(I). The group of memories associated with any particular word revived and forming the idea which the word represents

—*C. J. Thomas*

which enables us to understand the meaning of spoken words is defective. This affection is sometimes closely connected with word-deafness, and may be treated in the same way.

Much more attention should be given to children who suffer from speech defects with a view to ascertaining the cause and giving them individual and immediate help, so that the habit may not become fixed. Persons who have speech defects are at a great disadvantage, and find it difficult to take their places in society, or even to earn their living. Speech defects may be due to (1) adenoids, nasal conditions, cleft palate, etc., (anatomical reasons), or (2) to imperfect and backward speech, lalling, lisping, "baby talk" (probably due to a lack of proper home training), or (3) to an affection of the nature of "idioglossia," where a child seems to speak a sort of language of its own, or (4) to stammering or stuttering, where a child stumbles over words which he could say quite well were it not for the fear that he will stammer or stutter. In his book on this subject, E. W. Scripture suggests that the word stuttering should be used to the exclusion of the word stammering, and points out that children frequently begin to stutter after a severe nervous shock or fright, or a serious illness, or in the process of learning to speak. Auxiliary Class teachers should, if possible, have special training in voice and speech production. Individual skilful instruction is essential for the children affected; the study of the "motor images" of the lips in a mirror often assists, and help should be given at once to prevent the condition becoming chronic; proper breathing exercises should be taught.

A great many children have speech defects. In Liverpool, for example, two hundred leave school each year with speech defects—one hundred and fifty boys and fifty girls. In Detroit, two special teachers are employed to visit the different classes and give instruction to pupils with speech defects.

Stammering, stuttering, and other defects in articulation retard progress greatly. Adenoids, enlarged tonsils, cleft palate, and hoarseness must have appropriate medical treatment. Children who do not speak plainly need special instruction. Intensive methods, used by a successful teacher who has made a specialty of such instruction, enable the child to make a new start and climb the Hill of Difficulty at a good pace, reaching the top sooner than one would expect. Simple difficulties in articulation can be cured by careful, thorough teaching, with frequent repetitions, and the Auxiliary Class teacher should avail herself of the assistance of parents and of the regular class teachers to keep up the necessary practice.

Stammering occurs frequently in school children. In London, England, about one half of one per cent. of the girls in the elementary schools have this defect, while amongst the boys the percentage is said to increase from one half of one per cent. in the infant department to about three per cent. at twelve years of age.

Children who stammer have often a family history of nervousness, or have suffered from a fright or other nervous shock, or they have acquired the habit from sitting next a stammerer at school. This indicates that suggestion, confident handling, relief from all nervous and mental strain and fatigue, encouragement, change of air and scene, attendance at an open-air school, attention to the child's general health and happiness, and unlimited patience and cheerfulness on the part of the teacher and parents, will help to cure the condition. Practically it is always curable. Regular breathing exercises; learning to speak slowly, deliberately, and from a full chest; learning to sing and to read poetry; learning another language—all these help in the cure, which should be attained in a few weeks, or, at most, in a few months of special individual teaching followed by instruction in a special class. It is also very important that children who stutter

should not be rebuked, teased, or annoyed in any way, and that the habit should not be allowed to become chronic.

Classes for stammerers and children with other speech defects were organized in Detroit, in 1912, with ninety-three pupils in attendance. Previously, the teachers had reported the names of one hundred and eighty-seven children with speech defects, and the preference in admission was given to the older applicants. There were ninety-four names on the waiting list. In 1913, eighty-six of the one hundred and eighty-seven pupils were reported as having had their speech defects corrected.

MIRROR-WRITING

In mirror-writing, the looking-glass images of the letters are written instead of the correct form. This occurs occasionally in young children who are learning to write, and in deaf children, as well as sometimes in mental defectives. It is more often found in those who write with the left hand, and its production is probably more or less influenced by the confusion, as it were, between the impulses from the writing-centre (chiro-kinæsthetic centre) for the right hand and similar impulses from the writing-centre for the left hand. Careful supervision of the writing lessons, which should be frequent but short and easy, is usually all the treatment required. The child should use the right hand.

EPILEPSY

Epileptic children also need care and education. The number of such children is small relatively to the total school population, but their disability is a serious one and causes severe distress not only to the family but to their classmates and schoolfellows. Epileptic children, as a rule, are more or less defective mentally, and this is particularly evident after a fit. Some epileptics, however, are highly intelligent, with

endowments even, in rare cases, approaching genius. These are, of course, abundantly able to care for themselves and discharge the duties of citizens. Often the attacks in such a case are nocturnal only, and then, fortunately, their infirmity attracts little or no attention.

It is well known that the earlier in life epilepsy develops the more serious the affection is likely to become. Such children should never be urged or pushed in school work; any schooling that is attempted should be carefully adapted to their endowments and disposition. If they are able to attend the regular schools, arrangements must be made for them to retire, when they feel an attack coming on, to some place where they can be cared for, so that other children will not be shocked and distressed.

The question whether a child afflicted with epilepsy can be educated in the regular classes or not depends on his mental condition and the frequency and severity of the attacks. If they occur at long intervals, and if the child has normal mental powers, every effort should be made to educate him in the regular classes. Otherwise he should be in an Auxiliary Class.

The Ontario Hospital for Epileptics at Woodstock was opened in 1905, and has cared for a large number of patients.

Epileptics with marked mental defects, and, indeed, all serious cases of epilepsy, should be cared for in residential schools. Here great improvement often takes place. The patient should receive educational training, including the teaching of suitable occupations involving no personal danger in the event of a seizure. Perfect uniformity and regularity, absence of excitement of every kind, and careful supervision of eating, sleeping, and occupation are indispensable. Stairs, doors, beds, and windows must all be carefully constructed and arranged for the safety and comfort of the inmates, and the convenience of the nurses and attendants. The dangers

of ordinary school life to an epileptic child must not be lost sight of. Even a chair or stove may prove dangerous to such a pupil.

CARE OF AN EPILEPTIC CHILD DURING AN ATTACK

1. Lay the child on a rug, mat, or overcoat on the floor.
2. Place a pad in the mouth so that the tongue will not be bitten. Such a pad may be made of a handkerchief tightly rolled around a spoon or pencil.
3. Loosen all the clothing.
4. Allow the child to sleep for some time after the fit is over. The usual duration of a convulsion is about a minute and a half.

PHYSICALLY-DEFECTIVE CHILDREN

Mention has already been made of the fact that Auxiliary Classes are necessary for physically-defective children. Provision is made in the Act for such classes, and a good deal of attention has already been directed to the subject in Ontario. These Classes are required, in our larger cities at least, as centres for: (1) Children who are physically disabled as the result of congenital defects, disease, or illness; (2) children who are blind or semi-blind from high myopia and other causes; (3) children who are deaf or semi-deaf.

For children who are unable to walk without artificial aid, and for those who are so disabled as to be hardly able to walk at all, education is even more necessary than for the child who has no such disabilities. Their difficulties in making their way are great, and they should be carefully prepared to earn their livelihood in some manner which will be agreeable and satisfactory, and will secure their happiness. Many of them also need hospital care, and provision should be made for a teacher who will carry on the education of children that are well enough to study. This has been done for many years in the Hospital for Sick Children, Toronto.

As for children who are so disabled that, though they are some years beyond school age, they have never been able to attend school, but have been confined almost like prisoners, the only hope of making them citizens and of developing their powers so that they will be able to earn a living, and to enjoy the pleasures, and share in the opportunities of life, lies in their being provided with an education suited to their needs. In a Technical or Industrial School, for example, a room on the ground floor should be set apart for their use. Those who cannot reach school by public conveyance or by arrangements made for them by their friends or neighbours, may, under The Auxiliary Classes Act, be conveyed to school in any way arranged for by the School Board. Such pupils need seats suited to their condition, and if they are to have the comfort and ease that kindness and common sense claim for them, the schoolroom should be more like a living-room than an ordinary schoolroom. It is only right to make provision for the proper training of these children in order that they may become capable of self-support and of discharging the duties of citizenship. They must not be deprived of the opportunities the Province provides for all her future citizens, nor should they be permitted to sink into the condition of paupers and dependents. Before entering school the lives of such pupils have sometimes been very barren of interests or activities. In school they are enthusiastic in their work, and often make better use of their opportunities than other children. The school day should be four hours long, and the number of children in the class should not exceed twenty.

A nurse and an attendant should be provided for each class, both to assist in the care and supervision of the children in school and to take charge of them in the conveyance that carries them to and from school. The work of the school nurse in the homes of the children is also most important.

DRESSMAKING

School for the physically-defective, London, England—*From Report of Dr. James Kerr*

Great benefit may be secured by early medical and surgical treatment of these cases, and the careful and thorough work of school doctors and school nurses will surely result in saving many from disease and disablement; prevention is indeed better than cure.

The family cannot always provide adequate education for a disabled child, even though the child may have marked ability. A scholarship would enable the child to develop gifts which otherwise might be lost, and such a scholarship would often be well bestowed in an Auxiliary Class for disabled children.

The following are some of the occupations suitable for the physically-disabled:

Art Embroidery
Artificial Flowers
Artificial Limbs
Basket-making
Bookbinding
Brushmaking
Chairmaking and repairing
Chocolate-making
Cigar and cigarette making
Cooking
Dispensing
Draughting
Dressmaking
Electric Machinery
Engraving
Envelope-making
Feather-curling, dyeing, cleaning
Filagree work
Hand burnishing
Jewel-case making
Jewellery work
Knitting
Lacemaking
Lacquering
Laundry work
Leather work
Millinery
Paper-box making
Pattern-making
Photography
Pipe making
Printing
Sewing
Shoemaking
Shorthand
Surgical instrument making
Tailoring
Typewriting
Watchmaking and repairing
Wood-carving
Wood-working

In the after care of such pupils provision should be made for a bureau of work, a labour exchange, or a co-operative workshop, where their work can be utilized.

INFANTILE PARALYSIS

One cause of physical disability may be specially mentioned here. Those little children who are the victims of recent epidemics of anterior poliomyelitis (infantile paralysis) near Ottawa and Hamilton, and elsewhere in Ontario, are now of school age. In 1912 a landlord in Toronto asked one of the School Medical Inspectors to visit the house of a tenant of his, a working-man with six daughters from three to sixteen years of age, and to see the fourth daughter, Victoria, a bright, pretty little girl, eight years of age, who had had infantile paralysis about three years before, and had quite lost the use of both her legs. The only way she could move was to creep on the floor like a baby. The father had five other children and his wages just sufficed to keep them, leaving no margin to pay for conveying the child to school. She is now ten years of age and has had no education. How is she to earn her livelihood? We should arrange for her conveyance to school and give her a chance. How many other children in the Province are like Victoria? Probably a hundred at least, and there may be many more, for we have no complete register of the children in any school district. We have only a register of those who go to school.

Prevention in the case of infantile paralysis may soon be possible. It is contagious and is probably transmitted by the stable fly. Flies must not be tolerated and their breeding-places must be destroyed. Patients with infantile paralysis must be isolated.

THE SCHOOL CENSUS

Meantime we must do something for those already disabled. A School Census which would secure a complete register of all the children of school age, with names and residences, and would indicate the reason of non-attendance in

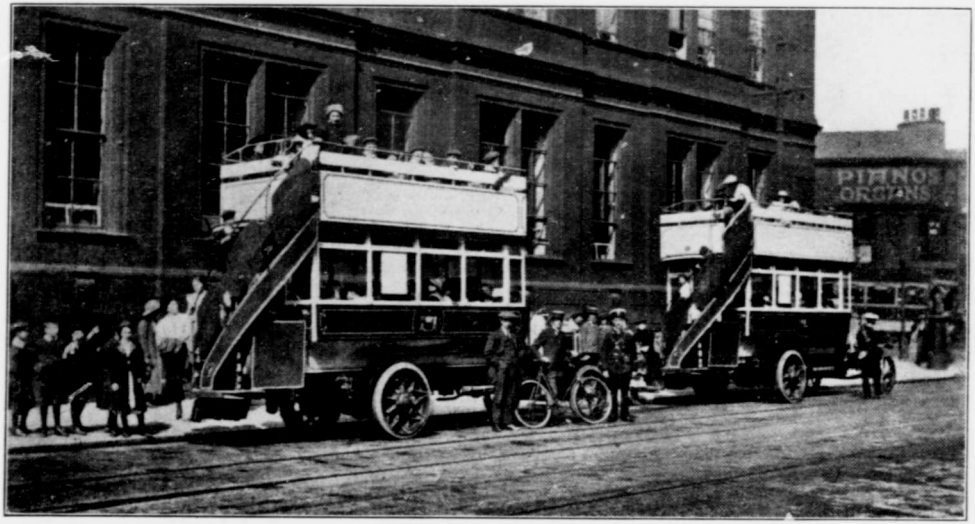
the case of any not attending school, especially any who were non-attendants on account of physical or mental defect, has been found to be of great importance in educational work in Great Britain, the United States, and other countries.

The Medical Inspectors of Schools find among the children under their care a certain number who are so disabled or deformed by diseases of the bones, joints, spine, or nervous system, or by chronic illness of some other kind, that they are unable to attend school regularly, if at all, or to follow the ordinary school routine. Tuberculous disease, especially of the back, hip, and knee, infantile paralysis, and other diseases occur before school age. Besides, there are children in the community who are unable to make their wants or even their presence known at all to the school authorities, and whose families have not the resources that would enable them to provide for the child's education. These can be reached only by the School Census and the Auxiliary Class.

Children who are physically disabled and backward as the result of defects, illness, or disease, including children who have adenoids, and tuberculous or debilitated children, need Auxiliary Class education. The defects enumerated above must be ameliorated or removed by medical and surgical treatment; if necessary, by Open-air Schools for tuberculous children (apart, of course, from other physically-defective children), by Open-air Schools for anæmic and delicate children, by general care and treatment. Conveyance to school, short school hours, and special facilities for comfort and for rest are also required. When such provision is made, the child, the home, and the community all reap a corresponding benefit, and the success of the child as a citizen, in spite of the handicap, is a great return for the work.

OPEN-AIR SCHOOLS

It is probable that about five per cent. of all school children under twelve years of age are anæmic or otherwise physically



MOTOR OMNIBUSES
Starting for Open-air School

inefficient from a variety of causes, chiefly from more or less serious illness. These children are greatly benefited by attending open-air classes. In all new schools at least one room should be constructed so that practically one side can be open to the air, if required, and provision should be made for flushing all school-rooms with fresh air.

There are other children who should go to the Open-air Classes in the City Parks, or in a grove or forest or other pleasant and beautiful place, where provision for food, clothing, and rest, conveyance to school, and other special needs are attended to. The necessary arrangements for the admission of these pupils must be made by principals, teachers, and the School Medical Inspectors and nurses in consultation with the parents and guardians; and it is necessary to keep in touch with the home life of the child and utilize any suitable agency for the establishment of the child's health. Facilities should be provided for cooking, dressing, and instruction in the open air, including gardening if possible. For class-work movable furniture and black-boards and some portable and other buildings for shelter are required. Frequent rest periods should be given between the recitations and exercises. Two hours' rest in the day and nourishing food at noon are found necessary. The children usually keep in advance of their grade though the lesson periods are short, and they generally show an improvement in height, weight, and health. Tuberculous children should not be in an ordinary open-air school, but in an open-air school planned specially for them.

Many of the principles of the Open-air School may be put into practice in other Auxiliary Schools, especially in those intended for mental defectives. The use of the garden as a class-room, and the training in farm and garden work, which is so desirable for these children, have been referred to elsewhere. Such a school enlarges the children's horizon, adds to their happiness and energy, and enables them to learn and

DINNER IN HALL

School for the physically-defective, London, England
—*Dr. Kerr*

understand better than before. The term "Open-air School" may be held to include Playground School, Forest School, Field School, and Tuberculous School. It is a most important type of Auxiliary School, and there is no doubt that the architecture of new schools will be improved on account of the importance now attached to the principle of the Open-air School.

Open-air Schools have been carried on since 1912 in Hamilton, Toronto, and other Canadian cities.

AUXILIARY CLASSES FOR PHYSICALLY-DEFECTIVE CHILDREN IN GREAT BRITAIN AND THE UNITED STATES

More has been done in England for physically-defective children than in any other country. They are taken to and from school in motor omnibuses, ambulances, and other conveyances, and a great deal is done in school by means of seats, couches, special furniture, the provision of meals, and the care of a school nurse, to make them comfortable and happy. One motor ambulance or omnibus is provided in London for every forty children in such a class, and if the attendance reaches sixty, two such conveyances are provided. A one-horse vehicle is provided in other places for every ten children. Rugs and stretchers are supplied, and a nurse and attendant are always in charge.

This work was begun by private benevolence. The Women's University Settlement had classes for invalid children, and in 1898 Mrs. Humphry Ward, on behalf of the Passmore Edwards Settlement, brought this subject before the London School Board. The Board undertook to provide the teaching, furniture, and apparatus on the understanding that the Settlement would give the room and pay for the school nurse. The first class was opened in the Settlement in February, 1899.

NEW YORK AND OTHER AMERICAN CITIES

New York has eight different types of Auxiliary Classes as follows:

Ungraded Classes for Mentally-defective Children.
Special Classes for Deaf Children.
Special Classes for Blind and Semi-blind Children.
Special Classes for Physically-defective Children.
Open-air Classes for Delicate Children.
Classes for Foreign Children.
Classes for Children who must soon go to work.
Classes for over-age pupils.

Seven classes for physically-defective children are now being taught in Brooklyn with one hundred and twenty pupils; two in the Bronx with twenty-four pupils; thirty in Manhattan with four hundred and sixty-one pupils. There is a class on the ferry *Southfield* for children who are tuberculous as well as physically disabled; and more classes are needed, as there are children waiting for admittance. Hot luncheons are provided, and stages to take the children to and from school. The following is the standard for equipment for each class:

Twenty adjustable desks and seats (new model).

Equipment for primary grade should include four grammar size desks and seats to accommodate cases of hip disease and over-age children. Equipment for grammar grade should include four primary desks and seats for Potts disease cases owing to their short sitting height.

The children do practically the same work as children in the regular classes, but they are dismissed at 2.30 p.m. As far as possible, the classes are in rooms on the ground floor or first story, except in one new school where there is a large elevator.

In Detroit, in January, 1910, a class for physically-disabled children was opened, with free transportation to and

from school. Sixteen children from six to fourteen years of age were in attendance the first year, and there are now two class-rooms with an enrolment of sixty-six. Luncheon is provided and a special nurse is on the staff. The children are described as being happy and eager to learn, and they are being taught with a view to help them to earn their living.

Chicago has two classes for physically-disabled children, with free transportation.

The classes for physically-defective children in Philadelphia are found to have fully justified their cost (which is largely in transportation). The percentage of regular attendance is as high as in the regular classes. Disabled children, twelve years of age and unable to read when they entered the class, have almost "caught up" to the children in the regular classes.

DEFECTS IN SIGHT AND HEARING

The two most important avenues of communication with the outside world are sight and hearing. It is well known that many of our children are defective in these senses. It is important to prevent these defects in the future, and it is possible to prevent them.

THE PREVENTION OF DEAFNESS

About one per cent. of all the school children in London, England, have discharging ears. There are a good many in Ontario who suffer in the same way. Most of this suffering is caused by scarlet fever and measles, which are preventable diseases. On the staff of every hospital where scarlet fever and measles are treated there should be an aurist who can thoroughly supervise the treatment of such cases until they are cured.

Children with discharging ears who are at school should be thoroughly and carefully treated by an aurist, assisted by the school nurse. If this were done, a very large proportion of such cases could be cured and deafness prevented.

There are other diseases causing deafness notice of which should be required and thorough treatment given to preserve the child's hearing. A discharging ear is a very serious thing; it exposes the child not only to the danger of deafness, but to the danger of death.

The main cause of ear disease and deafness is to be found in the back part of the throat and nose, with which the ear is connected by a passage called the Eustachian tube. If the end of this opening is blocked up by adenoids or by swollen mucous membrane—the swelling usually being caused by catarrh, or by the infection of influenza, scarlet fever, mumps, measles, or typhoid—then this part of the ear becomes unhealthy, the secretions are retained, the ear becomes infected and inflamed, and deafness is the result. Nature gives warning by ear-ache, which is often wrongly supposed to be caused by teething, worms, or neuralgia. Ear disease can usually be cured, if promptly and properly treated, and in this way deafness is prevented. The presence of adenoids is usually shown by mouth-breathing, snoring at night, and other signs; but the advice of an aurist is all-important in cases of ear-ache or slight deafness.

School life appears to have an unfavourable influence on children's sight. It is not hard to see why, when one looks at the lighting of some school-rooms and the paper and type in many school books. Extra large type should be the only kind allowed in little children's books, and lighting should be very well looked after in the building and re-modelling of schools. Every child's desk should be well lighted.

THE PREVENTION OF BLINDNESS

As to the prevention of blindness, popular education on the subject is so much needed that it should be mentioned here that the proper care of the infant's eyes at birth, or, better, the banishment of certain specific diseases from the community, would have saved the sight of about half the blind people in Ontario. According to the Census of 1911 the number of our Blind was 1,077.

The Ontario School for the Blind, Brantford, was opened for admission of pupils May 1st, 1872, and has done a great work for the Province. Where possible, however, semi-blind children in our Public Schools should live at home and attend day classes under proper conditions.

AUXILIARY CLASSES FOR BLIND AND SEMI-BLIND CHILDREN

Children who cannot see well enough, even with the aid of glasses, to read school books used by the other children, should have special help. Blind children, or those who have very slight vision, and are in danger of losing even that slight amount, must be taught in special classes with Braille type for reading and writing, and with every facility for suitable industrial training, so that they may ultimately be self-supporting. In cities of 100,000 and over it should be financially practicable to teach these children in Auxiliary Classes.

Three questions must be considered in the case of semi-blind and myopic children:

1. How are we to care for their sight so that it will not degenerate?

2. How are we to give them some training in reading, writing, and arithmetic, and other subjects?

3. How are we to make them self-supporting?

Children who have defective sight, but who are not blind, should not be taught with blind children but in Auxiliary Classes. Such children may have opaque spots on the cornea,

scars from old ulcers, congenital cataract, imperfectly developed eyes, and other serious eye conditions. Probably their number is equal to the number of blind children; but a great deal more can be done for them, and it may be done more easily than for the blind. Their eyesight should be most carefully preserved, and they should work under the best conditions as to light, type, etc., and in small classes, specially supervised by an oculist. They cannot be taught in an ordinary class. They also need special desks, and should not be allowed to write or draw, except under direction and by the movement called "free-arm"—the writing surface having a large extent, such as the black-board or the top of the desk.

The industrial future of such children should be carefully considered, and everything done to encourage and enable them to attain self-support.

Children with progressive short sight or high myopia should have oral teaching and should be taught in the ordinary class in any oral lesson in geography, history, arithmetic and literature, and in all other subjects, as far as possible, provided that they are not allowed or required to look at any book or to write on any paper.

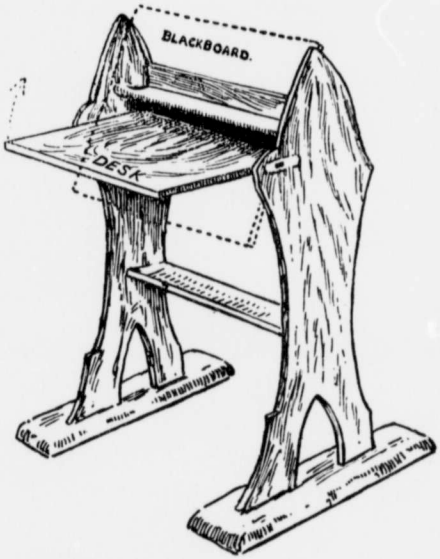
Black-boards and dustless chalk must be used in their class-room instead of pen, pencil, ink, or paper, and special desks must be provided. They should be encouraged to learn without books. Mental arithmetic, for example, is an important subject, and every educational advantage possible may be given them, provided only that their eyesight is not strained or damaged. If there is any danger of this, work must be stopped whenever the examining oculist finds it necessary. Manual and industrial training is, of course, most important and should occupy a great part of the children's time, every possible aptitude and gift being made the most of, and the various handicrafts being taught in a thorough and practical manner. The children enjoy their work and the freedom

given them under a wise organization and management. But the danger to sight must never be forgotten. According to Dr. Kerr, the head girl in a class in London, soon after being stopped in her work and warned not to use her eyes at all, lost her sight by hemorrhage in both eyes within a few weeks, on attempting to learn shorthand.

There are cases of high myopia in Ontario schools. Any child with markedly short eyesight should be examined carefully by an oculist, and where there is no School Medical Inspector the teacher should enlist the help of the parents, the Principal, and the Inspector. This variety of short sight is frequently progressive and increases during the whole period of growth, often ending in blindness. It is therefore impossible to exaggerate the importance of doing everything that can be done to prevent the sight deteriorating.

The teacher should act under careful directions from the oculist in the case of each pupil in an Auxiliary Class for the semi-blind. Some pupils should use a magnifying glass and some should not. Some pupils should have glasses, and some should not. Some should not use the sight at all. Each one should be carefully watched and not allowed to drift away. Special desks should be used like the one in the illustration, designed by Mr. N. Bishop Harman. Type-writing and industrial work are useful occupations. Oral teaching, manual work, and literary work may all be used in the instruction of this class. The degree of sight these children possess is of inestimable value to them, and should be preserved by every possible means.

Exercise and physical training are good for them, but on account of their imperfect sight they must be especially cautious in games and gymnastics; some kinds of gymnastic apparatus are unsuitable for them. They must not use books, pens, paper, pencils, or slates, except by special permission of the oculist who advises on admission to the Auxiliary Class;

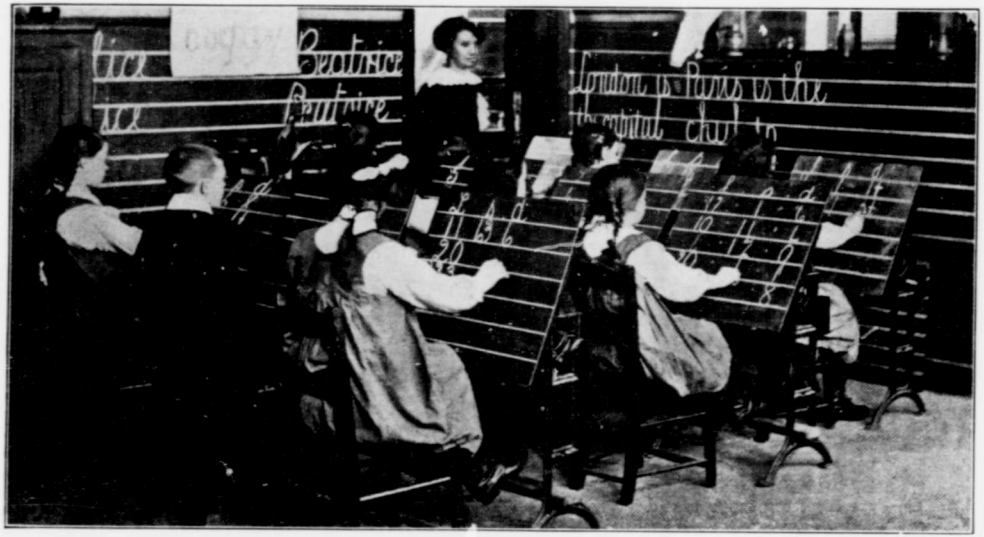


DESK USED IN CLASSES FOR MYOPIC CHILDREN

and, having reference to their future, some of these children should learn to read and count by special means, such as Braille type and a calculating frame or counting machine. They may write and draw on the black-board, using free-arm movements and very large characters. Only such manual work as they are permitted to do by the oculist should be taught them, nor should it be forgotten that much depends on the co-operation of the child and the family.

Many children whose eyesight is defective may, nevertheless, by the aid of an oculist's prescription, obtain glasses which make the sight quite good—nearly as good as the average. There are other children, who, even with the best of glasses, still have seriously defective vision, and yet can be taught a great deal. One eye may be defective or even blind, or both eyes may be defective. If at all possible, these children should remain in the ordinary classes, but should be placed in the front row, and the teacher should give them special attention to see that they sit upright and do not stoop over any of their school work. Their writing and drawing should be by the "free-arm" movement on the black-board, or on a millboard as large as the top of one of their desks. The books they use must have very large type (these may now be purchased), and their writing should also be very large. They should not do any work that requires them to read or write long columns of figures, should have as many oral lessons as possible, and should not use their eyes for more than half an hour at a time. With reasonable care, school work should not strain the eyes nor make the sight worse; but, in order to secure this, the co-operation of the child and the parents is essential. The child should not do home lessons, nor read much at home, nor read by artificial light.

Any effort at investigation brings to light children whose sight needs attention. During the examination, in 1910, of the children in Toronto who it was thought might be men-



MYOPE CLASS

Special class for children with very defective vision, Sheffield, England

tally defective, a boy thirteen years of age was found in the Junior First Book Class, just out of the Kindergarten. The teacher said she could not teach him to read, but she did not think he was a mental defective. She thought his sight was very bad, but he had glasses. On examination his sight was found to be one sixtieth in one eye and five thirty-sixths in the other and the glasses were useless. His mother had taken him to a place where "Eyes are examined free." They made him glasses for $5.00. His mother "went out by the day" to support the family. She paid two dollars on the glasses, but she never "seemed to get ahead far enough to pay the rest," so the optician (?) now has the two dollars and the glasses. The mother lost the two dollars, and the boy lost his education. The City of Toronto and the Province of Ontario paid for seven years' schooling for him, and lost every cent.

Afterwards an oculist saw him and generously gave him a prescription without money and without price. Somebody then paid an optician $1.75 (cost price) for the glasses, and when the boy put them on he said, "I can see fine; thank you very much for these glasses." As he was then fourteen, he went to work to help his mother, but his teacher gave him lessons at night, and he learned to read—seven years too late. The moral is that, in such cases, the advice of a skilled oculist is indispensable.

CHICAGO AND BOSTON

In Chicago much attention has been given to the establishment of classes for blind and semi-blind pupils. Their regular written work is done by them on special type-writers, and they also have special note-books with Braille type on one part of the page and type-written manuscript on another, so that they can be assisted in their work at home.

In Boston, a class for semi-blind children, whose sight was so poor as to make special teaching imperative, was begun on April 3rd, 1913, at the instance of physicians who had drawn the attention of the Board to the needs of these children. Enough children were easily found for two or three such classes, if they could only be conveyed to school. The progress they made was remarkable. Every case has individual direction, and the teacher is in close touch with the oculist. One child uses a big magnifying glass to read; another is not permitted to use a book at all; one has cataract and another high myopia; each one needs some special help.

THE EDUCATION OF DEAF CHILDREN

Children who cannot hear the teacher's voice or the answers of the other children, are being educated at a loss. We must make their education more effective. The number of deaf-mutes in Ontario was reported in the last Census as 1,410. They need not have been mute.

The case of deaf children is a particularly important one. In London, England, out of 243 deaf children examined, it was found that seventy-five per cent. were deaf before the age of four years. This shows how important it is for little children who are deaf to be educated in special classes, as soon as they can be got to school. School attendance for deaf children should be compulsory at three years of age. If nothing is done to develop lip-reading and motor speech-training at the right time and to preserve and develop the remaining traces of hearing and of speech acquired before the attack of illness which did such damage, then the child is deprived of a most important right by the ignorance and apathy of those in charge of its interests, including the family, the family physician, the Education authorities, and the Public Health authorities. Any little remnant of speech and hearing in such cases is very precious and is quickly lost by neglect.

As has been already said, proper care would have prevented, in by far the majority of cases, the loss of hearing.

TESTING THE HEARING

When hearing is lost, what can we do? First test the hearing. The child's education depends upon his hearing his teacher's voice, and therefore that is the practical schoolroom test.

In a perfectly quiet room the average normal hearing distance for a whisper is about twenty-five feet. A child that can hear a whisper at five yards is not going to lose much education on account of his hearing. Those who can hear a whisper from three to five yards away can get on in the front seats. Those who can hear a whisper from one to three yards away need special help to get on, and should be in smaller classes with a teacher who will speak very slowly and distinctly and take special, individual interest. Those children would be much better off, both for school and for life, if they learned lip-reading. Those who can hear a whisper one yard away only, or less, must be in a small special class of ten or twelve, and must learn lip-reading. They may, after they are thoroughly proficient in lip-reading, go anywhere and do anything. The accomplishment of lip-reading almost redeems life for them.

LIP-READING

The happiness of deaf children and their ability to support themselves depend largely upon their learning to understand what we say to them (lip-reading) and their learning to speak. They must see your face in a good light, and the teaching must begin at a very early age. Deaf babies say "Ma-ma" and babble just as other babies do, but instead of doing ten times as much to help them to speak as we do for normal children,

everybody gives up trying to do anything for their speech as soon as it is found out that "the baby is deaf!"

Miss Garrett's School in Philadelphia takes deaf children from two to eight years of age and teaches them to speak, all her efforts from morning to night being directed towards teaching speech and lip-reading.

SCHOOLS FOR THE DEAF

London, New York, and Boston have day schools for the deaf. That in New York was begun in 1909, and the absolutely deaf pupils can speak and can do lip-reading so well that one would hardly be aware that they are deaf at all. Day schools have many advantages, for it is most important that as far as possible deaf children should be brought up at home and take their place in the community. The Auxiliary Class makes this possible, and there should be a Nursery Class in connection with it.

A day school for the deaf was opened in Detroit in 1910, Children from three years old are eligible for admission, and the attendance is increasing. Here speech and lip-reading are taught in a practical manner.

One of the best day schools for deaf children is the Horace Mann School in Boston, established by the State of Massachusetts in 1869. The State pays the car fares of the pupils and $150 for each pupil per year. The oral method is used exclusively, and the Braille system of writing. There are sixteen teachers and one hundred and forty-eight pupils, and great interest is taken in their progress after they leave school as well as when they are in attendance.

In England there are many classes for blind and semi-blind, and for deaf children. Attendance is compulsory for the former from five to sixteen years of age, and for the latter from seven to sixteen years of age. Dr. James Kerr, Mr. Macleod Yearsley, and others advocate instruction of deaf children at a much earlier age.

The following equipment is required by the Education Committee of the London County Council for Schools for Blind and Deaf Children:

Abacus, 2; attendance board; black-boards; blinds (as necessary); clock; cupboards; chairs; single desks; easels; fireguards; longarm; mat; pokers; scuttles; scoops; tables; time-table frames; umbrella rack; portable lavatory (deaf only); exterior notice board (large E.C. with special lettering for deaf centre) glass tablets (deaf only); gymnastic apparatus when sanctioned by the Special School Sub-Committee; teachers' rooms to be furnished in accordance with rules applying to schools for mentally- and physically- defective children.

The first school for the deaf in Germany was opened in 1778, but it was at the first school for the deaf in England, established in 1792, in the Old Kent Road, by Mr. Braidwood, that lip-reading was first taught by his nephew, Mr. Watson. The revival of lip-reading dates from 1880, when an International Congress on the Teaching of the Deaf was held in Berlin. The English translation of the papers read at that Congress is worthy to rank along with Dr. James Kerr Love's interesting and remarkable book, *The Deaf Child*. Both of these books should be in all school libraries. In 1887 a school for teachers of the deaf was established in England. In 1888 a Royal Commission was appointed to investigate this subject, and an Act of Parliament was afterwards passed establishing classes for deaf children.

Mr. Macleod Yearsley, the eminent aurist, who holds a special appointment to the Education Committee of the London County Council, has done a great work for the deaf child in Great Britain.

We must then:

1. Teach the young deaf child to speak.

2. Recognize the deaf child and secure his education by lip-reading and otherwise.

3. Provide special teachers and special classes for the deaf child, and, if necessary, in large cities provide night classes in lip-reading for adults who are deaf, or who are in danger of becoming deaf.

A great many children suffer from more or less defective hearing, and there is reason to think that in about half the cases this defect is not found out at school. The teacher, however, should find this out, and the hearing should be carefully tested by the School Medical Inspector, or, if there is no School Medical Inspector, by the teacher.

Children who have any difficulty in hearing must sit in the front row, and in cases where the hearing is so defective that they cannot hear well in the front row, they should have special instruction in Auxiliary Classes.

Teachers who have been trained in the 'Oral Method" can teach deaf children lip-reading and oral speech so that they can communicate as clearly, and almost as pleasantly, as children with normal hearing. This is such an unspeakable boon to the future citizen that no pains and energy on the part of the teachers, parents, and the public should be spared to secure it for the child.

Auxiliary Classes for deaf children should be a centre of education for the whole community on the subject of the welfare of the deaf. The teaching of deaf children is, accordingly, not only a branch of the profession of teaching, but offers a career of singular opportunity for any teacher with interest and a kind heart. We can teach these pupils speech, and we can teach them to understand the speech of others. The teacher in charge of an Auxiliary Class can so relate herself to her pupils and others that she will hear of any cases of deafness among young children, and will be a powerful aid to the School Medical Inspector, the School Nurse, the Department of Health, and the Education Department in furthering the welfare of the community.

THE DEAF CHILDREN MUST LEARN TO SPEAK

The Auxiliary Class for deaf children may be developed so that it will have a direct influence on the welfare of deaf children under school age, who should learn before two years of age to speak as the normal child does. The teacher can show the mother how this may be accomplished.

The presence of any deaf-mute child in our community is a severe reflection upon us. The disability cries out louder than any words, "Teach me to speak." Modern methods of lip-reading and of teaching children to find out the movements of breath, throat, tongue, teeth, and lips, which go to make the spoken word, are marvellous in their results, especially if the lip-reading is thoroughly understood and carried out at home, no sign language being permitted.

The normal child learns to speak by listening and by looking. He hears the sound many times and produces it. He looks at the face of the person speaking and sees how some of the sounds are made. The deaf child of twelve months or so coos and gurgles, thus showing that he has the elements of language—he says "ba-ba" like any other child. He has sight and touch by which to learn to speak, but, alas! he does not learn, because from one year to seven or eight no one attempts to teach him. The wonderful development of the brain in these years is blighted, because, when function stops, growth stops also. Helen Keller says that "Deafness means the loss of the most vital stimulus—the sound of the voice—that brings language, sets thought astir, and keeps us in the intellectual company of man."

About fifty per cent. of the persons who are congenital deaf-mutes are the offspring of intermarriages among those who are blood relations and have one or more deaf-mutes in their ancestry.

The Ontario School for the Deaf in Belleville has done a great and progressive work for the deaf in this Province.

HISTORY OF THE AUXILIARY CLASS MOVEMENT

CHAPTER III

About fifty years ago the first scientific or organized effort was made to examine and classify defective children, and to develop and improve their mental and physical condition. At first all such children, whether physically defective or mentally defective (idiots, imbeciles, feeble-minded) were grouped together, and but little progress could be made until the different groups were properly classified. In the case of the mentally-defective all pioneer workers hoped that training and good environment would turn them into normal children. This, of course, was found impossible; but the efforts made from 1818 to 1848 did show that almost without exception the mentally-defective can be trained and improved.

In 1843, Dr. Twining published a little book on the subject in England, which had much influence, and in 1846 Dr. Seguin, the greatest pioneer in this work, published his book on *The Treatment of Special Children*, which marked the opening of a new era in the education of the mentally-defective.

The first recorded attempt to educate an idiot was made in 1800 by Itard, the physician in charge of the National Institute for the Deaf and Dumb in Paris. During the half century or more which followed, a few residential institutions were established in different countries for the care of the lower grades of the mentally-defective, but it was not till 1859 that Principal Haupte of Halle in Saxony induced the School Board to allow him to begin an Auxiliary Class for seventeen defective children, in which they were to be taught

two hours every day. Principal Haupte was later made a Privy Councillor, and his whole career, up to his death in 1904, showed him to have been a man of unusual influence.

Dresden in 1867, Elberfeld in 1879, and other cities, also established Auxiliary Classes, and in 1894 the Imperial Board of Prussia authorized such classes for abnormal pupils of compulsory school age.

In 1907 Germany had 314 Auxiliary Schools with 921 classes, about 1,000 teachers and 20,151 pupils. In the German cities which have such Schools, there are reported to be 1.56 mentally-defective school children to each 1,000 inhabitants. Assuming this to be the average percentage, it would give 93,600 mentally-defective children in Germany, the population of Germany being in that year 60,000,000.

The first Auxiliary School in Austria was established in Vienna in 1885; and the first in Hungary, in Budapest in 1907. The Vienna School had in 1906 ninety-six pupils and six teachers, also two physicians attached to the staff. It is said to have the best Auxiliary School building in the world, with six graded classes, eight class-rooms, two shower baths, etc., etc. A training course for teachers is given at this school.

In Belgium the first Auxiliary School was founded at Ghent in 1904, and there are said to be 8,700 mentally-defective children for whom no provision has been made.

In Holland, in 1896, an Auxiliary Class was begun in Rotterdam. The number of children in Holland who need Auxiliary Classes is estimated to be about one and one-half per cent. of the school registration. In 1909 the Auxiliary Classes were placed under the same management as institutions for the mentally-defective, and not under public school management.

France, even with Itard, Seguin, Binet, Simon, and others to lead her, did not take action till 1909. In that year an

excellent law was passed and as a result five Auxiliary Schools were established in Paris and two in Bordeaux.

In Scotland there are Auxiliary Schools, chiefly residential, many of which are under private management. In 1908 there were nineteen such schools with 777 pupils, seventy-six teachers, and eleven nurses. In some both physically-and mentally-defective children are taught.

In Switzerland the first school was established in Basle in 1889. There were in 1909 eighty classes with 1,700 pupils.

In 1900, the first Auxiliary Class was established in Denmark, at Copenhagen.

In Norway, in 1889, a law was passed authorizing Auxiliary Schools.

In Sweden, in 1905, the first Auxiliary Class was opened, and in 1906 there were eleven such classes.

There are no Auxiliary Schools or Classes in Italy or Russia, but in Italy there is a National Society for the care of the mentally-defective, and in Russia many mental defectives are cared for in institutions belonging to the religious orders.

THE UNITED STATES OF AMERICA

In the United States, authorities differ as to which was the first city to establish a class for mental defectives. It is variously given as Cleveland, Ohio, in 1875, or Providence, R.I., in 1893.

A very large number of such classes have been established since 1900, most of them in the last five years. New York has about seventy-two " Ungraded " Classes, the first of which was established in 1899 in the lower East Side of New York, with Miss Elizabeth Farrell as teacher. In 1906, Miss Farrell was appointed Superintendent of Ungraded Classes. In 1912 there were registered in these Ungraded Classes 22,378 children. In 1913 the New York Board of Education opened a special clinic for the examination of children thought to be

mentally defective. Two specially trained physicians and four social workers, assisted by a consulting staff of alienists and psychologists, give all their time to the work of the Ungraded Classes. One member of the consulting staff is in charge of the clinic which is open daily at the Board of Education Building.

VISITING TEACHERS AND FIELD WORKERS

As the result of an investigation of a Children's Aid Society school in New York by Miss Irwin, Field Worker of the Public Education Association, it was found that out of two hundred and one children, twenty-five were feeble minded and thirty-two below normal.

A Field Worker appointed by the Association has also been attached to the Ungraded Classes, and in September, 1913, the Board of Education appointed two visiting teachers to help the regular teachers with subnormal children. In the few months they have been working these visiting teachers have already done good service. Their work often brings the home and school into harmony and changes the whole aspect of the child's world. With children as with adults, to know all is to forgive all. To lighten their burdens, to give them more scope, more encouragement, and more self-respect, to prevent ill-health or ill-behaviour and the formation of bad habits—to prevent "economic waste as well as spiritual waste"—is the work of a visiting teacher.

CHICAGO AND BOSTON

In Chicago, forty schools are centres for Ungraded Divisions, and great assistance is rendered in the work by the Chicago School Department of Child Study and Educational Research.

St. Louis and Washington have a number of such schools and classes which are doing good work. In St. Louis, 435 children are enrolled in the Special Classes—290 boys and 145 girls. In 1911-12 the cost per pupil was $122.93.

Boston was one of the first cities in the United States to do this work, and since 1899 a number of classes have been established. Dr. Arthur C. Jelly, the Medical Inspector of Ungraded Classes, takes a great interest in them. Within the past year they have been re-organized. It was found that most of the pupils attending Ungraded Classes were really mentally defective, the others being "disciplinary cases" and the children of non-English-speaking parents. All except the mental defectives are being removed to other classes. It is estimated that from 1,500 to 2,000 children in the Boston schools are really mentally defective.

PHILADELPHIA

In Philadelphia, the first class was established in 1901, and much attention has since been given to Special Classes by Dr. M. G. Brumbaugh, the Superintendent of Education.

A census of mentally-abnormal children was taken in February, 1909, by the Philadelphia Bureau of Health and the Department of Superintendence of Schools, and an able report was made in 1910, after full investigation, by the Committee on Backward Children.

In 1912 the Chief of the Bureau of Compulsory Education took a school census of the Backward and Defective Children with the following result:

Defects	Pupils Enrolled	Pupils Not Enrolled	Total
Blind	44	53	97
Crippled	154	180	334
Deaf	128	50	178
Backward	256	48	304
Epileptic	15	83	98
Tubercular	24	75	99
Speech Defects	128	102	230
Other Defects	119	374	493
	868	965	1,833

Another investigation shows that there are 3,000 pupils who are four years or more behind grade. There are in the Philadelphia Public Schools one hundred Special Class teachers, seventy-five of whom are teaching classes for mentally-defective children.

Baltimore has four Ungraded Classes for mentally-defective children and two for epileptics, as well as twenty-eight for backward children, including two for children of immigrants.

THREE INQUIRIES

As to the work and success of these Auxiliary, or Special, or Ungraded Classes in the United States, three interesting inquiries have been made.

The first dealt merely with the number of such classes, and was instituted by the Commissioner of Education for the United States in March, 1911. The number of cities reporting was 898, ninety-nine of which supported classes for the mentally-defective and epileptics, and 220 had classes for backward children.

The second was made in 1913 by Professor J. E. Wallace Wallin of the University of Pittsburgh. Professor Wallin had replies to a questionnaire indicating that Special Classes were provided in all cities of the United States with a population of 100,000 and over, except Scranton, Pennsylvania; in sixty-eight out of ninety-six cities with a population of 25,000 to 100,000; and in fifty-seven out of 156 cities with a population less than 25,000. Professor Wallin recommends that a better differentiated and more consistent classification should be made in these classes.

The third inquiry was by the authorities of the Vineland Training School, who sent a questionnaire to all the teachers of Special Classes who had taken the Training Course for Teachers at Vineland. The questions asked were:

1. What, if any, is the effect, beneficial or hurtful, on a backward or feeble-minded child, of contact with normal children in the class-room in the following cases:

(*a*) If the child remains with normal children of his own physical age, but of greater mental age?

(*b*) If the child is placed in a room with normal children of near his own mental age, but of younger physical age?

2. What, if any, is the effect, beneficial or injurious, on the normal children in the above circumstances?

3. What is the general effect of mingling backward and defective children with normal children in the class-room or outside?

4. Are there any ill effects on the children or on their parents of sending backward or defective children to the Special Classes?

The conclusions drawn from this investigation were that Special Classes are necessary and helpful, and that the support of the principals and teachers of the regular classes are indispensable to success.

STATE COMMISSIONS

In Massachusetts, New York, New Jersey, Pennsylvania, Michigan, and other States, the public authorities have appointed commissions.

In Michigan an inquiry was made in 1911-12 as to the heredity and extent of feeble-mindedness in the State. The Eugenics Record Office, New York, the State Board of Health, and the Home for the Feeble-minded and Epileptics at Lapeer, Michigan, co-operated in this work.

The inquiry in Pennsylvania was ordered by the Governor, Senate, and House of Representatives. Those in New York have been conducted by the State Charities Board, the Public Education Association, and others. All the reports are able and convincing, and the recommendations unanimous. They

agree with the recommendations of the Royal Commission in Great Britain and of every other authority that has investigated the facts or given any thought to the problem.

The researches conducted by the Eugenics Record Office, New York, have also contributed materially to the formation of a body of public opinion on this subject.

In the State of Washington, the Gatzert Foundation for Child Welfare was established in the University of Washington, Seattle, in 1910, for the better care and treatment of defective children in the State, with an endowment of $30,000. This Foundation has already conducted two clinics for the benefit of such children, and has assisted in the work of the Juvenile Court. It has published University Bulletin No. 82, entitled, *A Summary of the Laws of the several States relating to the Feeble-minded.*

RESEARCH

The Training School for the Feeble-minded at Vineland, New Jersey, will always be remembered for the work done by Superintendent Johnstone, Dr. Goddard, and others, in establishing and encouraging research in their own and other institutions. Their object is not only to care for four hundred inmates, and to relieve the families, the community, and posterity from an intolerable burden, but to show light along the path of prevention by ascertaining the cause of feeble-mindedness, and helping to frame a policy in regard to the mental defectives worthy of a modern, civilized, and Christian State.

THE FIELD WORKER

In all these investigations, manifestly the first thing to do is to ascertain the facts of each case, especially in regard to family history and heredity. Every one knows how difficult it is to do this. In the case of the waifs and strays, Immigrant children, Children's Aid cases, and the inmates of Poor Houses and Orphanages, no one knows the facts. The names

of these children have sometimes been changed three times when they have been adopted and found to be failures in as many families. Often the bad plan of giving no information on adoption, so as to let the child have "a fresh start," has been rigorously followed.

In the case of any respectable family it is hard to get the facts because the situation has become desperate. They are afraid to tell too much about the family history, lest the child may be refused admittance. And, in any case, though they may have reached the point of entreating admission, they "forget" a great deal.

But if a Field Worker with a heart, tact, and some scientific qualifications, goes to see them after the child is "settled-in" at the institution, and the family have begun to realize what a relief it is to have only normal people in the home, and if this Field Worker tells them of the success and happiness of the absent member, then much information may be obtained. The mother's family and friends are as useful as the father's. If there is any member of the former connection who was "wanting a penny in the pound," the latter connection will likely know it, and vice versa; and if this information is clearly and fully recorded, tabulated, and pieced together, the Mendelian Laws soon appear "writ large."

The Field Worker has an important place on the staff of the Medico-Psychological Department of the modern Training School for the Feeble-minded, and, as an expert Social Worker who can aid in the solution of many social problems and leave the houses she visits a little happier than she found them, she has an important and useful career. She can usually trace out the ancestry even of the waifs and strays.

NEW JERSEY

In 1912 the New Jersey Department of Charities and Corrections took over part of the research work of the

Training School, granting $2,000 for continuing it. The Report of 1913 shows that 12,300 of the citizens of New Jersey (1 in 206 of the population) are wards of the State. These persons cost $2,500,000 annually for maintenance and are housed in buildings which cost $10,000,000, the interest on which at five per cent. is $500,000. The total cost per year is $3,000,000. The demands for admission to Charitable Institutions are numerous and out of proportion to the increase in population. Special information is given in this first Report regarding the inhabitants of Burlington County—"The Pines"—a county where there is the highest proportion of State wards to the population, namely, one to 155. Not only is feeble-mindedness shown to be hereditary in many families, but "entire districts are peopled with families of degenerates whose mentality is below normal."

In New Jersey, an Act was passed in 1911 requiring that each Board of Education in the State shall ascertain how many children are three years or more below the normal grade in the Public Schools, and that each school district in which there are ten or more such children shall establish a Special Class or Classes for their instruction.

GREAT BRITAIN

In Great Britain private schools for Imbeciles were established at Bath and Highgate in 1848. In 1886, an Act of Parliament defined the word "idiot," distinguishing also between the mentally-defective and the insane. The first Royal Commission on the subject sat in 1888. In 1891, the London School Board ordered the first Special Class to be opened, and in 1892 Classes were opened in Leicester and in London. In 1899 the Epileptic and Defective Children's Act was passed, under which a number of Special Schools and Special Classes have been carried on in all the large towns and cities of England. The Act is now under revision. There

are ninety-two schools for mental defectives in London, with a roll of 7,785 children. Dr. James Kerr, Chief Medical Officer (Education) of the London County Council, and his assistants, made special researches and studies for the benefit of these children and of physically-defective children, the records of which in his Annual Reports to the Education Committee, London County Council, are of great value.

In Birmingham and other cities in England, where Special Schools and Special Classes have been conducted, a great deal has been done by Miss Mary Dendy, founder of the Sandlebridge Schools, and by Mrs. Hume Pinsent.

It has been shown that not more than one third of the pupils who have had the benefit of expensive Special Class education can attempt to earn their own living, and these attempts rarely last more than a very short time. Positions are obtained by the After-Care Committees for these children when they leave school at the age of sixteen years, but they cannot hold them, and are never able to maintain themselves.

THE MENTAL DEFICIENCY ACT

Thousands of children have now passed through these Classes, and the public interest and enlightenment caused by this and other educational work did much to secure the passing of the Mental Deficiency Act of 1913, which is regarded as "the most important measure of social reform and social justice of modern times." There is some reason, indeed, to regard it as a direct outcome of the educational work already mentioned, many of the leaders of the movement being members of the School Boards and County Councils. The Report of the Royal Commission on the Feeble-minded, appointed by King Edward VII in 1904, did most of all to secure legislation.

Another powerful influence in the long campaign of education, which was necessary before the Mental Deficiency Act

could be passed, was that of Boards of Guardians and other persons connected with charitable institutions, prison reform, the care of inebriates, etc. The influence of the medical profession and of recent scientific investigations into the origin and cause of mental defect also helped, but nothing contributed more to the passing of the Act than the attitude of large bodies of voters, such as the Manchester and Salford Trades and Labour Council. Their representatives, in dealing with the statement made by its opponents that the Mental Deficiency Act was an interference with parental responsibility, stated that, as workers, they did not agree with this, and that while working people who had a mentally-defective child might be able for a time to look after him, yet there was always the constant, harassing dread and doubt as to what would become of the child after they had passed away, and also that the method of caring for such children proposed by the Act was the humane one, and would benefit the children, the parents, and the community at large.

The representative of the working women on the same Trades and Labour Council, said that the working women, who were mostly married women, had come to the conclusion that these matters were being dealt with from the wrong end. "We wait," said she, "until our Workhouses and Homes and Prisons are filled, and we really think that this Mental Deficiency Bill will deal with it at the right end, and prevent many of these people finding their way into the places I have mentioned."

The Mental Deficiency Act of 1913 is essentially a preventive measure, and gives those who have long realized the needs of mental defectives and have had the will to help them, the power to do so. Besides many provisions relating to institutional care and the duties and powers of judicial, medical, charitable, and other authorities, the Act provides for placing defective children and adults under guardianship.

County Councils and other Municipal authorities must, under this Act, ascertain what persons within their areas are mentally defective, and educational authorities must ascertain what children within their areas are permanently incapable, by reason of mental defect, of receiving benefit from instruction in the ordinary schools, and must notify the local authority of the names and addresses.

The safeguards incorporated in the Act are of a satisfactory character. No mentally-defective person can be placed under care without proper certificates by two Medical Examiners, one of whom must be the physician specially appointed for the purpose by the local authority or the Board of Control, and, in addition, an order from a Judge, a Police Magistrate, or from the Secretary of State. Provision is also made for the re-examination of any mentally-defective person in an institution within one year of admission, and at intervals thereafter.

The local Education authorities are also required to ascertain what mentally-defective children are incapable, by reason of mental defect, of profiting by instruction in Special Schools, and to notify the Local Committee, appointed by the County Council or other municipal authority for the care and control of the Feeble-minded, of the names of all these children, and why they cannot be trained in a Special School, and also of all children who, on attaining the age of sixteen, are about to leave the Special School, and are, in the opinion of the Education authorities, unable to care for themselves.

In order to secure the highest possible degree of accuracy in regard to such certificates and reports the Education authorities must in every case, if required, send a copy of the certificate and report to the Education Office at London, so that in no case shall there be danger of any child not having an adequate trial in a Special Class, or being incorrectly certified.

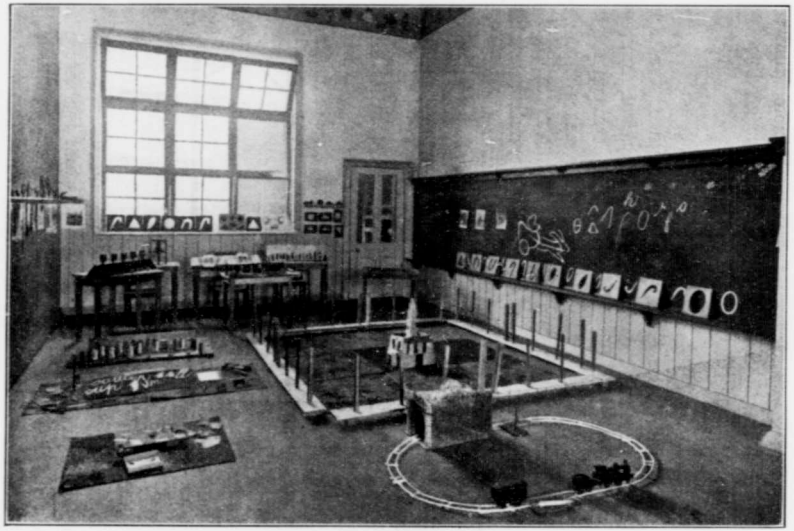
The annual Government Grant for the purposes of this Act is £150,000, to be apportioned according to the number of mental defectives cared for.

NEW ZEALAND

In other parts of the British Empire marked progress has been made in dealing with this question from an educational point of view.

In New Zealand it is dealt with under "An Act to Amend the Education Act of 1908," passed in 1910, which came into force in 1911. This Act provides that it shall be the duty of the parent of any blind, or deaf, or feeble-minded, or epileptic child to provide efficient and suitable education for such child. If the Minister of Education finds the parent unable to do this, then the Minister may direct that the child be sent to such school as he thinks fit, and the parent shall contribute such sum for his education as may be agreed upon between the parent and the Minister.

The Act further provides that if the Minister considers that any feeble-minded or epileptic person, apparently twenty years and six months of age, is not a proper person (in his own or the public interest) to be without guidance or control in a Residential Special School, the Minister may direct the Principal of such School to make application before a Magistrate for an order directing that the said person be detained in the School. The Magistrate is then to assign counsel for such person, and after taking evidence, he shall decide on the application. This procedure is to be repeated at intervals of four years or less. This Act was applied in 1912 for the care and protection of four boys and one girl who had attained the age of twenty-one years and were in the New Zealand Residential Special School at Otekeike, Oamaru, New Zealand. The School was established in 1908 with four boys as the first pupils, and has undergone a process of gradual development. The site is a fine one and comprises 352 acres of farm land. There are now about 150 pupils in residence.



PLAY-ROOM FOR THE LOWEST GRADE

Special school for mentally-defective children, Victoria, Australia

It will be noted that this Institution began on a small scale and has developed gradually. Such development is one of the conditions of success. It will also be noted that the Act, like the Ontario Act, does not forget the needs of the physically-defective.

AUSTRALIA

Some of the States of the Commonwealth of Australia already have legislation dealing with the subject of Auxiliary Classes. In Victoria, for example, "An Act to amend the Education Act," passed January 4th, 1911, makes it obligatory that parents shall send defective children to Special Schools, under penalty of fine and imprisonment. It also provides that the parents, if able, shall pay a fee for these classes. The age limit during which attendance is compulsory is from seven to sixteen years. There are also Auxiliary Classes in Melbourne and Sydney.

The Australasian Medical Congress in 1911, at its Annual Meeting held at Sydney, appointed a Committee to investigate the prevalence of feeble-mindedness, to educate the public, and to promote a popular campaign dealing with the subject. At the Annual Meeting in 1914 this Committee presented a Report of thirty-two pages, containing statistics and information which showed a great deal of research and hard work, especially as all such inquiries "have to contend against great apathy and inertia, even in the medical and teaching professions themselves." The Committee devoted nearly all its efforts to an inquiry into the prevalence of mental defect among children of school age, and states that the percentage of mentally-defective children in Australasia is much the same as in England. It also states that there is urgent need for some legislation enabling institutions to detain mentally-defective persons under due legal safeguards.

It recommends day schools, residential schools, and colonies for the permanent care of the mentally-defective because "the

feeble-minded are far happier as well as safer in them than when left to the mercy of the world, which has too much to do to make allowances for them or prevent their misconduct or disaster. The expense of instituting the colonies would undoubtedly be large, yet truly economical when the present expenditure on the feeble-minded in Gaols and Charitable Institutions is weighed in the balance. By such means alone can the State hope to prevent the feeble-minded from forming the large proportion they do of our habitual criminals, drunkards, prostitutes, and wastrels, and thus alone can they with propriety be prevented from propagating their undesirable type."

At the request, and with the co-operation of this Committee, an investigation as to the number of mentally-defective children in the 2,241 Public Schools of Victoria, Australia, was carried out, and in the Report of the Minister of Education for Victoria the returns for 1913 are available for all but fifty-seven small rural schools. The returns include children from about five and a half to fourteen years of age actually attending the Public Schools, without taking into account children below or above these ages, or children attending other schools, or the "ominous number of 7,331 children who do not attend school at all." The totals show 732 mentally-deficient children, or .42 per cent. of the whole, and 3,400, or two per cent., "subnormal or mentally dull," having only the intelligence of a child two or more years younger. The return also shows "113 epileptic children, most of whom will become mental deficients." This means that "taking all ages up to sixteen years, there are 1,650 mentally-deficient children" in Victoria. The total number of children of all ages in Victoria is about 396,000.

"The magnitude of the problem, obvious at once by consideration of the above-mentioned figures, will be fully realized only when the final returns are obtained from the other sources

—State Schools, truant officers, medical practitioners, institutions, and homes." The figures for the three chief cities are also given separately, and the returns for Melbourne are particularly important. In 1911 the medical officers visited eleven schools in Melbourne, with an attendance of 9,000 children, and found ninety-two of them definitely feeble-minded, and an additional number of forty-eight, whose cases they considered should be specially investigated. The teachers' report was 212 in 38,000, or .56 per cent. "The tests by the Medical Officers practically doubled the teachers' estimate of the number of feeble-minded, and trebled it for the number needing special education and investigation."

"The reason for this is that the high grade feeble-minded who may reach, but never pass, the stage of intelligence of children nine to twelve years old is not easily recognized, and then only in the later years of school life. The child appears usually under the head of the mentally-dull, and is distinctly abnormal and, later on, most important from a social point of view. The teachers' estimate will thus be realized to be an absolute minimum dealing only with the intermediate grades and not including the gross cases (idiots, etc.) on the one hand, and the less marked high grades of feeble-minded on the other. The very fact of its being a minimum, however, definitely enhances its value and emphasizes the size of the problem before us. If our experience in Melbourne is applicable to the whole State, the real figures for Schools would be twice 732=1,464, or .8 per cent. feeble-minded, and three times 732=2,196 definite plus probable cases, or 1.2 per cent." The population of Victoria was 1,362,794, and of Melbourne 600,160, according to the census of 1911.

As a consequence of this investigation the Government of Victoria was asked:

1. To establish Special Schools or Special Classes for the mentally-defective;

2. To establish residential schools for those defectives needing special care and attention and those from rural districts who cannot reach special schools;

3. To provide a colony for adult defectives;

4. To secure special legislation.

The Cabinet took a favourable view of these requests, and the Inspector-general of the Insane, Dr. W. Ernest Jones, was directed to prepare a Bill for presentation to Parliament.

CANADA

In the other Provinces of the Dominion the question of the training and the care of the higher grades of mental defectives is receiving a good deal of attention. It may be presumed that so far as percentages are concerned the situation in them is much the same as in Ontario.

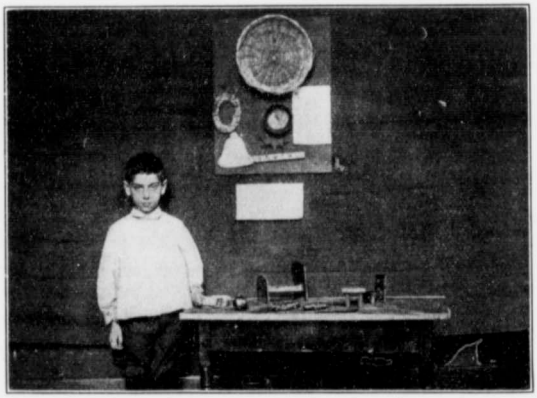
In May, 1908, the Nova Scotia League for the Care and Protection of Feeble-minded Persons was formed at Halifax, Nova Scotia. A special inquiry in the schools of Halifax was made by Supervisor McKay, who wrote to all the teachers of the Public Schools, asking them to report the number of mentally-defective pupils they had who could not profit by their teaching, and also if they knew of any defectives of school age in the school districts who were not attending school.

In New Brunswick, the cities of St. John and Fredericton have taken some steps looking toward the formation of Special Classes, and in Quebec a large number of the mentally-defective are cared for in different charitable institutions. In Prince Edward Island no steps have been taken as yet.

In Manitoba, the Board of Education and the Children's Aid Society of the city of Winnipeg have moved in the matter, and in Saskatchewan and Alberta the press and public officials are endeavouring to bring the matter to the attention of those concerned. The Superintendent of Neglected and Dependent Children in Alberta has had some children who are mentally

defective under his charge and has advised that steps be taken to care for them permanently.

The Minister of Education for British Columbia, the Honourable Dr. Young, has also had this matter under consideration, and two Auxiliary Classes have been opened in Victoria and Vancouver.



WORK DONE IN A SPECIAL CLASS

—*Witmer*

ONTARIO AUXILIARY CLASSES ACT, 1914

CHAPTER IV

THIS Act, which provides for the establishment of Auxiliary Classes and Schools in Ontario, and includes the chief provisions of the Special Classes Act (repealed under Section 14 of the present Act), was passed in 1914, and came into force at once.

Sec. 2. By it the Minister of Education is empowered to make such regulations as may be found necessary in accordance with this Act and the Department of Education Act, and it is provided that the Board under whom the Classes are to be established may be a Board of Education, a Board of Public School Trustees, or a Board of Separate School Trustees in a city.

Sec. 3. The pupils in Auxiliary Classes are to be those who from any physical or mental cause are unable to take proper advantage of the ordinary Public or Separate Schools Courses. Children who are of a low grade of mental defectiveness, and cannot be taught in such classes, are not eligible for admission.

Children who cannot see or hear well enough to learn in the ordinary classes, especially the deaf or semi-deaf, and the blind or semi-blind, as well as those whose general health is so poor that they need open-air schools, or open-air classes, and those who have difficulties in learning of a less evident, definite, or well-ascertained character, are all entitled, under the Act, to the advantage of instruction which will give them the education that other children get in the ordinary classes.

There are many physical disabilities that can be removed

under medical advice and direction, and those schools which have the advantage of the services of School Medical Inspectors and School Nurses have been able to secure in many cases that children suffering from adenoids and other affections which seriously impair their health and power of learning have had such disability removed by the family physician or by treatment at a hospital.

On the other hand, there are many children suffering from poor sight and hearing who do not know it themselves, and the teachers and parents have not noticed it or thought of it. It cannot be too often repeated that it is necessary to search out such cases. Only a careful examination of sight and hearing by a competent examiner will determine what children really need instruction in Auxiliary Classes, or, at the very least, special consideration as to seating, repetition of work, etc. It has been found that, even when such examinations have been made, they have sometimes been conducted so inefficiently that the children learned by heart the test type letters and told them to the other children, the result being that out of one or two hundred children, every one has been reported as possessing normal sight. Such an examination is worse than useless. When a child is not "getting on" at school the cause of his backwardness must be found and, if possible, removed. The Auxiliary Class now gives us a better opportunity to do this. It is better for a child to be educated in the ordinary class, if that is possible; but if it is not, it is infinitely better for both the child and the community that he should be educated in an Auxiliary Class than not educated at all.

It is, therefore, of the first importance that we should find out (1) why the child is backward, and (2) what can be done to remove the backwardness. In other words, great care must be taken to give children who need it instruction in Auxiliary Classes.

Sometimes the disability of the child, such as severe lameness, makes it necessary that means of reaching the school should be provided, as well as care and comfort at school. This is provided for in the Act.

POWERS OF THE BOARD

Sec. 4. The Board has wide powers with reference to the establishment, curriculum, and staffing of Auxiliary Schools and Classes. Subject to the approval of the Minister of Education, it is empowered to acquire sites and erect buildings, establish any course of instruction and training that may be desired in order to train and educate the children, and appoint teachers and instructors, not only in the ordinary school subjects but also in any trade, occupation, or other work that the Board may think proper, and may, subject to the approval of the Inspector of Auxiliary Classes, conduct such school and classes as a residential school and training home, and do everything necessary for this purpose. The site and buildings referred to may, with the approval of the Minister of Education, be in an adjoining municipality.

RELIGIOUS INSTRUCTION

Sec. 5. In the event of a residential school being established it shall be the duty of the Board to make due provision for the religious instruction of the pupils by the clergymen or ministers of their respective denominations.

WARDS OF THE BOARD

Sec. 6. In a residential school the pupils shall be wards of the Board, and shall so remain during school age and up to the age of twenty-one years, if the Board and the Inspector of Auxiliary Classes decide that this is advisable.

ADMISSION

Sec. 7. Admission to Auxiliary Classes and Schools shall be obtained on the report of the Board of Admission, consisting of the Principal of such Auxiliary School as Chairman, and two other members, one of whom shall be the School Medical Inspector, and the other the Inspector, or the Chief or Senior School Inspector, as the case may be. All admissions must be approved by the Inspector of Auxiliary Classes.

Subject to the regulations, pupils may be admitted to the Auxiliary Classes from other municipalities.

Fees for instruction and for board and lodging, payable by parents and guardians, shall be fixed by the Board, with the approval of the Minister of Education.

MEDICAL CARE

Secs. 8, 9. Medical care and treatment of the pupils, if necessary, shall be provided by the Board, and in order to secure the best results the Board may direct the School Medical Inspector or other officer to visit the home of the child and consult and advise with the parents about such matters.

FINANCE

Sec. 10. The transportation to and from the Classes may be provided for by the Board out of its funds.

Sec. 11. All moneys required by the Board for carrying out the objects of the Auxiliary Classes Act shall be raised in the same manner as any other moneys required for Public or Separate Schools under the control of the Board.

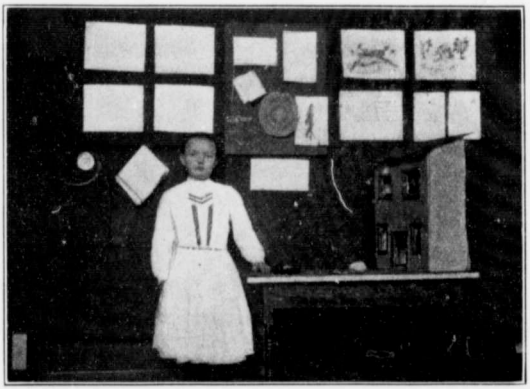
REGULATIONS: APPOINTMENT OF INSPECTOR

Sec. 12. The Minister of Education may from time to time, subject to the approval of the Lieutenant-governor in

Council, make all regulations necessary for the administration and enforcement of the Act and for the establishment and carrying on of such schools in every necessary particular, and also for the appointment of the Inspector of Auxiliary Classes.

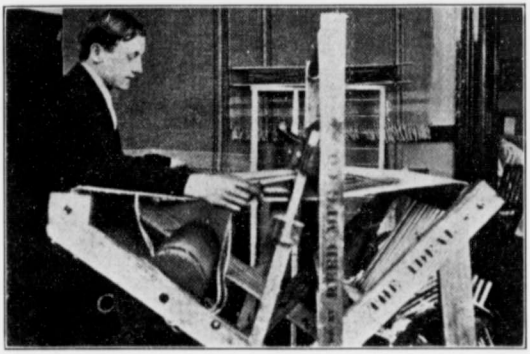
GRANTS

Sec. 13. The Minister of Education shall annually, in accordance with the regulations, apportion among all Auxiliary Classes all sums of money appropriated as a grant therefor.



WORK DONE IN A SPECIAL CLASS
—*Witmer*

THE GIRLS' BAND, VINELAND, NEW JERSEY



RUG-WEAVING, VINELAND, NEW JERSEY

QUALIFICATIONS AND TRAINING OF TEACHERS FOR AUXILIARY CLASSES

CHAPTER V

THE training and education given in Auxiliary Classes, as in all other classes, really depends on the character and personality of the teacher. It is of essential importance to secure some one for this work who will be a saviour to these children. The teacher should understand the underlying reasons of State which have made every civilized country determine to educate its future citizens, even when they suffer from some disability. If the child cannot adapt himself to his environment, as children who have perfectly normal mental and physical powers can, then the State must set about making his environment more suitable to him. This is what is aimed at in Auxiliary Classes.

The teachers who are to carry out this purpose of the people must be recognized as among the most important of the profession. They should possess certain personal and professional qualifications, and should be paid accordingly. An increased salary should be given for work which requires long preparation, and which not many teachers can do. Such a teacher should have had perhaps about three to five years' experience in class work, and that experience should have been a varied one. Some special training is indispensable and is best secured, as a rule, in residential institutions. This statement applies more especially to the teachers of mental defectives.

BRAILLE METHODS AND LIP-READING

Teachers of children who are semi-blind must, of course, have acquired the all-important special Braille methods. For

children who are entirely deaf, or in danger of becoming so, lip-reading is indispensable. The teacher who has the gifts of leadership and social vision will be able to organize both these types of Auxiliary Classes as social centres in the community for those whose future success in life depends, even more than in the case of normal children, on their education. These pupils will be connected with the class for a longer time. The school and the teacher may be a true *alma mater* to them and, besides, the Class will in time attract to itself all those who, in the city or town, or, indeed, perhaps in that district of the Province, need such instruction. A nursery should be attached to the Class for deaf and semi-deaf children, where mothers might come with any child from one to three years old who has been born deaf or has lost the sense of hearing. The need of this has already been explained.

AUXILIARY CLASSES AS A CENTRE

These teachers should co-operate through the School Medical Inspectors and School Nurses with all other public officials and agencies, such as Medical Officers of Health, and hospitals, particularly those hospitals where scarlet fever, measles, and meningitis are treated. They should also aim at educating the public to help to prevent deafness, or blindness, or physical defect of any kind, and especially as to the necessity of preventing any such defect from growing worse. Cases of discharging ears, for example, are very common, and in every such case there is danger, not only of deafness, but even of death; for such a discharge means a local infection, which, if not cured, may reach the brain and prove fatal. The proper and thorough treatment of diseases of the eye in childhood is another matter of enormous importance.

The organization in this way of the Auxiliary Class as an integral part of work for social and educational betterment and welfare, with a certain connection with research work

and the progress of School Medical Inspection, will not only be of great benefit to the children concerned, but will make a difference to the teacher.

PERSONAL QUALIFICATIONS

Volunteers are to be preferred as teachers of Auxiliary Classes, especially of classes for mentally-defective children, but much depends on the reason for volunteering. Those who have been able to "make something of" backward and defective children are often so fascinated by seeing what can be accomplished that they feel disposed to devote themselves to the work altogether. Anything one takes an interest in grows more and more interesting, and some modern educational methods have been discovered in class-rooms where mental defectives are taught. The child a teacher gets a chance to understand always finds a place in her sympathies and affection. Volunteers for Auxiliary Class work should know something of the Crafts. Vocational training is going to be an important function of Auxiliary Classes. Mental defectives have better hands than brains: we must train their brains through their hands. There is no use keeping them long at reading and writing and figuring.

Next to knowledge of the Crafts comes adaptability. The ordinary school-room methods do not suit mental defectives. It is said to be characteristic of a really great mind to be willing, when necessary, to throw away old plans and ideas and make new ones. Some people have no mental scrap-heap, and consequently their mental life is lived on a low plane. They never reach really efficient brain-functioning.

The Auxiliary Class teacher must be of infinite resource and sagacity, tactful, just, sympathetic, adaptable, public-spirited, and patient—for without patience, and plenty of it, nothing else will avail. She usually has an even, sunny temperament. She must realize how great the

achievements of the mental defectives are. The lightning-flash action of a normal adult mind and body is very different from the slow action of the mind and body of the mental defective, for whom it is an overwhelming and gradually-performed task to clasp the hands. The teacher in charge of such children must have a great deal of freedom and very few fixed rules. She must be able to do much with little; she must analyse every task into tiny steps, and teach one step at a time. She must be at liberty to take the children out of the school environment for a pic-nic, or a country walk, or to do anything else that will enable her to judge and develop their common sense and mental ability.

No member of the teaching profession, or of any other profession, has a greater sphere, or may have a more honourable career, than the teacher of the Auxiliary Class. In the true sense, she is a specialist, and she is in a better position to do original work than most teachers. She has also a greater opportunity than most teachers to discover new solutions of important educational problems. Such a teacher must have exhaustless courage and be a born encourager of children. Always encourage defective children. They never need discouragement. E. R. Johnstone says that for the mental defectives, "The sign is a smile," and the password "Do you belong?"

TECHNICAL AND INDUSTRIAL EDUCATION

The cherished picture of a model school-room with children sitting immovable in straight rows, and standing up, hands behind them, cannot be seen in Auxiliary Class work. The teacher has no time for it. Her task is to help the physically-defective and make them good citizens, or to rescue the backward child and return him to normal school life with the other children, or to prepare the mental defective to take up simple industrial occupations in an environment where, under

permanent care and protection, everything is arranged to suit him and nothing to harm or annoy.

Teachers of Auxiliary Classes should always have as many "strings to their bow" as possible. For them a knowledge of handicrafts is necessary. This is the case pre-eminently in work for mental defectives, but it is also the case in Auxiliary Classes for the physically-defective, the members of which must face the fierce competition of modern industrial life.

In a residential school and colony it will be enough if mental defectives are able to do some one thing, as gardening, manufacture of clothes, domestic employment, or the production, care, and preparation of food, so as to fit in to the simple plan of life in the home or colony, and to pay, or partly pay, for the cost of their maintenance. Their every power should be developed with this end in view. Mental defectives cannot be made citizens, and we should not waste our time any longer following the theory that we can make them responsible. They never are and never will be. But the physically-defective pupils may take their places as citizens, and bear the citizen's burden in spite of their heavy handicap. Whatever doubt there may be as to the duty and wisdom of preparing other children in school to earn a living, nobody can have any doubt about these children. As a rule, unless specially gifted intellectually, they must gain such dexterity at printing, watchmaking, manufacturing jewellery, or other suitable occupation, as will enable them to make their way. Accordingly, a place must be reserved for such a class in the Technical and Trades Schools. Their teachers should be strong, firm, discerning, patient, enthusiastic, kind, and really fond of children.

METHODS

A knowledge of kindergarten and primary methods and of physical education, in addition to special training and industrial training, is helpful. The Auxiliary Class teacher

must never be the slave of routine; originality and adaptability are at a high premium in Auxiliary Class work.

THE PRINCIPAL AND STAFF

Where there are two or three Auxiliary Classes, it is better on the whole that they should be grouped together in one school, if this can be arranged. There should always be a specially qualified Principal in charge of each group. There is scarcely any part of the school system which will not have some relationship, at some time, with the Auxiliary Class work, and it is important that the Principal, or other officer who directs the work, should be able to make the most out of such relationship. The duties of the Principal should be clearly defined. In large cities where there are several classes for mental defectives, and several for physically-defective children, there should, of course, be a specially qualified Principal in charge of each group.

Besides the qualifications and experience above referred to, the Principal needs executive ability, public spirit, and a strong sense of justice. Recommendations as to the appointment of teachers, the division of their duties, the development of the Auxiliary Class system and its adjustment to the needs of the children and the community, the equipment of the class-rooms, the programmes and time-tables of the work, and a great many details and emergencies and new departures which are sure to present themselves for consideration and decision, offer a wide field of thought and work, an opportunity for leadership and direction, and a sphere of great usefulness and interest.

Besides the teacher in charge of an Auxiliary Class, it is always an advantage to have an assistant. One person can hardly carry on work in an Auxiliary Class to the greatest advantage. Individual work is required. The assistant may be some one who is preparing to take up Auxiliary Class work

or a teacher in training, for Auxiliary Class work will probably form in the future an important subject on the curriculum of Faculties of Education and Normal Schools.

THE SCHOOL MEDICAL INSPECTOR AND SCHOOL NURSE

An attendant is another important member of the staff of an Auxiliary School. Where the Auxiliary Classes are held in a private house, the housekeeper is frequently appointed as attendant. This was the case in St. Louis, where ten Special Classes were held in as many private houses rented for the purpose by the Board of Education.

The School Medical Inspector and the School Nurse attached to Auxiliary Classes should be specially qualified and experienced, and the School Medical Service should be permanently organized with this in view. It is a great loss to have suitable and successful officers removed to other schools, and their places taken by novices. Proper organization is to the advantage of the Service itself, as it promotes interest and efficiency, and enables both the Doctor and the Nurse not only to acquire special knowledge and a personal influence with the school authorities and the parents, but to specialize and avoid the tedious routine, which is otherwise apt to interfere with their usefulness.

There are many things in the care of the children and their instruction in manners and usages that they have had no previous opportunity to learn, for example, personal hygiene, the care of their clothing, the care and adornment of the rooms, and other matters. In these the housekeeper or other attendant may prove herself invaluable.

In schools for physically-defective children, the work of the Doctor and Nurse is not only of great benefit to the children, but is of the utmost medical and social interest. In arranging for the finding of such children, for their admission, and for the necessary special equipment, such

as rolling-chairs, couches, special desks, etc., the Nurse may render great service. She should also supervise the transportation of the children, and accompany them in any conveyance that may be provided. It cannot be too clearly understood from the beginning that admission to the Auxiliary Classes is a great privilege. The hours are shorter than in the ordinary schools, the rooms are more comfortable, and the teachers do more for the pupil. The stay in these classes is to be as short as possible, and where the Auxiliary Classes are properly taught and equipped, the benefits are at once apparent.

Auxiliary Classes for mentally or physically-defective pupils should be conducted wholly apart from those for truant or delinquent children. The reasons for this are obvious.

TRAINING OF TEACHERS FOR AUXILIARY CLASS WORK

Next to the personality, character, and aptitudes required for Auxiliary Class work, special training is of greatest importance. It is of much more importance than long experience in teaching ordinary classes. In Ontario, those who have been appointed to do this work have had some training. The teacher of the Auxiliary Class in the Toronto Public Schools attended the Summer Session at Vineland for the teachers of Special Classes, and in 1913, Inspector Putman, of Ottawa, writes: "During July and August we sent two experienced teachers to Rochester to take an eight weeks' course in handwork industries, such as are used for the education of the feeble-minded—weaving, knife-work, basketry, and clay-modelling. During the autumn term these two teachers spent two months studying the problem of feeble-minded children in American Schools and other Institutions. One of them spent her time in the Massachusetts Institute for Feeble-minded at Waverley and in the schools of Boston. The other spent two months in the Vineland Training School in New Jersey and in the schools of Philadelphia, Trenton, and

Newark. These institutions in Massachusetts and New Jersey are admitted to be the best in America, and the schools for the feeble-minded in the cities visited by our teachers are taught by their graduates."

The best place to train teachers for Auxiliary Classes and to study mentally-defective children is in an institution where these children are cared for under the best conditions. This work has been done in Great Britain and also in the United States, where Institutions like Star Cross, Sandlebridge, Darenth, Waverley, and Vineland are available. In order to know what, and how, we can teach the children, we must know what they can learn, and how they can learn it best. In the outside world, where the mentally-defective child is really a "foreign body," we have little or no chance to understand him. He needs a place of his own where the environment is suited to him.

RESEARCH

The moral obligation to study out the problem of the care of mental defectives has appealed to the pioneers in institutional work. In 1898, Dr. A. C. Rogers, Superintendent of the Minnesota School for Feeble-minded and Colony for Epileptics at Faribault, appointed a psychologist, Dr. A. R. T. Wylie, to begin Clinical Laboratory work there. Mr. Edward R. Johnstone, of Vineland, however, was the first person to realize that, great as is the work of caring for four hundred mentally-defective persons in an Institution, there is a greater work that a training-school for feeble-minded can do. The greatest thing that such a training-school can do is to find out why these children came into the training-school, or, indeed, into the world. Why are they feeble-minded and other children not? Where did they come from? What is their ancestry? What was their environment? What are their mental and physical characteristics? These questions

are important because they all lead up to the one important question: How can we prevent this enormous evil—this hopeless and miserable condition, and all the evils it causes? Mr. Johnstone set out to answer this question by establishing, from private funds obtained by him for that purpose, a Psychological Clinical Research Laboratory at Vineland in 1905. Of this Dr. Herbert H. Goddard was appointed Director in 1906. Some of his work is recorded in the books listed in the appended Bibliography, but what we are now especially concerned with is to point out the impulse given to the training of teachers by this Training-school and its Research Department.

Since 1904 a Summer Course has been given at Vineland to those who wish to qualify as teachers of Special Classes, and in 1911 another Special Course was opened for those who wish to qualify as Medical Inspectors of Schools, with special reference to the examination and treatment of mentally-defective children. Similar Training Classes are conducted at the New York State Custodial Asylum at Rome, N.Y., and the Home for Feeble-minded and Epileptics at Lapeer, Michigan, and a great many teachers have received more or less instruction at Waverley, Massachusetts, under Dr. Fernald.

A large number of American Universities also give special Lecture Courses and Clinical Instruction to students in their Faculties of Education and Departments of Psychology on the examination, education, and treatment of mentally-defective children. Among these are the Universities of Pennsylvania, Washington, Minnesota, Missouri, New York, Iowa, Oklahoma, and Johns Hopkins, Pittsburgh, Yale, Leland Stanford, Harvard, Cincinnati, Tulane, and Cornell. Similar instruction is given in the Medical Schools of Columbia, Harvard, Johns Hopkins, New York, Chicago, Yale, Michigan, and Cornell Universities. Some instruction is given in the State Teachers' College, Greeley, Colorado, and in Normal Schools

SUMMER SCHOOL FOR TEACHERS, 1912, VINELAND, NEW JERSEY, U.S.A.

in Colorado, California, Illinois, Massachusetts, Minnesota, Michigan, New York, Pennsylvania, Indiana, and Washington.

Next to the opportunities given by Special Departments in Institutions, the Departments of Education mentioned above give the most satisfactory opportunities for the training of teachers for Auxiliary Class work for mentally-defective children.

Students are trained in psychological diagnosis in the University of Pennsylvania, University of Pittsburgh, and the University of Washington. For many reasons, however, teachers should not be expected to take the responsibility of the diagnosis. That is a matter for an expert who has at least the professional qualifications of a physician and some knowledge of psychology, as well as the necessary experience.

A number of the Courses referred to above are given in the Summer Sessions only.

In the School of Education of the University of Pittsburgh a Summer School is conducted, lasting about eight weeks, in which a great deal of suitable work is done. Here every effort is put forth to make the work practical and useful. The chief subjects of study and lecture are:

Clinical Psychology and the Study of Mentally Exceptional Children; The Care and Education of Backward and Feeble-minded Children; Psycho-Educational Pathology, and Educational Therapeutics; Social Investigation; Industrial and Manumental work; Child Study; Educational Psychology; Principles of Education; Biological Aspects of Education; Experimental Pedagogy; Play, and certain Industrial Arts, such as wood-carving, jewellery and metal-working, ceramics, and modelling.

This Course was established in March, 1912, as a part of the work in the School of Education of the University of Pittsburgh, under the Department of Clinical Psychology and Special Education. It includes a Psycho-Educational Clinic. The Director of the Department is Dr. J. E. Wallace Wallin.

The University of Pennsylvania, in its Psychological Laboratory and Clinic, under the direction of Professor Lightner Witmer, who is Professor of Psychology in this University, established in 1896 Special Courses for the benefit of those who were preparing to teach exceptional children. Although a great deal of attention is given to mental defectives in the Summer Course which has been developed here during the last eighteen years, the Department is more interested in the professional training of expert teachers for restoration classes than in the training of teachers for feeble-minded institutional cases. "Restoration Classes are classes for children who are normal mentally, but for some reason have fallen behind in educational progress, and are correctly described as backward, but not feeble-minded."

In this University the following courses are given during the Summer term of about seven weeks:

Abnormal Psychology; Child Psychology; the Psychological Clinic; Orthogenic Methods; Social Factors of Juvenile Efficiency; Clinical Tests and Measurements; Laboratory and Didactic; General Psychology; Mind and Body; Genetic Psychology; Behaviour; Qualitative Analysis; Clinical Methods; Individual Laboratory; Observation Classes.

This Psychological Laboratory and Clinic has thus for eighteen years afforded general scientific training and clinical work for teachers. It now offers a similar Course occupying four Summer Sessions, or one Summer Session and one regular Academic Year's work, for college graduates in the graduate school who are qualifying for the M.A. degree in the University of Pennsylvania. The removal of speech defects, speech training, physical education—especially corrective gymnastics, scientific kindergarten methods, and training for visiting and social workers, are included in the Course. A Social Service Department with a staff of five social workers is an integral part of the Department.

New York University provides a Course of about seven weeks in the Summer School, specially arranged for teachers of classes for backward and mentally-defective children. The Director of this Department is Dr. H. H. Goddard, of Vineland, and the Associate Director, Professor Gesell, of Yale University.

The following Courses are given, including lectures, summer work, observation classes, and laboratory work:

The Psychology of Defectives; The Pedagogy of Defectives; Tests of Intelligence; Supervision and Administration of Schools and Classes for Defectives; Manual Arts; Household Arts; Basketry; Calisthenics, Games, and Dancing; Abnormal Psychology; Criminal Psychology; Experimental Psychology; Sociological School Work.

Beginning with the Academic Year 1914-15, New York University offers a two years' course of training for teachers of Ungraded Classes. The Course includes eighteen hours' instruction per week, each year, the tuition charge being $150 per year. For entrance a student must have graduated from a high school and a normal school or training school, or must have secured an equivalent training. The required work is as follows:

For the First Year:

Anatomy and Physiology; Hygiene; Physical Education; General Psychology; Psychology of Defectives; Psychological Analysis of Backward Children; Principles of Education; Observation and Practice; Industrial work, and additional work.

For the Second Year:

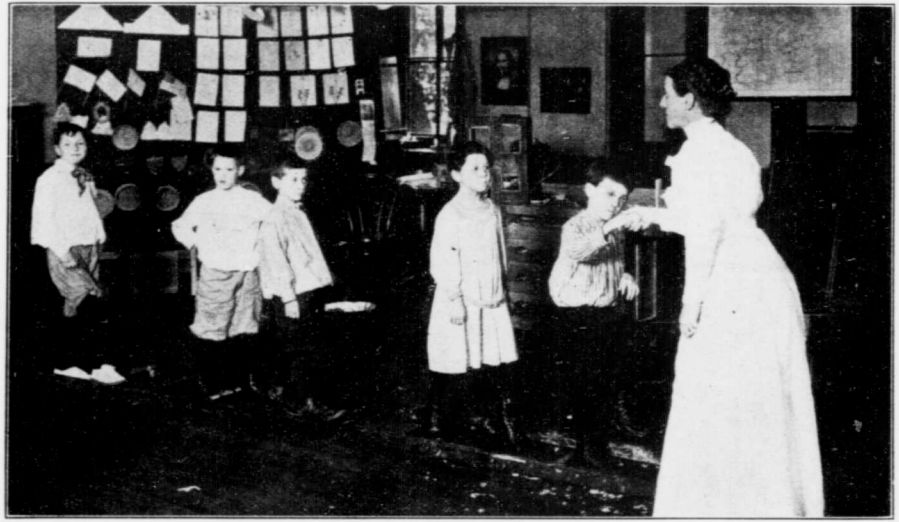
Plays, Games, and Rhythmic Exercises; Methods of Teaching with special reference to the Mental Defectives; Special Methods in Sense Training; Special Methods in Speech Defects; Organization and Management of Special Classes; Advanced Observation and Practice; Industrial Courses, and additional work.

The Board of Education of the City of New York, in co-operation with the Brooklyn Training-School for Teachers, adopted in 1912 a special Course of Study for teachers of Ungraded Classes in the following subjects:

Psychology; Physiology; Speech-training; Methods of Teaching adapted to the Mentally-Defective; Story-telling; Class Management; Gymnastics, Games, and Folk Dances; Manual Training.

Fifteen teachers took this Course in 1912, and fifteen others in 1913.

A large number of the teachers in charge of the Ungraded Classes in New York have had special training. These teachers are all regularly qualified, having had three years' experience. The special training of 114 of these teachers was obtained in the following Institutions: The University of Pennsylvania, 4; Harvard University, 2; New York University, 63; Vineland Training School, 36; Adelphi College, 26; The College of the City of New York, 51; Brooklyn Teachers' Training-school, 42.



CORRECTIVE GYMNASTICS

Teaching children to pick up their feet in walking —*Witmer*

THE AUXILIARY CLASS-ROOM AND ITS EQUIPMENT

CHAPTER VI

Auxiliary Class-rooms should be centrally placed with reference to the school population they are to serve, and should be made attractive and capable of being utilized as a social centre for the benefit of the children. The medical and physical needs of the children should be borne in mind in all the plans and equipment. If the class-room is in an ordinary school, the floor and walls should be specially constructed so that noise from music, games, gymnastics, etc., will not disturb the rest of the school. Cupboards and closets are required, and good cloak-room facilities.

No Auxiliary Class, even when the teacher has an assistant, should have an average attendance of more than twenty pupils, and not more than ten or fifteen pupils should be taught in one room.

FLOOR SPACE

For Auxiliary Classes for mentally-defective children the floor space required in England is not less than fifteen square feet for each pupil; and for physically-defective children not less than eighteen square feet. When it is borne in mind that one or more of these pupils may be wearing a Thomas' splint and may be able to work and learn perfectly well lying down, and that rest periods are often necessary, when all rest lying down, it will be seen that the space mentioned above should be the minimum provision. The same floor space is needed for the semi-blind and semi-deaf classes.

LIGHTING, HEATING, VENTILATION

The windows should not be so high that the children cannot see out of them. Clear glass should be used and suitable shades provided.

Lighting, heating, and ventilating are of the greatest importance and must be suitable and adequate; the temperature as a rule should be a little higher than in ordinary classes. The class-rooms should be frequently flushed out with fresh air, and should, if possible, be on the ground floor, easily accessible to the street, the gymnasium, the playground, and the lavatories. The room should be about thirty by forty feet, with a southern exposure, if possible, and convertible into an open-air room in good weather.

FURNITURE

Tables of different heights are better than desks. The furniture should all be plain and strongly made. The chairs may be of different heights, from twelve to eighteen inches. The tables should be plain, without varnish, and arranged in sets or "nests," such as:

Height,	22	inches;	top,	26 x 18
"	24	"	"	30 x 20
"	26	"	"	34 x 22
"	28	"	"	38 x 24
"	30	"	"	42 x 26

Rubber tips should be provided for chairs and tables. Eight or ten work-benches, adjustable and suitable to the room, will be required. A folding screen, a couch or bed, one or two comfortable chairs, and other suitable furniture to be provided, as required, will add to the usefulness and homelikeness of the room.

EQUIPMENT

Kindergarten materials of a large size should be used for mentally-defective children; for example, kindergarten bricks, six inches long by one inch high and two inches wide, and cones six inches high, painted in the primary colours. As an exercise the child is given a red brick, for example, and told to walk round the table till he finds one the same colour; or he is required to fit variously shaped pegs, blocks, and other forms into holes of the same shape.

The Education Committee of the London (Eng.) County Council provides furniture for Special Schools in accordance with the following scale:

Schools for mentally- and physically- defective children.—Single oak desks; small chairs; abacus frames; blinds; kindergarten or plain black-boards as required; easels; attendance board; interior notice board; exterior boards; ink-well cupboard or trays; clock; large forms; glass tablets; longarm; mats; large kindergarten or 3 ft. 6 in. by 2 ft. 6 in. tables; time-table frames; alphabet box; stock cupboards; clay box; fireguards, scuttles; scoops; pokers. Cork matting for bathroom in all cases, chairs and couches, and collapsible dining tables and forms for physically-defective schools, when sanctioned by the Special Schools Sub-committee. Furniture for the teachers' rooms from the list of furniture supplied to managers' and teachers' rooms in ordinary day schools. Furniture for craft-rooms.

The following equipment is required for Ungraded Classes in New York City:

1. Black-boards—Slate, on all available wall space.
2. Running water—Porcelain sink, 9 inches deep by 18 inches wide, by 27 inches long, with hot and cold water supply.
3. Work-benches—Three; Albenart Adjustable Bench, Model 3. To have two Toles vises and three drawers.
4. Tools—General (To be ordered from the supply list):
   3 bits, auger, ½ inch, ⅜ inch, ¼ inch.
   1 bit, expansive (large), boring ⅞ inch to 3 inch.

2 braces, Barber, 6 inch sweep.
1 file, bastard, half-round.
6 hammers, tack.
2 rulers, steel, 24 inch graduated.
1 saw, rip, 22 inch.
1 saw, crosscut, 22 inch.
1 screw driver, round blade, 4 inch.
2 spoke shaves.
1 square, try, 15 inch.
1 stone, oil.

For each bench: (To be ordered from the supply list)
1 chisel, 1 inch.
1 chisel, ½ inch.
2 clamps, cast iron.
1 gouge, ½ inch.
1 knife, Sloyd.
1 plane, smoothing.
1 back-saw, 10 inch.
1 saw, keyhole.
1 square, Try, 6 inch.

5. Physical Training:
1 bar, horizontal, for doorway.
Clubs, Indian, ¾ lb., 15 pair, N.Y.C. Model.
Dumb bells, 1 lb., 15 pair, N.Y.C. Model.
Racks for clubs, bells, and wands.
Stall Bars, one section.
Wands, 3¼ ft. long, ¾ in. diameter, 15 N.Y.C. Model.

For girls a sewing-machine is also provided, and less equipment is used in the classes for young children.

PREPARATION AND SERVING OF MEALS

There are economic advantages in having Auxiliary Classrooms grouped together. Hot and cold water, and some facilities for preparing and serving a meal, are required, as in most cases the children cannot go home at noon; and the preparation and serving of meals helps to provide the neces-

sary variety of occupation and gives an opportunity for training in manners, household and domestic occupations, and in muscular and sensory activities. The time given to each school lesson should be short.

The nurse or attendant should have charge of the kitchen and of the buying and preparation of the food, co-operating, if possible, with the Domestic Science Department of the School.

THE GARDEN

There is a great advantage in having a little garden attached. It is always possible to get a part of the school grounds, or a corner in an adjoining lot, for raising vegetables, flowers, and fruit. Such provision affords an opportunity for practical teaching of the best kind, gives the children much interest and pleasure, and helps them on in their education.

BATHING

Facilities for bathing are necessary. The equipment should be simple and inexpensive, and where there is a kitchen with a good water supply, the additional expense of a bath and laundry tubs is not very great.

TOILETS

For obvious reasons it is better that the Auxiliary Class should have sanitary conveniences separate from those provided for other children, in cases where such a Class is held in a large school building. These conveniences must, of course, be easily accessible and adequate, at least one for each ten children.

SUPPLIES, IMPLEMENTS, TOOLS

Besides the ordinary kitchen utensils, which should be as few and simple as possible, there should also be provided all

necessary cleaning materials and utensils. A certain number of pupils, in rotation, should be attached to the House Department and have charge, under supervision, of all these materials and utensils, including dusters, towels, aprons, table-linen, dishes, knives and forks, and other house supplies. This, of course, can be done under an organized and advantageous system in a residential school, but even in a day school it is wonderful how interesting and successful this branch of the work can be made.

There are also materials and supplies required for needle-work, as well as implements and tools for any crafts which may be taught in the Auxiliary Classes. These should be as few, simple, and good as possible, and their care and use should be one of the best means of training the pupils. They should be kept in cabinets built into the walls, with sliding doors. What the children learn in the way of manual and industrial occupation will educate and develop them far more quickly and satisfactorily than any other training. Kindergarten material, attractive models, and articles for object and manual training, may be common to a number of classes.

BOOKS AND PICTURES

Pictures that the children can understand and love are a great help, and in every community there are people who have only to know this in order to be ready to provide them. The teacher should advise about the selection of such pictures. The pictures should include photographs of the pupils, and a group photograph of the staff, the pupils, and those of the trustees and public who have helped to organize the Class—this should be taken as soon as possible after the Class is organized.

Books, children's magazines, occasionally a suitable newspaper, and dolls and games for the young children, are amongst the things that aid in the class-work.

FLOWERS AND MUSIC

Plants and flowers are always appreciated and a musical instrument of some sort is very desirable. A player-piano would be an excellent thing. A sand board or modelling board and certain tools, dishes, etc., are also valuable parts of the equipment. The teacher's desk and other necessary things should not be forgotten. Everything should be well cared for and kept in good order.

SUPERVISION

Supervision at recess and playtime is a matter of special importance in Auxiliary Classes. The more independent and self-reliant the children are the better, but where their defects make it difficult for them to protect themselves, the teachers must see that they are constantly looked after. They must never be left without proper supervision by one of the staff, or by an attendant.

TRANSPORTATION

In all Auxiliary Classes great attention should be paid to the transportation of the children to and from school. It is, of course, not contemplated under the Act that the Public Schools should attempt to train and educate any child "whose mental capacity is incapable of development beyond that of a child of normal mentality at eight years of age." This excludes the so-called "custodial cases," some of whom would be unable to find their way to school. But there are many mentally and physically-defective children who need the company of an older pupil, from their own family or neighbourhood, so that they may reach the Class safely, regularly, and punctually. Even the higher grades of mentally-defective children are not always capable of doing so without some assistance or companionship. Sometimes where the family cannot make the necessary arrangements without

the assistance of the school authorities, the best way, especially in a large city, is to arrange for a conveyance of some kind to call for the children and take them to school. The nurse attached to the Auxiliary Classes should always accompany the children in the conveyance, and besides the driver, it is often advisable to arrange that an attendant, or the janitor of the Auxiliary School, should assist in the cases where there are physically-defective children who have to be carried in and out. This can always be done under the supervision of the nurse. Any neighbour, or passer-by, or the policeman on the beat, would be glad to assist.

THE COURSE OF STUDY

CHAPTER VII

It was once thought that mentally-defective children were so because they had been neglected, starved, or abused, and mental defectives, alas! are sometimes badly treated, but that is not what makes them mentally-defective. They were born so, and if they had been well fed and kindly treated they would still have been mental defectives. The brain is defective. It never had normal power of development. We cannot develop what is not there.

It was once thought, also, that the undeveloped brain of a mentally-defective child could be developed if the best conditions of teaching and environment were secured; and people even spoke of "curing" mental defect. This is absurd. Feeble-mindedness results from incurable organic defect. The cerebral condition may be recognized under the microscope. It is plainly a permanent condition. We cannot replace poor brain cells by good ones any more than we can replace a poor eye by a good one. And this applies especially to the higher powers of the brain. We say that the "speech-centre" is in Broca's convolution, but where are the "centres" that give us good judgment and the power of managing our own affairs? It may be that the power of associating and combining and bringing into action the stored-up memories of innumerable experiences that are somehow recorded in the cells of the brain has much to do with our higher intellectual processes. In such power the mental defectives are hopelessly lacking. Their mental development has been arrested. Their mental powers are the powers possessed by a normal child at

somewhere between one and twelve years of age, and all we can do is to train these powers and employ to the fullest extent the bodily and mental gifts possessed by the pupil.

THE FUTURE OF MENTAL DEFECTIVES

The future of every child should be provided for by making him self-supporting. Mental defectives cannot be made self-supporting, and therefore their future must be provided for in some other way. Except in the case of persons of great wealth, it is impossible to provide constant care and supervision for mental defectives without ruining the home life of the other members of the family, and it is accordingly evident that an institutional home must be provided as a permanent residence for such persons. They are happier there than they would be in their own homes, and in an Industrial Farm Colony all can be partly, and a few almost entirely, self-supporting.

MENTAL AND PHYSICAL POWERS OF MENTAL DEFECTIVES

Any child capable of entering a school is also capable of training and improvement, but developmental capacity varies greatly. There are many things which normal children do not need to be taught. It is a mistake, for example, to teach and urge the normal child to walk. Nature does that, and all we need to do is to give the baby an occasional helping finger and see that no danger threatens. But a mentally-defective child must be taught how to walk, sometimes even how to stand. The record of the age at which this is accomplished is important, as it usually gives us an idea of the amount of defectiveness present. Inability to walk and talk before five years of age usually, but not always, means serious mental defect.

If a mentally-defective child can be taught to speak clearly and recognize his own name and the name of the place where

he lives, and can also learn, when a little older, the names of the days of the week and the months of the year, and can count up to one hundred, and perhaps learn to write his own name and acquire any other knowledge that he will use, something has been gained.

The improvement of such children in habits and in what they can do in a routine fashion, is greater still. They often learn to be obedient and dependable in coming and going and carrying messages. They improve much in appearance. They can play a little, especially if encouraged by their playmates, and they want to help when they see the teacher or the other pupils doing anything. There is no use attempting to teach them to read or write, except the mere rudiments mentioned above. Mentally-defective children who, with great labour and constant repetition, are taught reading, writing and arithmetic, soon forget what they have learned because they are not able to use or understand it. The time spent in teaching them these subjects was wasted. It should have been spent in teaching them to do something useful with their hands.

They have a capacity for manual and industrial work, and it must ever be kept in mind that even in cases which at first dismay us, we may discover a corner of the brain, as it were, where some ability lies dormant. Girls who at first seemed to have no intelligence have been taught to make valuable Honiton lace, and boys who are very much out of place in an ordinary school can learn to make roads and do various kinds of farm and garden work. They must be tried first at one thing, and then by and by at another, until we see what they can do. The supervision required by these pupils is very constant and minute until they can once do a thing. Then they can and will go on with less supervision. Most of them can earn part of their living.

There are other mentally-defective children of a higher grade who can read words of one or two syllables, and can do

a little arithmetic, but can seldom subtract correctly. They usually succeed at manual work, becoming fairly good workers at simple industrial occupations. But they always need some one to praise, encourage, and help them, and keep them up to their best. They seldom understand the value and use of money. Like all other mental defectives, they need constant supervision and direction, as well as protection.

There are, finally, still higher-grade children who cannot get far beyond long division, and sometimes they cannot do multiplication at all, or do it very poorly. They can read simple narratives fairly well, and can write a letter, although in a childish way. Many of them, too, know something of the value and use of money. Their manual work and industrial work is often very good, and under care and supervision in a suitable institution they may become self-supporting. The best of these are capable of becoming attendants and helpers in a large institution, and doing all its trade work and farm and garden work. In an institution they are also able to amuse themselves and others, and can be made exceedingly useful and happy. They have, however, little or no will power, and are quite deficient in understanding and judgment, so that they fall victims to every temptation, and to every evil-disposed person, and are the type of the feeble-minded most dangerous to the community.

WHAT TO TEACH TO THE MENTALLY-DEFECTIVE

The first thing that mental defectives need to be taught is how to use their muscles properly, especially muscular co-ordination—to grasp, to walk properly, to lift up their feet and put them down properly, instead of stumbling and shuffling crookedly. Every form of physical training, beginning with the simplest, is helpful. Personal cleanliness, behaviour, manners, learning to keep their clothes neat and clean and to put them on straight, are all highly useful means of improv-

ing their condition. To achieve this means a great deal of personal attention given to the child, endless encouragement, and real co-operation between the teacher and the child, for the teacher must reach down to the child's level. In the less promising children, to secure a smile, a more intelligent and attractive expression of face, or a few well-articulated words said of the child's own accord, means great progress.

The teacher should always remember that a mentally-defective child knows something, and should value what he does, and think of his dignity as a human being. Can the child help others? Has he ever had a chance? Has he any bad habits that need to be corrected? Always encourage the mental defective—praise arouses dormant energies. Never finish your inquiry from parents and others till you find out what he *can* do—not what he cannot. There will always be something. After a long time one teacher noticed that a mentally-defective boy knew if anything was out of its proper place in the school-room and put it back without being asked.

TRAINING THE SENSES

It is very important to train the senses. These children do not see, or hear, or smell, or taste, or feel as normal children do. In a normal child the senses often "expand," as it were, of themselves, and gather memories to store up in the brain. The feeble-minded child cannot store up memories without the teacher's help. So we must give him a "mystery-bag," containing balls, cubes, little dumb-bell shapes, marbles, oranges, apples, scissors, keys, and other things, and get him to put in his hand and tell what he has in his hand, and how he knows. So with taste—salt, sugar, pepper, and other things must be tasted by the pupil. He has to learn about the things he will use. So with hearing and sight. All these senses have to be definitely and sedulously tested, trained, and stimulated. Object lessons are by and by superadded to sense training.

GENERAL TRAINING

Gradually the training of the hand and eye in all forms of muscular and manual activity should be carried on from simple to more complex processes, always having in view such industrial and occupational training in the simple trades as will enable the pupil to support himself as far as possible.

Reading and writing and simple concrete counting and calculation should be taught only to the pupils who can learn them with some degree of ease. Where there is good reason for believing that a child cannot learn to read or to understand the multiplication table, we should keep him at the things he can do, and never mind the reading or the multiplication table.

In all Auxiliary Classes we must give up the idea that a child "should" know such and such things. Auxiliary Class children are not like those who enter certain grades and "should" have learned to read, or to add, or something else. We must begin with what they know and go on from there; this knowledge is always on a lower plane than that of other children of the same age, and further knowledge can best be acquired by steps so gradual as to be almost imperceptible. Such a child does not know how to use his hands and fingers properly, how to feel or grasp well, how to lift up his feet in walking, or how to hold himself as do other children of his age. Even the muscles of his lips need training; he must be taught to close his lips firmly and not to keep his mouth open. Sight, hearing, smell, taste, feeling, and the muscular sense must be sedulously trained. Such children cannot attend, or observe, or understand well, and their power of will is weak. That is what mental defect means. But they can learn to throw a ball and catch it, to use a skipping-rope, to plait a braid, to march to music, to imitate the teacher or another pupil in gymnastic exercises. Then they can play simple games, run races, and make regulated movements of various

BRUSH WORK
Goodrich Road School, London, England

kinds, and when they are seated in the class-room they can do work in which the fingers are used definitely and constantly. This produces a gradual but certain improvement. Never should anything be done for a defective child that he can do for himself. Always encourage him to do things that need a little effort from him. Thorough, firm, and kind training is his only chance. The training of the special senses and of motor-power, and of the will and voluntary attention and observation, lays a foundation on which we may proceed to develop mental defectives into useful, self-respecting, and happy inmates of an institution designed and planned for their permanent home.

INDUSTRIAL TRAINING

To simple industrial occupations the pupils should be introduced as soon as possible. The girls should learn housecrafts and handcrafts, and the care of gardens and poultry, dairy work, cooking, laundry work, mending, sewing, embroidery; and the boys should learn carpentering, painting, plumbing, as well as road-making, cement work, and garden, farm, and house work. Of course not all of these subjects can be taught in any one class, and only some of them in day classes, but manual work of some kind must form the larger part of the teaching. In all formal lessons the periods should be short. Even with high-grade mental defectives one or two hours in ordinary class work is quite enough.

Here it is important to repeat that the teacher must always make sure that temporary backwardness, due to any removable cause, is never confused with mental defect, which is an irremovable cause.

In the case of the defective child, the somewhat fixed idea of a child as an inmate of a school-room must be modified. The teacher must regard him more as a person and less as a pupil—perhaps almost as a doctor regards a patient.

The personality and charm of the teacher is a most important factor in developing the children. She needs the enthusiasm of humanity. No sphere of social work is wider than the sphere of the teacher of the Auxiliary Class. No trouble should be too great for her; and everybody should help her. In Rochester, the Superintendent of the Special Classes says, "We have never been refused help."

A child will very often be found to do much better in one part of the class work than in another. In manual training, a mentally-defective child of thirteen years may rank with normal children of twelve, in arithmetic with normal children of five, and, perhaps, in reading with normal children of eight. This is an encouraging record, because it means that such a child with early training and permanent care will do well, and make not only a "good living" in an institution, but enjoy his life and accomplish a good deal.

METHODS AND RECORDS

Concrete methods of study and teaching are always to be employed. Abstract ideas and the use of symbols for abstract ideas the mental defectives cannot grasp. They can often measure and weigh, when they cannot add and subtract. Sense training (see above) is most important. The senses of sight and hearing, as well as of touch, must be trained by appropriate exercises. Games must always be organized and supervised, or they fall flat and soon stop.

Suggestion is a most important method in the training of mental defectives. It hardly ever fails. This method alone, skilfully and reasonably used, has been the foundation of many a teacher's success. We thus work at the child's mental level or very slightly above it, using the ideas and motives he can understand and giving him the things that he needs, such as activity, pleasure, and self-respect.

Records of Auxiliary Class work must always be kept. The card index system will probably be found to answer best.

SPEECH AND EARLY TRAINING

With normal children there should be little or no formal teaching before the age of seven or eight, and the same rule should apply to a feeble-minded child, if the home surroundings are good and the child is being trained. Usually, even in good homes, such children receive little or no training, whereas they need far more than other children. Great pains should be taken to teach them to speak clearly, and to wash, dress, care for, and feed themselves. Speech is so important that in any Auxiliary School there should be at least one teacher who has made a special study of speech-training. Dr. Potts suggests that as mental defectives are usually fond of music, it may help in teaching articulation to strike a note on the piano and get them to imitate the note with the different vowel sounds.

For the faculty of attention which develops rapidly enough of itself in the normal child, a great stimulus is required in the case of mental defectives, such as throwing a bean bag, or other fairly soft object, at the child, thus attracting his attention, getting him to learn to catch a moving object, and also to defend his head and face from the blow of the bag. The child should, of course, be taught at home to dress himself. Very often this is not attempted, and, at best, the home training must be supplemented by the teacher. It is her duty to persuade the child to keep his clothes properly arranged and cared for. It takes a very long time to teach a defective child, for example, to put on his boots; but it can be done, and it is worth all the time and trouble it takes. A large shoe with very large eyelets is a great help. The child gradually accomplishes the task of putting the lace-point into the eyelet. By and by he gets to know the difference between the right and left boot

and finally he learns to tie a knot. These are all achievements of great practical value to the child, and to those who have the charge of him.

Certain types of mental defect are easily recognized at a very early age, but the higher grades can rarely be correctly diagnosed before the child is seven or eight years of age, or even older. The age at which such children should be sent to school varies, as has been already said, according to the home care and training.

As regards eating, the attention given to training in this in the case of normal children is often far from sufficient or successful. With mental defectives the training needs to be painstaking, long continued, and patient to secure the proper eating of food, instead of bolting it whole.

THE TRAINABLE PERIOD

Another point about the training of the mentally-defective is that the trainable period is short. From birth to fifteen years is practically the limit. After sixteen they can hardly learn anything new. They do not go on learning all their lives as normal people do. The training in schools is, accordingly, of extreme importance, especially when we consider how very slowly they learn.

PRODUCTIVE WORK

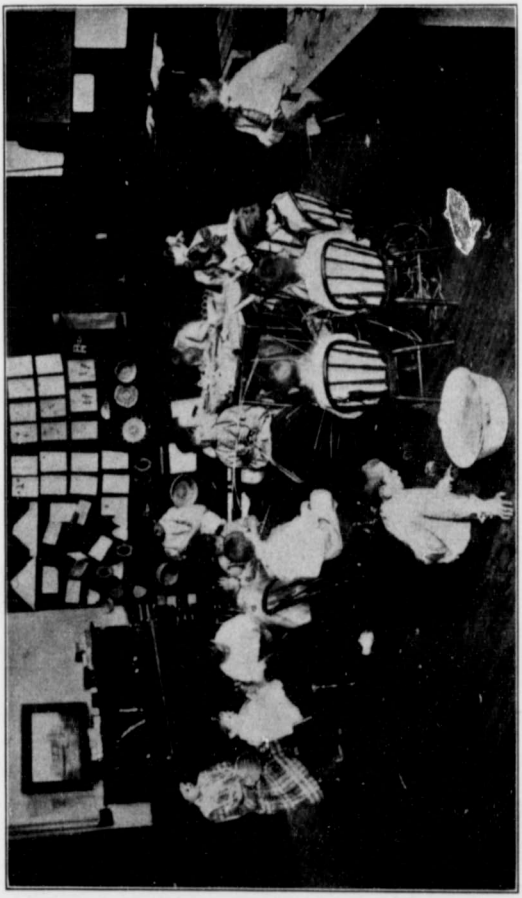
The great market for the work of mental defectives is, of course, in their own institutions. It must not be thought that the farm work which they do, even with some responsible person ever near, would entitle them to the wages of an ordinary farm man, or that the boots made and mended, cloth woven, clothes cut out and made, etc., could be sold in competition with the work of first-class workmen. The institution ought to do practically all its own work and may have a surplus of

farm and garden products, and possibly a few manufactured articles to sell, but it must always be remembered that mental defectives cannot take their place in the industrial world. In Birmingham, the work of the After-Care Special Schools Committee has been invaluable to other workers, because they not only did everything possible for the children leaving the Special Schools, but kept very complete records. They now have records of six hundred and fifty mentally-defective children who have left the Special Classes. Only twenty-one out of the six hundred and fifty earn as much as $2.50 a week, and there are only eight of them over twenty years of age who are doing any remunerative work at all. The Committee gets them situations when they leave school at sixteen years of age, but these children cannot keep situations.

The pride of production should be appealed to in a child, and also the sense of humour. They should have a due sense of their own importance. Classification should not be too close; it should be possible to put a new and poor pupil next a good pupil who will help him. Sometimes pupils love to take work home to finish it. The self-respect of the pupils should be developed, and they should be taught to take a pride in their work. Cleaning, polishing, keeping the room neat and pretty, and all like employments, are good. Repairing different articles will give a great deal of pleasure to many of them. Regular and punctual attendance is a great achievement for mental defectives.

There are many occupations (for example, artificial flower-making) which are advisable at different times. The children should work at what they are interested in. A large variety of occupations and industries carried on is also helpful. This is recognized in Great Britain by giving a larger grant to schools where many crafts and industries are taught.

Teachers in Auxiliary Classes should not regard the three R's as all-important. These are comparatively recent acquire-



HAND WORK

Nine different kinds of hand work are shown —*Witmer*

ments of the human race, even the picture-writing of the Egyptians being only about six thousand years old. The small letters of our own alphabet reached England only about 100 A.D., and Strabo says that in his time the people of Albania could not count beyond one hundred.

THE MONTESSORI METHOD

Much interest has been aroused in the study of mentally-defective children by the Montessori methods, which were first used in the teaching of these children. Dr. Maria Montessori became interested in educational problems while acting as one of the assistants in the Department of Psychiatry of the University of Rome. Her methods present in an attractive and practical modern form the principles and methods recognized and developed by Froebel, Seguin, Fernald, and others. The pretty and sensible apparatus, and the great kindness, gentleness, and respect used towards the children by Dr. Montessori and her followers have aided in the success of the method to which great attention has been paid by many educators. These methods aim at making the children feel at home in school, happy, natural, unconscious, unrestrained, and ready to act and work. When this has been accomplished, by letting the child alone, by allowing him to watch the other children, and by the sympathy established between the child and the teacher, a system of sense and muscle-training is begun, and carried out from step to step until the child can walk and move gracefully and comfortably, carry things carefully, and use the sense of touch with certainty and to his educational advantage. The child's powers of thought and intellect are gently stimulated and developed by the further use of the knowledge he has already acquired.

Dr. Montessori says that when the child comes first to school he must be given a kind and thorough inspection by the teacher, in the presence of the mother if possible, to see

that the child is perfectly clean and all the clothing clean and in the best of order. If there is anything that can be improved, the child's attention must be gently drawn to it, and it must be shown how to make everything clean and right. But no fault-finding remarks must be made, and the children must be encouraged to assist each other in a polite and friendly way. As all children love dabbling in soap and water, ablution may be made a play for them. Then the school pinafores must be inspected and put on, the children helping each other to button them. Regular exercises are contrived to teach the children how to put on, fasten, and arrange their own attire. Easy games and gymnastics follow, with music, and then training in carrying and handling glasses, plates, dishes, spoons, knives, tables, and little chairs, and many other things that have to do with the house, and with manners and usages at table.

The apparatus includes a great many different materials and articles. There are rough and smooth tablets for training the sense of touch, samples of many papers and cloths, light metal vessels which are filled with water at different temperatures, and a great variety of objects made of different metals, woods, etc., of various sizes, shapes, and weights, each appropriately graded and adapted to teaching some special thing with interest and ease. In one exercise, the child may be blindfold, in another, the visual sense is the only one used, and so with the other senses. The models and cards of different colours are sixty-four in number, eight tints with eight gradations of intensity of colour in each, different colours of silk and paper being used. Whistles and boxes filled with different materials are used for making sounds and noises, so training the child's sense of hearing.

The great aim of the Montessori method is that the child should educate himself, finding out for himself, as far as

possible, about the things around him by direct contact with them, and correcting himself when he makes a mistake.

For teaching writing, an apparatus consisting of a metal frame with metal insets of different forms and sizes is used. The child places these insets in turn upon a piece of white paper and uses a pencil to follow the outline of the metal inset, thus learning the use of the pencil. When the inset is removed, he is allowed to trace the outline over again in colour. Then he is allowed to use cards upon which letters cut out in sand-paper have been mounted, different colours of paper being used for vowels and consonants. He is taught the sound of the letter, and then allowed to trace the form of it with his forefingers. Finally he is helped to build words by the teacher, first repeating some simple word made by combining the letters of which he has just learned the sound. Thus he is led to recognize the word, and is usually able to write it of his own accord, having acquired muscle-memories of the forms of the letters. He is then ready to use the "movable alphabet" in which the letters are cut out of stiff paper, pink for vowels and blue for consonants, and kept in a box, each letter having its own place marked, so that the child can keep every letter in its own place. Similar methods are used in teaching numbers from rods which have already been handled by the child in making a "long stair," and learning to understand about different lengths. These rods are marked in different sections, the shortest having one section, the next two, next three, and so on, each one being used to teach the child a different number.

The whole apparatus is now manufactured in New York, and may be purchased in Toronto. Bulletin No. 1, *The Montessori Method,* by S. A. Morgan, B.A., D.Pæd., Principal Normal School, Hamilton, should be consulted. It contains an exposition and criticism of the Method with illustrations of the apparatus.

OCCUPATIONS

The occupations mentioned as suitable for Special Classes by the regulations under the English Act of 1899 and 1909 are:

For Younger Children

Bead-threading, drawing, paper folding, paper tearing, paper-cutting and mounting, paper-mat making, clay-modelling, plasticine modelling, macramé-work, netting and other string-work, kindergarten sewing, wood-strip work, pitch-cane work.

For Older Girls

Cookery, plain and fancy needlework, laundry work, housewifery, knitting, mending, machine-sewing, drawing and design, basket-work, chair-caning, gardening.

For Older Boys

Drawing and design, wood-work and carpentry, tailoring, shoemaking and repairing, cardboard modelling, chair-caning, gardening and farm work, household employments, mat and rug-making, repoussé, bent-iron work, printing, baking, basket-work.

MUSIC

In Residential Training-schools and Colonies for the mental defectives the establishment of a band or orchestra has been found not only a great benefit to the pupils, but a source of pleasure to the parents and friends and to the general public. The training for this service is a valuable means of developing the powers of the boys and girls as well as of adding to their happiness. Music is always a great benefit to the mentally-defective.

FIRE-DRILL

It is obviously of special importance that in all Auxiliary Classes and Schools Fire-drill should be thoroughly taught.

CLEVELAND AND OTHER CITIES

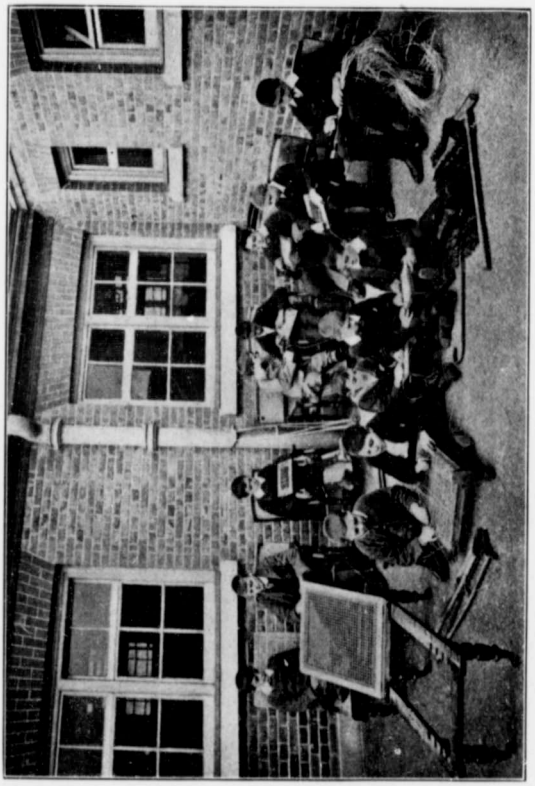
The children of the Special Classes spend much of their time in the school yards caring for the gardens, when the weather permits. Each child has his own plot of ground varying from perhaps ten square feet to fifty square feet. What he raises is his, and from time to time he goes home proudly carrying with him the lettuce, beets, onions, etc., that he has raised.

SPECIAL CLASSES IN ST. LOUIS

Time	Length Minutes	
9.00	30	Assembly; Singing—Chorus and individual. Stories and Talks—Ethical, hygienic, nature.
9.30	60	Numbers—use of domino and figure cards; tablets; sticks; toy money; clock-face; rulers; liquid and dry measures; simple problems of every-day life. Four fundamental processes (abstract and concrete), according to individual progress; number games and memory-training exercises.
10.30	10	General information—geographical, biographical, historical.
10.40	20	Recess.
11.00	60	Reading—four days—class divisions. Language—one day; letter-writing; story-telling; observation and memory exercises.
1.10	10	Spelling—sounding, games, dictation.
1.20	15	Special exercises for physically-defective children.
1.35	45	Physical Training and folk-dancing.
2.20	10	Recess.
2.30	50	Manual Work—construction; basketry; sewing.

NEW YORK

The day's programme in an Ungraded Class in a New York Public School, arranged by the teacher, subject to great variation, is somewhat as follows: From 9 to 11.45 a.m. and from 1 to 3 p.m., with appropriate intermissions, the children



CHAIR-CANING

School for the physically-defective, London, England
—*Dr. Kerr*

pursue various tasks calculated to train the senses and to develop them on the motor side. They dust and arrange the room, name objects in picture books, and learn about their attributes, sing songs; listen to a story concerning which they may make observations; study nature by means of a little garden, where potatoes, peas, lettuce, onions, etc., are planted by the pupils themselves in a rough box; carve simple shapes in wood; select and match colours; have simple gymnastics; test their smelling and tasting; pursue various games under instruction to aid in self-control and improve in precision of hand, eye, and ear; then there are exercises in drawing on the black-board, counting with money, brush work with colours, modelling in clay, word pictures, Indian club and dumb-bell exercises, etc., the whole concluding with dancing and marching to music, special attention being given to the attitude, rhythmic body movements, and mannerly deportment. The Ungraded Classes of all the schools make occasional visits to museums, the aquarium, and zoological garden for objective teaching; and to Forest Hills and Bronx Park for field work. Materials from some of the museums are also loaned, so that the objects themselves may be seen and studied.

COURSE OF STUDY

A brief summary may now be given of a suggested Course of Study for pupils in Auxiliary Classes for mentally-defective children.

Sense Training

Sight. In addition to what has already been said, great attention should be given to the training of sight by games, introducing objects of different shape, size, number, colour, outline, and arrangement, with many variations; have the pupils shut their eyes, open them, blindfold them, match colours, tell how many persons, etc., they have seen, and so on.

CHINNING THE HORIZONTAL BAR

A satisfactory and inexpensive gymnasium

—*Witmer*

Hearing. Games here may be varied by telling what sound is heard, where it comes from, what makes it, as, for example, sounds made by wood, glass, metal, money, instruments, animals, etc.

Pains should be taken to introduce variety, and so secure interest and animation.

Touch. This includes pressure sense, muscular sense, stereognostic sense, pain sense, and temperature sense. A series of tests which will teach the child each of these in an easy, amusing, and interesting way may easily be devised by the teacher. Materials which have rough, smooth, polished, hard, soft, wet, dry, sticky, oily, and other surfaces should be at hand, and also cloth, wood, metal, cotton, woollen, velvet, silk, etc. The "mystery-bag," well filled with objects of different forms, shapes, and sizes is, perhaps, the best way to develop the stereognostic sense, while the muscular sense may be trained by lifting weights, by moving things, by pulling, etc. Temperature sense may easily be trained by teaching the child to distinguish between the temperature in different rooms, between out-of-doors and indoors, between hot and cold water, etc.

Taste and Smell. These senses should be trained in the "sense-room" or by the use of materials from the "sense-cupboard."

Physical Education. This should have an important place in the curriculum, and a good deal of time in every day's work.

Manual and Industrial Work. This is of much more importance than any other kind of employment and instruction.

Reading and Writing. These subjects should be taught very simply and but little time should be given to them, except for the children who show some aptitude for them.

Speech and Language Lessons. These should be a most important part of the work in an Auxiliary Class and every

lesson about anything should be utilized for this purpose. Walks in parks, woods, and fields supply excellent material for lessons.

Housekeeping. The different details and employments connected with a house, such as furnishing, heating, lighting, food, purchasing, making change, clothing, and employment are good material for lessons on practical life.

Object Lessons. These may be used to great advantage. The children should be encouraged to find and bring their own objects. Lessons on these should be developed with great attention to detail and to awakening the child's powers of observation, understanding, memory, and general usefulness.

Arithmetic. This should be taught in the easiest and most concrete way possible. Measuring the room, playing shop, counting pennies, and other such exercises, are suitable.

Drawing and Modelling. Lessons on these are both suitable and enjoyable.

Music should always have a place.

Local Geography, local History, Literature. Occasional lessons on these and the memorizing of suitable selections may be used to some extent with the older and higher grade pupils.

General Subjects. Lessons on personal habits, conduct, table manners, care of themselves and their clothing, and on industrial occupations, must always occupy an important place and may be made very interesting.

In the daily programme great attention should be paid to physical exercises, personal hygiene, and proper breathing. The abdominal muscles should be gently contracted and then relaxed by appropriate exercises. As far as possible, an easy and well-balanced position of the body should be secured. Dancing exercises, arm and leg movements, bending exercises, and exercises to correct round shoulders, help in securing a good carriage. Relaxation exercises are also helpful.

Personal hygiene and cleanliness are matters of extreme urgency in Auxiliary Classes. The improvement in the hair, the clothing, and the general appearance, which can be secured, repays all the time and energy expended on these matters. Facilities for washing, bathing, brushing, mending clothes, etc., are necessary. The proper use of the pocket handkerchief should be taught.

Attention to the condition of the teeth is another matter of great importance, and regular brushing and cleaning are essential both to health and to appearance. These children need this care and training more than other children do, and the results in increased health and self-respect are often surprising.

Many of the children in Auxiliary Classes and many of the inmates in institutions for mental defectives can act as helpers in teaching and caring for the younger and less efficient children and inmates. These helpers thus aid in the work of the institution and contribute more towards their own maintenance than they could in any other way.

THE COST OF ESTABLISHING SUCH SCHOOLS

CHAPTER VIII

PERMANENT care in a suitable institution is the only successful, economical, and humane method of dealing with mental defectives. This secures not only their welfare and protection, but also the welfare and protection of the community and of posterity.

It is recognized that the ratio between the number on the staff and the number of inmates in such an institution should be about one to five, or one to six. If the School is to do thoroughly satisfactory work, the members of the staff must have, in addition to the regular month's vacation, a short leave of absence, such as a "week-end," not infrequently.

The cottage plan of construction is the best, and, as far as possible, one "group" or "family" of children, numbering from twenty to twenty-five, should be in each cottage. Larger cottages may accommodate two such "groups," but this plan does not as a rule work so well.

The provision of a large tract of land is necessary, among other reasons, to secure proper separation and classification of inmates. Thus low grade cases should be in cottages on a retired part of the grounds, the younger inmates should be placed in a cottage by themselves, and of course the cottages for girls and those for boys should be in different parts of the grounds.

In the best institutions of this kind the industrial work grows more practical every day, and thus better and more economical administration is secured as well as more satisfactory training of the children. As already pointed out, many

of the more intelligent and helpful among the inmates make good junior assistants and officers of the institution, and everybody can work at something.

The cost of establishing a Training School and Industrial School Colony for mental defectives will, of course, vary with the cost of the land and buildings. The School and Colony must grow gradually, and must begin with a small number of inmates. There must be a well-qualified Superintendent and an efficient and well-organized staff. As to the land, of the institution is to care for from 500 to 750 inmates, at least one acre per inmate, say 750 acres, is required. The following statement from the Extension Department of Vineland Training School in New Jersey is the consensus of opinion of several Superintendents, each of whom has had a wide experience in planning, building, and conducting institutions of the kind:

"Building cost varies in different states, but the cost of a well-equipped institution on the cottage plan, built substantially, but without any ostentation, with that architectural beauty merely which comes from perfect adaptation to use, we estimate to be as follows:

For an enrolment of 500 pupils about $600 per capita, or $300,000 complete; for an enrolment of half the number, or 250, the cost would be about $800 per capita, or $200,000 complete; for an enrolment of 100 the cost would be about $1,000 per capita, or $100,000 complete.

The above figures are based on the proposition that in building for 100 or for 250, certain of the necessary service buildings would be made large enough to serve when the institution should grow to a capacity of 500 inmates.

For a Farm Colony, without school buildings, and receiving only selected, robust, able-bodied inmates, to be conducted in connection with the Training School, we estimate the cost of a Colony for 50 at $300 per capita, or $15,000; a colony for 150 would probably cost $200 per capita, or $30,000; that is to say, after building and equipping the colony for 50 at the cost of $15,000, additions thereafter could be made at the rate of about $200 per capita.

BAKER COTTAGE, VINELAND, NEW JERSEY
Built by gifts of friends

With regard to the best size of such an institution as the Training School, we believe the number that can be best cared for under one administration is about 500. But this is only on condition that the institution shall be allowed to grow, and not too rapidly, to that number. To begin a Training School for feeble-minded with 500 inmates would be an impossible task, because it would be necessary to start with a completely trained staff in every department, from the Superintendent down, which would be clearly out of the question.

In making the estimate of 500 as being the best limit, we are taking into consideration the best care of the individual child. The limit of economic advantage we believe to be about 750. After that number is exceeded there is probably little, if any, reduction in per capita cost because of the increased number.

As to the amount of land, it is well to purchase, in the first instance, more than will be required eventually, rather than less. The price of land adjoining an institution farm is always increased after the institution is equipped. On a 500-acre tract it is possible to do many fine things, as, for instance, to have a Farm Colony within half a mile of the parent institution and on the same estate. For many years the Association of Superintendents of Hospitals for the Insane used to estimate that the plant should include one acre per patient, and we think that is a salutary rule.

In choosing the site, health, drainage, water supply, disposal of sewage, accessibility from every part of the territory to be served, and even the landscape are all more important than fertility of the soil, although that also should be considered. The presence of a switch connected with a railway line will make a difference of two to five per cent. in building cost, and perhaps two per cent. thereafter in annual maintenance cost.

The method followed in some states, in creating a new institution, of appointing a board of construction to choose the site and put up the buildings, followed by different people as a board of management, afterwards, of course, you will not follow in——. You have a great deal too much common sense there for that sort of a proceeding. We would, however, advise you by all means to employ an expert in institution management to help the architects—in fact, we would have such an expert design the plant before the architects are called in, and, if possible, the man

POST-OFFICE CORNER
Special School for mentally-defective children, Victoria, Australia

who is to be the superintendent afterwards should be the designer. This is not so much out of the question as it appears, if you begin with a few small and necessary buildings which are designed to fit into the general plan when it shall be completed; because in that case the plan may be modified, as experience shows to be wise, after the institution has been opened.

There are a few buildings which should be as commodious from the first as will be required after the institution shall have grown to full size. Among these are the administration offices, the power house, the store-room and, perhaps, the laundry. Of course, the equipment of these buildings will be increased as the institution grows, but the buildings themselves might well be larger at first than is necessary.

With the central buildings well-adapted and balanced, additional cottages can always be put up; even a school-house may be enlarged. But a general plan, adopted with a view to ultimate growth and having the location of additional cottages set down upon it, should be made before the ground is broken."

ADVICE TO PARENTS

APPENDIX A

THE advice of the teacher is always of great value to the parents. The following suggestions are intended to assist teachers in advising the parents of children who are to attend an Auxiliary Class.

1. CHILDREN WHO ARE PHYSICALLY DISABLED OR DELICATE

As soon as possible arrangements will be made to have your child admitted to an Auxiliary Class, which will be held in a room made more suitable and comfortable than the ordinary class-room is, and in which special attention will be paid to all matters of health and practical education. You are asked to see the teacher of the Auxiliary Class as soon as you can, and to assist in every way that you can, so that your child may get an education that will help him (her) to develop his (her) ability and aptitudes and to be useful, happy, and self-supporting.

Your child especially needs the most nourishing food you can give, an abundance of fresh air, and sufficient sleep—from ten to twelve hours, according to age. Every effort will be made to improve your child's health, and you are asked to co-operate with the School Nurse and School Medical Inspector, and your family physician, and to carry out their advice.

2. CHILDREN WHOSE SIGHT IS NOT GOOD

Your child has been examined by a physician, who finds that he (she) does not see well enough to learn properly at

school. As soon as possible he (she) will be admitted to an Auxiliary Class, taught by a specially trained and competent teacher, who will help him (her) a great deal in his (her) school work and will make every effort to enable him (her) to get a good education.

You are asked to give the teacher every assistance and to help your child to carry out all the directions as to the care of his (her) eyes and the way to study given by the School Inspector, the School Nurse, and the teacher.

Please go to see the teacher of the Auxiliary Class as soon as your child is admitted and co-operate with her in all her efforts to help your child. Home training and interest and encouragement will do a great deal to make the work of the Auxiliary Class helpful to your child.

3. CHILDREN WHOSE HEARING IS NOT GOOD

Your child has been examined by a physician, who finds that he (she) does not hear well enough to learn properly at school, even when sitting in the front seat. He (she) will be admitted as soon as possible to an Auxiliary Class, where, if he (she) cannot speak well, he (she) will be carefully taught to speak and be given a good education so that he (she) will be able to succeed almost as well as if he (she) had good hearing.

In order to make the school work a success your child must be trained at home:

To take care of his (her) own and every one else's property;

To be kind, obedient, and cheerful;

To be clean, tidy, and helpful.

You can assist greatly in teaching the child to speak if you will; always persuade the child to look at you when you speak. In this way he (she) will understand a great deal of what you say. Say the name of anything, such as bread, milk,

a toy, etc., and repeat it before you give the article to the child. Talk to the child. Never make signs.

Teach the child to write and to draw, on slate or paper, his (her) name, the names of his brothers and sisters, and the names of common objects, such as " cat," " doll," etc., showing at the same time the object named.

If the child can hear a little, or has never heard, it is very important to talk to him (her). If he (she) is still able to speak, he (she) must be induced to continue to speak and to ask for everything he (she) desires. If this is not done, the child will lose what speech he (she) now has.

You can help the teacher very much by taking an interest in the lessons, by teaching the child the names of the people at home, by talking to the child, by preventing him (her) from making signs, and by encouraging the use of spoken language as much as possible.

It is of great importance that attendance at school should be very regular. Teaching a deaf child is more difficult than teaching one that hears, and requires constant attention and effort on the part of both teacher and child. Occasional absences undo much of the work, and the child loses a great deal.

Please see the teacher frequently, and consult about the child's progress, and give the teacher your confidence, helping her to help your child by every means in your power.

4. CHILDREN WHO ARE SO BACKWARD THAT THEY ARE PROBABLY MENTAL DEFECTIVES

Your child will improve a great deal, but needs a great deal more patience and more teaching than your other children. You must teach this child a great many things other children learn for themselves. But he (she) will learn a great deal if you persevere and train him (her) wisely and kindly.

Keep the child warm and comfortable, see that the clothing is dry and warm enough, and that the food is nourishing. Teach the child to chew the food well; watch this carefully, and be very particular about habits and manners, both at the table and everywhere else. Take the child into the fresh air as often as you can, and let him (her) have exercise and run about to make his (her) body as strong as possible.

Do not listen to well-meaning but ignorant people who tell you that the child "will grow out of it." This is not true; the improvement will come only by good training, good and constant care, and a good condition of health.

Do not let the child run about the streets with other children, but always be sure that he (she) is with some responsible, sensible person.

Never let him (her) begin making faces, or making noises, or swaying backward and forward, or learning any other bad or unpleasant habit. These are very harmful, and almost impossible to correct if once begun.

The greatest improvement will come from getting him (her) to do over and over again any little thing he (she) can be taught to do, such as telling which shoe is for the right foot and which for the left, lacing up the shoes, tying a knot, buttoning and unbuttoning his (her) clothes, always teaching a little at a time. Even if it takes months to teach him (her) these things, it is well worth while, because it improves the child, and it is a great help to you and everybody in the house when he (she) can dress without help.

Encourage him (her) every day and all the time. Praise all his (her) efforts and let him (her) do over and over and over again anything he (she) is not good at till he (she) can really do it well.

Never do anything for him (her) that you can, even with a great deal of time and trouble, get him (her) to do for himself (herself).

THE REST HOUR

On rainy days the children are required to rest indoors
—*Witmer*

Do not give him (her) anything that is really hard to do, because failure discourages. But help him (her) to do tasks that are a little hard, but not too hard. Always encourage the child to do anything he (she) likes to do, if it is not harmful or wrong. It is sure to please and help him (her).

Improvement will not come quickly, but it will come gradually, and will be very interesting and encouraging to you and the child and everybody concerned.

If the child makes too much noise, encourage and teach him (her) to be quieter. If he (she) seems not to notice anything, encourage him (her) to take hold of anything that he (she) seems to fancy. Listening to sounds, looking at bright colours, using his (her) hands and limbs, helping you in the house when he (she) is a few years older will all help to improve him (her).

Your child will be admitted as soon as possible to an Auxiliary Class, where he (she) will have a great many advantages and be taught by a specially trained and competent teacher, under whom he (she) will be sure to improve, especially if you help the teacher by encouraging the child to tell about the Class and all that he (she) learns there and to put his (her) lessons at school into practice at home.

AN ACT RESPECTING AUXILIARY CLASSES

APPENDIX B

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. This Act may be cited as *The Auxiliary Classes Act.*

2. In this Act,

(*a*) "Regulations" shall mean regulations made by the Minister of Education under the authority of this Act and *The Department of Education Act.*

(*b*) "Board" shall mean and include a board of education, board of public school trustees, and board of separate school trustees in a city.

3. A board may establish and conduct classes for children who, not being persons whose mental capacity is incapable of development beyond that of a child of normal mentality at eight years of age, are from any physical or mental cause unable to take proper advantage of the ordinary public or separate schools courses.

4.—(1) For the purposes of section 3 the board may, subject to the approval of the Minister of Education,

(*a*) Acquire a site and erect thereon such buildings as may be suitable for the education and training of the pupils;

(*b*) Establish such courses of instruction and training as may be best adapted to secure the mental and physical development of the pupils;

(*c*) Appoint such teachers and special instructors in ordinary learning or in any useful and beneficial occupation as the board may think proper;

(*d*) Provide in connection with the classes in the same or a separate building a suitable residence and home for the pupils or such of them as in the judgment of the board, subject to the approval of the Inspector of Auxiliary Classes, can be more suitably provided for in such residence and engage such officers and servants as may be deemed proper for the oversight and care of the pupils in the residence.

(2) With the approval of the Minister a site may be acquired and buildings erected thereon in an adjoining township, and for that purpose the board shall have and may exercise within such township the like powers as within the city for which the board is constituted.

5. It shall be the duty of a board where a residence is established to provide for the due instruction of the pupils in religion by the clergymen or ministers of the respective churches or religious denominations to which they belong, and for their attendance at religious worship.

6. Where a board establishes a residence under this Act, every pupil admitted thereto shall be a ward of the board and shall be subject to the control and custody of the board during school age and for such further period, but not after reaching the age of twenty-one years, as the board, subject to the approval of the Inspector of Auxiliary Classes, may deem advisable.

7.—(1) Subject to the regulations pupils shall be admitted to Auxiliary Classes upon the report of a board consisting of the principal of the school, the school medical inspector and another school inspector, or the chief or senior school inspector as the case may be, of which board the principal shall be the chairman approved by the inspector of Auxiliary Classes.

(2) Pupils may be admitted to Auxiliary Classes from other municipalities upon such terms as may be permitted or prescribed by the regulations.

(3) Such fees for instruction and for board and lodging shall be payable by the parents or guardians of the pupils, as may be fixed by the Board, with the approval of the Minister of Education.

8. Where a board has established Auxiliary Classes under this Act, it shall be its duty to provide for the proper supervision of the health and treatment of every pupil attending the classes and for proper medical treatment of every pupil who appears to the principal or inspector to require the same.

9. The board may direct the school medical inspector or such other officer as the board may appoint, to visit pupils in their homes and to consult and advise with their parents as to their treatment and the conditions which will best enable the pupils to attain the greatest possible degree of intelligence and education.

10. Subject to the regulations, the board may provide for the transportation of pupils to and from the Classes, and may pay for the same out of the funds provided under section 11.

11. The moneys required by the board for the carrying out of the objects of this Act shall be raised and levied in the same manner as for the erection, establishment, improvement, or maintenance of the public or separate schools under the control of the board.

12.—(1) The Minister of Education may from time to time make regulations subject to the approval of the Lieutenant-governor in Council for the administration and enforcement of this Act and for the establishment, organization, government, examination, and inspection of Auxiliary Classes, the admission and dismission of pupils, the duration of their term of residence, and for prescribing the accommodation and equipment of school houses, residences, and buildings, and the arrangement of school premises for auxiliary classes.

(2) The regulations may provide for the appointment of a duly qualified medical practitioner who may be an officer of any department of the government to be Inspector of Auxiliary Classes and may define the duties and powers of the Inspector.

13. Subject to the regulations the Minister shall annually apportion among Auxiliary Classes all sums of money appropriated as a special grant therefor.

14. *The Special Classes Act*, being chapter 272 of the Revised Statutes of Ontario, 1914, is repealed.

OUTLINE OF WORK

APPENDIX C

THE following outline of work has been adapted from that used in the Philadelphia Special Schools:

I. CLASSIFICATION AND GRADING OF PUPILS
II. TIME ALLOTMENT AND DAILY PROGRAMME
III. MANUAL TRAINING

GRADING

The training of special pupils calls for greater freedom in the range of activities, selection of material, choice of subject-matter, and distribution of time than the regular school grading will permit.

Grade A will consist of pupils of low mentality who are being held in school pending appropriate institutional provision.

Grade B will contain pupils of a higher mental grade than Grade A, but who probably could not, with profit to themselves, be returned to the regular grades. The interests of these pupils will be best served by endeavouring to fit them, through manual training, for industrial life. Few or none of them succeed in the life of the community. They, however, succeed well in an industrial Farm Colony.

TIME ALLOTMENT AND DAILY PROGRAMME

Owing to the complex conditions of the work the determination of time allotment and daily programme is one of the most difficult of the problems that confront the Special Class teacher. Difficult as the solution is in schools that include several special classes in which the pupils are more or less well graded, it is manifestly much more difficult in

the case of schools with but one Special Class in which are included pupils of all grades of mentality of both the backward and disciplinary types.

Grade A

—	Periods per day	Minutes per week	Per cent. of time
Opening Exercises	1	50	3 1/3
Physical Training, Marching, Games, Personal Hygiene	4	325	21 2/3
Recess (Free Play)	2	150	10
Manual Training (Desk-work and Bench-work)	2 or 3	400	26 2/3
Music, including Rote Singing	3 or 4	125	8 1/3
Drawing	1	100	6 2/3
Writing	1	50	3 1/3
Reading	2	100	6 2/3
Arithmetic	2	100	6 2/3
Language : Stories, nature work, etc., Spelling incidental to written work	1 or 2	100	6 2/3
		1,500	100

Grade B

—	Periods per day	Minutes per week	Per cent. of time
Opening Exercises	1	50	3 1/3
Physical Training, marching, games	3	200	13 1/3
Recess (Free Play)	2	150	10
Manual Training (Desk-work and Bench-work)	2	400	26 2/3
Music, including Rote Singing	2	75	5
Drawing	1	100	6 2/3
Writing	1	50	3 1/3
Reading	1 or 2	125	8 1/3
Arithmetic	1	100	6 2/3
Language : Stories, nature work, etc., Spelling incidental to written work	1 or 2	150	10
History, Geography, Hygiene	1 or 2	100	69 2/3
		1,500	100

Programme

In making a programme attention should be given to the following suggestions:

1. The teacher should have a programme as a general guide, from which she may vary as conditions require.

2. It is especially important that periods of work should not be too long. With the exception of games and manual training (desk-work or bench-work), no period of the programme for Grade A should be longer than twenty minutes; and none longer than twenty-five minutes for Grade B.

3. In many cases numerous difficulties will prevent a strict adherence to a time allotment, owing to the individual differences of pupils included in the class. The organization of the class into too many groups may militate against obtaining the best results. It is suggested, therefore, that as far as possible the programme adapted to the largest group of the class be followed; the remainder of the class to be treated in subsidiary groups, or, if necessary, given individual attention. Music, Drawing, Writing, Physical Exercises, and frequently Language, can be given to the class as a whole.

4. Assigned home work and home study for children in these grades is regarded as of little value.

Typical Daily Programme for Grade A

9.00– 9.10. Opening exercises.
9.10– 9.20. Arithmetic.
9.20– 9.30. Singing.
9.30– 9.50. Reading.
9.50–10.10. Physical exercises and personal hygiene.
10.10–10.20. Language: Story.
10.20–10.30. Writing.
10.30–10.45. Recess.
10.45–10.55. Arithmetic.
10.55–11.00. Song.
11.00–11.20. Games and physical exercises.
11.20–12.00. Desk-work or bench-work.

1.30– 1.35. Song.
1.35– 1.55. Drawing.
1.55– 2.15. Hand-work (desk-work or bench-work).
2.15– 2.20. Physical exercises.
2.20– 2.30. Language: Story.
2.30– 2.45. Recess.
2.45– 3.05. Desk-work or bench-work.
3.05– 3.25. Games.
3.25– 3.30. Song.

Typical Daily Programme for Grade B

9.00– 9.10. Opening exercises.
9.10– 9.30. Arithmetic.
9.30– 9.40. Marching or games.
9.40–10.00. History, geography.
10.00–10.10. Song.
10.10–10.20. Language: Story.
10.20–10.30. Writing.
10.30–10.45. Recess.
10.45–11.10. Reading.
11.10–11.20. Physical exercises and personal hygiene.
11.20–12.00. Desk-work or bench-work.

1.30– 1.50. Language.
1.50– 2.10. Physical exercises and games.
2.10– 2.30. Drawing.
2.30– 2.45. Recess.
2.45– 2.50. Song.
2.50– 3.30. Desk-work or bench-work.

DESK WORK FOR BEGINNERS

The child's mastery of himself is largely due to mastery of his material environment. Imitation is the method he uses in adjusting himself to his surroundings. This changes from mimicry of the actions and the appearances of people (plays and games) to imitation of the productions of people.

There are certain things in the child's environment on which it is easy for him to impress himself; the materials he chooses in the beginning of his hand work, though crude for

purposes of self-education, are simple for his easy comprehension, plastic and pliable so as to be easily changed, rhythmic in arrangement to satisfy his æsthetic instincts.

Since the child naturally chooses these things to re-act on, the system of education following the child's natural tendencies must supply similar opportunities. The school, however, being aware of the limitations of a casual environment, must provide a richer field for experiment and ample suggestions for later steps in development.

Exercises employing materials and activities which in the natural order of the developing interests of the child and of the difficulty of accomplishment meet these requirements satisfactorily, are:

1. Bead-stringing, which satisfies the early instinct of accumulation and production. It has relation to art through its rhythmic arrangement.

2. Sewing on cardboard with zephyr, silkateen, etc., is an early form of drawing. It introduces decorative art by its rhythmic arrangement and colour combination.

3. Weaving, folding, and cutting, in their use of such pliable material as paper, give opportunity for easy expression through the use of the common tools, the needle and scissors.

4. Raffia and reed work.

5. Wood work with tools at the bench.

BEAD-STRINGING

See Elizabeth Harrison's *Organized Hand Work*. Use Hailman beads (see supply list).

SEWING

Rhythms in two colours sewed on "border cards" already pricked. Use these as "studies"; transfer to cardboard and make into book-covers, for blotters, calendar pads, etc. They may also be used on coarse materials, such as stiff net, linene, denim, burlap for bags, etc.

The order of colour arrangement in sewing should be noted:

1. Contrasting harmony
2. Complementary harmony
3. Analogous harmony
4. Monochromatic harmony

PAPER-FOLDING

Use both "cover paper" and "coated paper" in these lessons.

1. Use a type form, such as the "barn-fold." Develop houses, churches, chairs, sofa, piano, etc., from it. It is well to group the work of different pupils and make from this fold the buildings of a city, as: houses, church, library, cottages, school-house, trolley-cars, etc.

2. Use a type form, as a "soldier's cap," fold and make sail-boats, row-boats, captain's hat, fireman's hat, sunbonnet, etc.

WEAVING

Use linen mats (kindergarten supplies) 7 x 7, inch and half-inch strips.

Weave a simple sequence. These mats may be made into baskets, shaving-cases, sewing-cases, calendar pads, etc.

1. Splint-weaving: Use half-inch splints, very thin; soak splints to make them flexible and, while wet, weave into mats, baskets, holders, etc.

2. Zephyr-weaving (Bartlett Looms): Make cap, sweaters, etc.

3. Raffia-weaving on looms.

4. Rug-weaving: Simple to complex with design; jute, chenille, cotton roving, rags, carpet chain.

5. Chair Caning.

6. Rush Chair Seating.

Materials for paper construction work: Cover paper, 4 x 4 or 5 x 5, blunt scissors, and library paste.

General Directions

Dotted line represents folds.

Heavy lines represent cuts.

Fold the paper in 16 squares and cut by dictation.

The objects cut are:

1. Scoop.
2. Hod.
3. Paper rack.
4. Tray or cradle.
5. Rocker.
6. Basket.
7. Shelf.
8. Hod.
9. Chiffonier.
10. Sled.
11. Sofa.
12. Paper rack.
13. Bowl.
14. Basket.
15. Station-tray or table.
16. Washstand.
17. Settee.
18. Barn.
19. Box or basket.
20. Cube or chair.
21. Trunk.
22. Covered basket.
23. Piano or bureau.
24. Desk.
25. Closet doors made from No. 5.
26. Table and four napkins.
27. Simple chairs.

SUGGESTIONS FOR WORK IN RAFFIA

Raffia Wrapped over Cardboard

Use strips of cardboard, any width. Roll into rings, punch and tie where ends lap, or sew ends.

The following objects may be made in a similar manner: (1) Napkin rings; (2) picture frames (square, round, oval); (3) match holders; (4) round boxes, cylindrical boxes, etc.

Basketry

1. Rope wrapped with raffia in lazy squaw stitch, making mats, baskets, etc.

2. Reed wrapped with raffia in lazy squaw, 8-stitch, or knotted stitch, making mats, picture frames, baskets, etc. Designs formed by introducing colours.

Braided Raffia

Use coloured string or coloured shoe-laces. Begin with three strands; later increase the number of strands.

Models: Hot-dish mats, dolls' hats, baskets, hand-bags, picture frames, etc.

String-work

A variety of models can be made from string, some of which are very simple, for example, whistle cords, watch chains, horse lines, whips, etc.; more complex objects, for example, hammocks, hats, bags, etc.

REED BASKETRY

General Suggestions

This is only a *suggestive* course of reed basketry. Very low grade backward children may not be able to work with reed.

Models of Section I may be used with variations by low grade children who can work with reed. This grade, probably, may not be able to control the shaping of the basket to any great extent.

Models of Section I and II may be used with higher grade children trained to shape the basket and to work by measurement.

After completing models of Section I and Section II, in continuing the work with this grade of children, it may be possible to use only variations in shape and size of these simple baskets.

Models of Section I and Section III may be used for high grade backward children.

Only a few (perhaps three or four) of a class will be able to make *all* of the models given, but it is possible for some backward children to make every basket suggested in this course.

The making of baskets depends upon the ability of the child to use his hands, and some low grade children may be able to make baskets from any group.

The number and kind of baskets made will depend upon the judgment of the teacher in determining the ability of the child.

Children of a disciplinary class may be able to use models of Section I and Section II, and a few of the class possibly could make any of the models given.

Some of these children may be able to continue this work by making fancy baskets.

Section I

Model No. 1:

Small mat, 4½ spokes. Open border.

Model No. 2:

Mat, 6½ spokes. Closed border.

Model No. 3:

Small basket, 8½ spokes. Slanting sides. Closed or open border.

Section II

Model No. 1:

Small basket, 8½ spokes. Bowl-shaped. Closed or open border. Introducing repairing.

Model No. 2:

Small basket with overlapping cover, 8½ spokes. Sides straight. Closed border. Introducing triple twist. Overlapping cover. 8½ spokes. Flange of triple twist. Small ring in centre of cover.

Model No. 3:

Small sewing basket, with lid resting on border, 10½ spokes. Basket turned up with triple twist and several rows of triple twist at end of weaving. Border more complicated than in small models. Handle at each side of one piece of heavy reed. Cover, 10½ spokes. Cupped slightly. End with several rows of triple twist. Small ring in centre of cover.

Model No. 4:

Small jardiniere, using straw braid for side of basket, or flat reed, 10½ spokes. Basket turned up sharply with several rows of triple twist of heavy reed. Straw braid or flat reed for side. End with several rows of triple twist. Border closed or open.

Model No. 5:

Easter basket with simple handle, 8½ or 10½ spokes. Triple twist at base and top. Side woven of straw braid, flat reed, or two weavers of No. 2 reed running parallel. Simple hoop handle.

Section III

Model No. 1:

Scrap basket. Separate bottom. 8½ or 10½ spokes. Spokes for side inserted each side of base spoke. Bottom, two rows pairing, the rest of triple twist. Basket turned up sharply with several rows of triple twist of heavy reed. Side woven with braided rust, straw braid, or two parallel weavers of reed. Heavy border of coils.

Model No. 2:

Basket with spokes on outside. Can be made as a sewing basket, jardiniere or scrap-basket. 16 spokes, four groups of four, with 32 spokes inserted about an inch before turning up the spokes. Open border. Small rim at base.

Model No. 3:

Flower basket, 16 or 20 spokes. Cover bowl, enamelled pan, or tumbler. Made similar to Model No. 2.

Model No. 4:

Small market basket. Oval base. Inserted spokes for side. Weavers for side of reed, straw braid, braided rush or flat reed. Handle—heavy foundation bail wrapped with reed or cane.

MANUAL TRAINING IN SPECIAL CLASSES

Shop-work and desk-work

Every child should be taught to *work*, and the school should do its part in this important phase of his training. Skilful execution is one of the chief factors in success of any kind. The shop in our public schools should provide a training that will help the pupil to proceed intelligently in any occupation.

The principal aim is to teach the boy how to attack a problem and to carry it to a successful solution. From the standpoint of character building it matters but little upon what problems pupils work, but the attitude developed, and the habits formed while attempting a solution, are matters of great moment. Intelligent attack, orderly procedure, skilful execution, painstaking completion out of which grow habits of industry, good, honest work, respect for labour, the ability to do things—these are the rich results of real education.

Shop-work

The term "shop-work" is plain and simple. It means *work* done in a shop. The best kind of shop-work for a Special Class boy is found in the wood-work. The material is pleasant to work. It is clean, may be readily shaped, and the tools used are more familiar, perhaps, than those used in any other handicraft.

The aim in giving shop-work to the pupils is not simply to give them mechanical skill, but to develop in them intellectual and moral powers. Through the shop-work is given a special training of the senses of sight, touch, and muscular development, and with these a training of the mind so as to make it master of the hand, and the hand an efficient servant to the will.

Every boy desires to make something. The question is, "What shall he make? Is he capable of selecting for himself?" The mere gratification of the impulse to activity is not in itself suffi-

cient. Not activity alone, but sustained and well-directed activity is an essential aim of the work.

The problems should be so presented as to lead from the known concrete to the unknown (to him) concrete. The work must be as definite as possible, and proceed from the simple to the more complex by easy and successive stages. Work should not be undertaken by a child which it cannot do in a reasonable time and with some degree of success. During the early stages of shop-work, only one new fact or operation should be included in any one undertaking, and it is by no means necessary that this should always include something new. Several lessons upon one type of work may be needed. The new feature should be so related to the type previously given as to keep up the interest, thus ensuring attention.

At first the interest of the pupils is centred in the tool to be used; this is new to them. The teacher should take advantage of the newness of the tools to develop some little skill in their use, and a knowledge of the working parts, before the novelty passes. The use and manner of handling each tool should be made very clear before the pupils are required or permitted to work with it. A sample of the work to be done should be where the pupils can refer to it as a standard.

No pupil should be allowed to begin a piece of work, however simple, until he has a clear, definite statement of the problem.

In the following suggested outline for a series of lessons, order of complexity and order for development have been kept in mind:

Repetition of work of previously learned types is used in new models, thus securing attainment of skill with the various types of work.

Working drawings of the models used should be made, and the pupils taught to interpret and use them. The mental ability of the child and judgment of the teacher must be the factors which determine whether or not the drawings will be of value. Blue prints of models used should be furnished the teacher and the pupils when in the teacher's judgment they will be of value.

The value of a mental picture and ability to make the hand construct a similar material object must be continually held up before the pupil, thereby encouraging the expression of inventive genius. The models suggested are of the types useful in the home. The idea of motive for the making of the article has been considered in the use of each.

Pyrography may be used to advantage, but again the use of this must be left to the judgment of the teacher.

Note.—Low grade backward and other children, who give evidence of inability to successfully accomplish regular shop-work, should be restricted to desk-work and bench-work in their respective class-rooms. Every class-room containing children of this type should be equipped with benches for additional hand-work.

Reference Books

Manual Training. Allen & Cotton	$0.80
Manual Training. Woodward	1.35
Wood Working for Amateur Carpenters. Griffith	0.25
King's Wood Work and Carpentry (Construction)	0.56
King's Elements of Wood Work	0.48

All pupils are familiar with the square figure:

It presents parallel and equal sides.

It offers planing, both with and across the grain, upon a sufficiently long surface to permit of successful work.

Therefore, the square figure, 6 in. x 6 in. x ⅜ in., is taken as the first model in the suggested course.

SCHEDULE OF WORK.

Type Models	Optional	Operation	Tools
No. 1 Tit Tat Too Board.	Bread Board, Flower-pot Stand, Checker-board, Basket Bottom.	Planing, Measuring.	Plane, Try Square, Brad Awl.
No. 2 Hexagonal Mat.	Tea-pot Stand, Bread Board.	Planing, Use of Dividers, Sawing (back saw)	Plane, Dividers, Saw.
No. 3 Key Back.	Match Scratch, Thermometer Back.	Planing, Sawing, Boring.	Plane, Saw, Brace and Bit.
No. 4 Octagonal Bread Board.	Cutting Board, Bill File, Dish Mat.	Planing, Sawing.	Plane, Dividers, Saw.

SCHEDULE OF WORK—*Continued*

TYPE MODELS	OPTIONAL	OPERATION	TOOLS
No. 5 Card Back.	Tally Board, Laundry List.	Planing, Sawing, Use of Spoke Shave, Boring.	Plane, Saw, Spoke Shave, Dividers, Brace and Bit.
No. 6 Ring Toss (circle).	Bottom for Basket, Top, Pasting Board.	Planing, Sawing, Use of Spoke Shave, Boring.	Plane, Dividers, Saw, Spoke Shave, Brace and Bit.
No. 7 Spool Holder.	Line Winder.	Planing, Use of Dividers, Sawing, Use of Spoke Shave, Boring.	Plane, Dividers, Saw, Spoke Shave. Brace and Bit, Screw Driver.
No. 8 Coat Rack.	Jar Dryer.	Planing, Use of Dividers, Sawing, Use of Spoke Shave, Boring.	Plane, Dividers, Saw, Spoke Shave, Brace and Bit.
No. 9 Sleeve Board.	Key Tag, Pencil Sharpener, Sail Boat.	Planing, Use of Dividers, Sawing, Use of Spoke Shave.	Plane, Dividers, Saw, Spoke Shave.
No. 10 Coat Hanger	Clothes Fork.	Planing, Sawing, (back), Use of Frame Saw, Use of Spoke Shave.	Plane, Saw, Frame Saw, Spoke Shave.
No. 11 Clothes Line Winder.	Hammock Needles.	Planing, Use of Dividers, Use of Frame Saw, Boring, Use of Compass Saw.	Plane, Dividers, Frame Saw, Brace and Bit, Compass Saw.
No. 12 Tether Bat.	Canoe, Hand Mirror Back, Match Tray, Canoe Paddle.	Planing, Sawing, (back), Use of Dividers, Use of Frame Saw, Use of Spoke Shave.	Plane, Saw (back), Dividers, Frame Saw, Spoke Shave.

SCHEDULE OF WORK—*Continued*

TYPE MODELS	OPTIONAL	OPERATION	TOOLS
No. 13 Necktie Rack.	Lap Board, Photo Shelf.	Planing, Use of Frame Saw, Filing.	Plane, Frame Saw, File.
No. 14 Flower-pot Stand.	Weaving Loom, Slat Stool, Sled, Step-ladder.	Use of Rip Saw, Planing, Sawing (back), Chiselling, Nailing.	Saw (Rip), Plane, Saw (back), Chisel, Hammer and Nails.
No. 15 Clock Shelf.	Bird House, Letter Box, Doll Chairs, Salt Box.	Planing, Sawing (back), Use of Spoke Shave, Boring, Nailing.	Plane, Saw (back), Spoke Shave, Brace and Bit, Hammer and Nails.
No. 16 Whisk-Broom Holder.	Glove Box, Magazine Rack, Morris Chair, Shoe Box.	Planing, Use of Dividers, Use of Frame Saw, Sawing (back), Use of Spoke Shave, Boring, Nailing.	Plane, Dividers, Frame Saw, Back Saw, Spoke Shave Brace and Bit, Hammer and Nails.
No. 17 Brush and Comb Case.	Tool Rack, Wheelbarrow, Tabouret.	Planing, Use of Frame Saw, Filing, Boring, Glueing, Screw Setting.	Plane, Frame Saw, File, Brace and Bit, Glue, Screws and Driver.
No. 18 Towel Roller.	Plate Rack.	Planing, Use of Frame Saw, Filing, Boring, Glueing.	Plane, Frame Saw, File, Brace and Bit, Glue, Screws and Driver.
No. 19 Book Rest.	Picture Easel, Candlestick.	Planing, Setting of Hinges, Setting of Screws.	Plane, Hinges, Screws and Driver.
No. 20 Book Stand.	Other Styles, Pen Rack, Knife Box.	Planing, Chiselling, Filing, Screw Setting.	Plane, Chisel, File, Screws and Driver.

SENSE EXERCISES

APPENDIX D

THE following sense exercises are reprinted from a circular used by the teachers in the Special Classes in Philadelphia:

The term "sense exercises" may be applied to any series of lessons which has as its basis activities especially devised for the methodical exercise or training of the senses. The purpose of sense-training is the development of the powers of observation. Observation implies careful attention and the working up of the sense material into clear mental images. Developing powers of observation is training in habits of careful inspection. Readiness and completeness of recollection after an interval are the determining factors in measuring the result of the training.

In order to secure careful attention on the part of the pupils and furnish a means of inciting the recall of the sense impressions, the sense exercises are given in connection with play and language games.

The children having had experience in the use of all the senses, and the class interest being a community interest, the exercises here presented begin with sight.

As children are more interested in people, and easily learn to distinguish them by their general appearance and their voices, the exercises of sight and hearing are in the following order:

1. Exercises with People.
2. Exercises with Things.
3. Exercises with Qualities of Things.

1. With People:

SIGHT EXERCISES

(*a*) Stand three children in front of the class.
One of the three leaves her place and hides.
Who has gone?

In this exercise the pupils at their seats keep their eyes open. The difficulty may be increased by having more and more children in front of class, or by having pupils leave seats. By requiring a description of pupil hiding, a higher degree of observation and more language work may be introduced in the game. This exercise is preparation for:

(*b*) Stand three children in front of class.
Pupils in class close eyes.
One of three leaves and hides.
Open eyes! Who has gone?

The difficulty may be increased as in previous exercise. The following rhymes may be used to advantage with each exercise:

"Now tell, little children, who has gone from the ring.
If you guess rightly, we'll clap and we'll sing!"

"One, two, three, four, five, six, seven, eight, nine, ten.
If you can't guess the first time, you may try again."

(*c*) Blindfold a child.
Raise edge of blindfold and let him see part of the dress of another.
Who is it?

(*d*) Blind Man's Buff
Play with three in a ring.
The Blind man attempts to catch one of the three.

2. With Things:

(*a*) Hold object before class.
Pupils close eyes.
Object "hidden in sight."
Pupils search for hidden object.
Play other games, for example, "Hot butter blue beans," "I spy."

(*b*) Place three coloured balls before child.
Blindfold child.
One ball is taken away.
First is taken. What colour is taken?
Red is taken. From what place was it taken.

Increase difficulty by increasing the number of balls, first removing one, then two or three.

"If your guess is sure and true,
Then we will all clap for you."

(*c*) Rainbow Game

Teacher holds up card with word "red" upon it. Asks child to find a ball of that colour and stand in the front of the room. Continue until all of the colours have been presented. Teacher holds up a card, and asks child to take the card and stand beside the one who has a ball of corresponding colour. Continue until all of the cards have been disposed of. Name colours.

(*d*) Colour Matching Game

Paste coloured squares, oblongs, circles, and other forms of different colours upon cards. Place a number of these cards upon black-board ledge. Teacher shows a duplicate of one of the cards for an instant, and asks a child to match the colour seen, to hold it up, and say, "My colour is RED like yours." Proceed in this way until all the colours have been matched.

(*e*) Observation Games

Children walk around the room.
What did you see?
Who saw the greatest number of things? Name things.

As an increased difficulty of this exercise, use the following: Put doll, box, shoe, nut, marble, ball, knife, bottle, ink-stand, and bell on table. Let children observe, go away and tell how many things they see, or write what they see. Who saw the largest number?

(*f*) Guessing Games

Blindfold a child.
Teacher holds up object and says, "I have something red."
Child asks, "Is it round or square?"
Guesses name of object.

(*g*) Sorting Games

Teacher or children collect leaves. Let children put leaves that are alike together—as maple, poplar, horse chestnut, etc. The same games may be played with nuts, seeds, grains, irregular forms, alphabetical letters, etc.

(*h*) Naming Games

To teach the names and ready recognition of the leaves, show a maple twig with leaves on it, and have children tell from what tree it was taken. Hold up a poplar twig with leaves upon it, and have children tell from what tree it was taken. Continue this way until several kinds have been used. Have the children bring many leaves and place them on the table. Show a maple twig with leaves on it, remove it, and have a child, or a number of children, pass the table and find leaves like those on the twig. Show another twig from a tree familiar to the children; after an instant remove it, and have the children find leaves exactly like the ones on the twig.

(*i*) Thimble Ring

All the players but one form a circle, each one clasping with his left hand the right wrist of his left-hand neighbour. This leaves all of the right hands free and all the left hands occupied. The odd player stands in the centre of the circle, and tries to detect who holds the thimble that is passed from hand to hand. Each player in the circle places his right fist in the hand of his neighbour on the left, while the entire circle repeats these lines:

"The thimble is going, I don't know where;
It is first over here, and then over there."

When the player in the centre thinks he knows who has the thimble, he goes up to him and says, "My lady's lost her thimble.

Have you it?" If correct, these two players change places. If incorrect, the one who is "It" demands of the player addressed to find it. This player in turn has one guess. If correct, he takes the place of the one who has the thimble, and the one who was "It" taking the vacant place in the circle, and the one who held the thimble going to the centre. Should the player be incorrect in his guess, he changes places with the one in the centre.

3. Qualities of Things

(*a*) Guessing Games

1st step.—Descriptions of persons, things, or parts of a room, as, "I see something made of wood—of clay—of tin—of iron—of glass," etc.

2nd Step.—"I see something made of wool, red and round," etc.

HEARING EXERCISES

1. With People:

(*a*) Knowing Voices

1st step.—One child says, "Good morning" back of another child, who tells who is speaking.

2nd step.—Repeat exercise, having child who is speaking stand in different part of the room, tell who is speaking, and what part of the room.

3rd step.—Eyes closed. Teacher touches child, who runs outside. As soon as he raps at door, some child asks, "Who is calling?" Child outside answers, "It is I." Children guess who it is.

4th step.—A certain number of children cover eyes. A certain number of children hide. They call "Whoop." Children uncover eyes, and tell where others are by sound.

5th step.—Two or three children turn their backs. Others speak. One says, "Good morning"; another, "It rains." Pupils having back turned tell who spoke and what was said by each.

Have the children form a circle. Blindfold a child, give him a pointer, and place him in the centre of the circle. At a given signal the children are to move until the floor is tapped with the pointer, when they are to stop immediately. The child in the centre must point to some one who is to take hold of the pointer. The one who is blindfolded asks, "Who is it?" The child holding

the pointer answers, "It is I." If the child's name can be given correctly, he is the one to be blindfolded and take his place in the centre of the circle.

(*b*) Knowing Tunes

Teacher sings a tune or plays a melody.
Children tell what is sung or played.

(*c*) Knowing Noise

Blindfold child.
Let two people walk across floor.
How many walking together?

(*d*) Rhyming Games

1st step.—Children rhyme words. One child says "fall"; another rhymes it, that is, says, "haul," "call," "ball," "tall," etc.

2nd step.—One child recites:

"Little Jack Horner
Sat in a (corner)."

Last word to be filled out by other child.

"Little Miss Muffet
Sat on a ———."

Fill out rhyme

3rd step.—A longer poem:

"'Twas the night before Christmas,
When all through the ——,
Not a creature was stirring,
Not even a ——."

(*e*) Silent Game

The children must be able to read the lips. A leader stands in a corner of the room. Then children sit in order. The leader whispers—but not loud enough to be heard—a child's name. The child must rise and come to the front of the room without a sound. Those making a sound or not responding when names are called must remain in their seats.

2. With Things:

(*a*) Sound of Things

Pupils close eyes.
Teacher strikes tin pan or other object.
What was struck?

Vary the exercise by dropping articles. As preparation for this exercise the children are taught to recognize the sounds when glass, wood, tin, iron, etc., are struck. For increased difficulty place keys in tin box, wooden box, glass jar, cardboard box, etc. Rattle box and have pupils tell kind.

(*b*) Sounds of bells

Pupils close eyes.
Teacher rings bell.
What kind of bell was rung?

The pupils are prepared for this exercise by having the bells rung and the sounds designated as school bell, dinner bell, bicycle bell, etc.

(*c*) Counting sounds

Teacher taps upon table.
Pupils tell how many times teacher tapped.

The difficulty may be increased by tapping upon iron, glass, etc., and having pupils tell how many times the teacher tapped, and upon what the teacher tapped.

TOUCH EXERCISES

1. Recognizing by Touch:

1st step.—Objects on table. Show them to child. Blindfold child. Place objects in hand. Have him feel and name object:

"Though your little eyes are blinded
Your little hands can feel."

2nd step.—Have a number of objects. Do not let the child see beforehand. Blindfold. Let child feel objects and name them. Put in a bag a whisk, chalk, a bottle, etc. Let child feel in the bag and tell what he has.

3rd step.—Drawing models and samples of materials. Blindfold child and have him tell names and qualities of objects by feeling. Teach hard and soft, rough and smooth, round and square, in the same manner, thus, "hard ball," "soft ball," etc.; "rough carpet," "smooth glass," etc. Use samples of wool, cotton, silk, leather, satin, etc.

SMELL EXERCISES

Recognizing common objects and flowers:

Blindfold child.
Have him smell coffee.
What do you smell?

As preparation for this game many lessons should be given in distinguishing strongly contrasting things, such as coffee, tea, vinegar, soap, onion, spices, flowers, etc.

EXERCISE SENSES TOGETHER

(*a*) Blindfold child.
Child smells flower.
Tells flower by description, for example, "That is a small violet flower," "That flower has five petals," etc.

(*b*) Hide the Thimble, Hot Butter Blue Beans

One player is sent from the room. One of those remaining hides a thimble, a cork, or other object that has been previously shown to the absent one. When the object is hidden, the absent player is recalled and proceeds to hunt for the hidden object. While he is doing this, the others sing or clap their hands; when the hunter is far from the object, lightly; when he approaches it, sounds are to grow louder.

(*c*) A Grouping Lesson

Things together. Give name, form, and group according to designated characteristics. Place blue objects with blue. Find ball—place with round things. Place soft objects together in group. Find how one object may belong to several groups.

(*d*) Memory

Tell any story that has a concrete basis in which interest lies in each thing:

"I am thinking of an animal that has two wings and scratches."

Imagination—"The old, old lady."

SENSORY MOTOR EXERCISES—EYE TRAINING

Place a box in the front of the room. Give each child a bean bag. At a given signal, tell the children to run around the room and as they pass the box, throw the bags into it. Those failing to do so are out of the game. The successful ones may take the bags and run again.

Hoop Game

Have a child hold a hoop in a vertical position. Give each child in the ring a bean bag and let him attempt to throw it through the hoop. The row sending the greatest number of bags through the hoop wins.

Ball in Ring

"In my hand a ball I hold,
Till upon the floor 'tis rolled."

Draw circle first—two circles, etc. Aiming.

Target Toss

Three concentric circles should be drawn on the ground or floor. Their size will depend upon the skill of the players. Each player throws three bean bags, or, if out of doors, small blocks of wood or shells. The thrower stands with his toe on the throwing line, and tosses the bags. If the bag stops on the centre circle, it scores fifteen; if between the centre and the next larger circle, it scores ten points; if between the middle and largest or outer one, it scores five points.

For very small children, a bag that lands on a line may score for the larger circle which it touches. For more expert players, a bag landing on a line does not score at all. The player wins who has the highest score in five rounds of the game.

SONG GAMES

Gymnastic and Representative Plays, as used in the Normal School Kindergarten Training Course, may be found in the following books:

Gaynor Books
Merry Songs and Games
Eleanor Smith's, Nos. I, II, III
Knowlton's Books
Hofers' Rhythms
Bentley Books
Neidlinger Books
Jenks and Walker Books
Poulsson's Books

GAMES AND PLAY

Games for older children to be used from *Philadelphia Hand Book* and Mr. Stecher's *Book of Games.*

BIBLIOGRAPHY

APPENDIX E

The asterisk indicates that the book is of special value

AUTHOR	BOOK	PUBLISHER	DATE
*Abelson, A. R.....	Measurement of Mental Ability of Backward Children.....	British Journal of Psychology..	1911
Anderson, Robert.....	Treatment of the Feeble-Minded, Safeguarding the Community.....	London: Char. Organ. Review...	1904
	Annotated Bibliography of Feeble-Mindedness	Training School	1910
Armitage, T. R.....	The Education and Employment of the Blind	London: Harris & Sons	1886
Ashby, Henry.....	Speech Defects in Relation to Mentaily-Defective Children.....	Med. Chron.	1903-4
Atkinson, Stanley B..	Care and Control of the Feeble-Minded	Econ. Review	1909
Auden, G. A.....	Feeble-Mindedness and Juvenile Crime.	Journal of Criminal Law and Criminology	1911
*Ayres, Leonard P.	Identification of the Misfit Child.....	New York: Russell Sage Foundation	1911
*Ayres, Leonard P.	Open-Air Schools.....	New York: Doubleday, Page & Co.	1910
*Ayres, Leonard P.	Laggards in our Schools.....	New York: Russell Sage Foundation	1909

Author	Book	Publisher	Date
Baldwin, Bird T.....	The Psychology of Mental Deficiency..	Popular Science Monthly	1911
Baldwin, J. Mark....	Mental Development in the Child and the Race.....	New York: The Macmillan Co...	1895
Barker, L. F.....	Nervous System.....	New York: Appleton	1901
Barr, Martin W.....	Mental Defectives, their History, Treatment, and Training.....	London: Rebman	1904
Barr, Martin W.....	Mental Defectives, their Classification and Training.....	Philadelphia Medical Journal...	1902
Barr, Martin W.....	Possibilities of Development for Mental Defectives, and the State's Care of Them	Alienist and Neurologist	1910
Barr, Martin W.....	Recognition and Training of Mental Defectives	Philadelphia Medical Journal ..	1902
Barr, Martin W.....	Some Studies in Heredity.....	Journal of Nervous and Mental Diseases	1897
Barr, Martin W.....	Marriage; Results and Effects of Heredity, Consanguinity and Environment	Psycho-asthenics	1911
*Bateson, W.....	Mendel's Principles of Heredity.....	Cambridge University Press ...	1909
Beach, Fletcher.....	The Treatment and Education of Mentally-feeble Children	London: J. & A. Churchill	1895
Beach, F., and Shuttleworth, G. E.....	Idiocy and Imbecility (in Sir Clifford Allbutt's System of Medicine).....	London: Macmillan Co.	1899
Beckley, C. C.....	Some Border-line Cases of Mental Deficiency	Boston Medical and Surgical Journal	1908
Bell, A. G.....	Methods of Instructing the Deaf in the United States.....	Washington, D.C.: Amer. Annals of the Deaf.....	1898

*Bickmore, A.....	Industries for the Feeble Minded.....	London: Adlard & Sons.....	1914

*Bickmore, A.	Industries for the Feeble-Minded	London: Adlard & Son.	1914
Binet, Alfred	Das Problem der Abnormen Kinder	Eos	1905
Bligh, Murray	Mongolianism	Child	1911
Block, Siegfried	Mental Defectives	Medical Record	1907
Boas, H.	The Form of the Head. A Critical Contribution to School Anthropometrics.	American Anthropomologist	1911
Bonser, Frederick G.	The Reasoning Ability of Children of the Fourth, Fifth, and Sixth School Grades	New York Teachers' College, Columbia University	1910
Bosbauer, Miklas S.	Handbuch der Schwachsinnigenfursorge	Leipzig: Teubner	1909
Boulanger	Les Anormaux dans la These de Lombroso	L'enfance Anormale	1910
Boulanger	La Co-Education des Anormaux	L'enfance Anormale	1911
Boulanger	Prevention de L'enfance Anormale et Alcoolisme	L'enfance Anormale	1912
Brown, Wm.	The Essentials of Mental Measurements	Cambridge University Press	1911
Bryant, L. S.	School Feeding	Philadelphia: J. P. Lippincott	1913
Bullard, W. N.	High Grade Mental Defectives	Boston Medical and Surgical Journal	1908
Bullard, W. N.	Mongolian Idiocy	Boston Medical and Surgical Journal	1911
*Butler, Amos W.	Burden of Feeble-Mindedness	National Conference of Charities and Correction	1907
Campbell, F. J.	The Education of the Blind	International Cong. of Hygiene, London	1891-2
Cantlie, James.	Physical Efficiency	London: G. P. Putnam	1906
Carter, Marion H.	Conservation of the Defective Child	McClure's Magazine	June, 1909
Cattell, J. McK.	Mental Tests and Measurements	Mind	July, 1890

Author	Book	Publisher	Date
Champneys, F. H. A..	Mentally Defective in Prison.....	British Medical Journal	July, 1908
Channing, Walter.....	Significance of Palatal Deformities in Idiots	Journal Mental Science	Jan., 1897
Channing, Walter, and Wissler, Clark.....	Hard Palate in Normal and Feeble-Minded Individuals.....	American Museum Natural History, Anthrop. Papers	1908
Clark, L. Pierce, with Chas. E. Atwood....	A Study of the Significance of the Habit Movements in Mental Defectives	Journal American Medical Association	Mar., 1912
Clark, L. Pierce.....	Psychopathic Children.....	New York: N. Y. Medical Journal	1914
Clarkson, R. D.....	Children Who Never Grow Up.....	Falkirk: Callender.....	1909
Cole, S. J.....	On Some Morphological Effects of Microcephalic Idiocy.....	Journal of Anatomy and Physiology	1910
Conklin, W. J.....	The Mating of the Unfit; A Study in Eugenics	Dayton	1912
Coriat, I. H.....	Mental Condition of Juvenile Delinquents	Psychological Clinic	Oct., 1907
Cornell, Walter S....	Relation of Physical to Mental Defect in School Children.....	Psychological Clinic	Jan., 1908
Cornell, Walter S....	The Results Obtained by Special Classes for Defectives.....	Training School	Dec., 1910
*Cornell, Walter S....	Health and Medical Inspection of School Children.....	Philadelphia: Davis	1912
*Crowley, R. H.....	The Hygiene of School Life.....	London: Methuen	1909
Dallemagne, Jules....	Degeneres et Desequilebres.....	Bruxelles, Lamartin	1894

Danielson, Florence H.,

Dallemagne, Jules....	Degeneres et Desequilebres.....	Bruxelles, Lamartin	1894
Danielson, Florence H., and Davenport, C. B.	The Hill Folk	Cold Spring Harbor, New York. Eugenics Record Office	1912
Davenport, Chas. B...	Family History Book.....	Eugenics Record Office	1911
Davenport, Chas. B., with Weeks, D. F...	A First Study of Inheritance in Epilepsy	Eugenics Record Office	1911
Davenport, Chas. B...	Euthenics and Eugenics.....	Popular Science Monthly	Dec., 1910
Davenport, Chas. B...	Origin and Control of Mental Defectiveness	Popular Science Monthly	Jan., 1912
Davenport, Chas. B...	Heredity in Relation to Eugenics.....	Henry Holt & Co.	1911
Davenport, Chas. B...	Census of Feeble-Minded in Institutions and Poor Houses.....	Psycho-asthenics	1911
Dawson, Geo. E.....	A Study of Youthful Degeneracy.....	Pedagogical Seminary	Dec., 1896
Dawson, W. R.....	Some Points Concerning the Diagnosis and General Treatment of the Feeble-Minded	Journal of Mental Science	1910
Dean, H. R.....	An Examination of the Blood Serum of Idiots by the Wassermann Reaction.	London Lancet	1910
Dendy, Mary.....	The Feeble-Minded.....	The Training School.....	1909
*Dendy, Mary.....	Problem of the Feeble-Minded	Manchester Statist. Society....	Mar., 1908
Denison, Chas.....	Degenerative Results of Defective Heredity	Denver, Colorado, Med. Society..	1900
Dickinson, W. H.....	Responsibility of the State for the Feeble-Minded	Nat. Assoc. for Promoting the Welfare of the Feeble-Minded.	1904
Diller, Theodore.....	Some Practical Problems Relating to the Feeble-Minded.....	Journal of Psycho-Asthenics ...	1911
Doren, G. A., and others	Our Defective Classes, How to Care for Them and Prevent Their Increase...	Columbus: Westhote	1899

Author	Book	Publisher	Date
Douglas, A. R.....	Care and Training of the Feeble-Minded	Journal Mental Science	1910
*Dresslar, F. B.....	School Hygiene.....	New York: Macmi'lan	1913
Dugdale, R. L.....	The Jukes.....	New York: G. P. Putnam's Sons.	1900
Dundas, J.....	Mental Deficiency in Children.....	Practitioner	Sept., 1909
Edson, Andrew W....	How Far Should the Public School System Care for the Feeble-Minded?.	Bulletin American Academy of Medicine	Aug., 1912
Eichholz, A.....	Treatment of Feeble-Minded Children.	London: British Medical Journal	1902
Elderton, Ethel M., and Edgar Schuster.....	The Inheritance of Ability.....	London: Galton Laboratory Publications	1907
Estabrook, A. H., and C. B. Davenport....	The Nam Family	Cold Spring Harbor, Eugenics Record Office	1912
*Fernald, Walter E....	The Imbecile with Criminal Instincts.	\merican Journal of Insanity ..	Apr., 1909
*Fernald, Walter E....	History of Treatment of the Feeble-Minded	Boston: G. H. Ellis Co.	1912
*Fernald, Walter E....	Some of the Methods Employed in the Care and Training of Feeble-Minded Children of the Lower Grades.....	Boston: G. H. Ellis Co.	1912
Goddard, Henry H....	The Heredity of Feeble-Mindedness...	Eugenics Review	Apr., 1911
*Goddard, Henry H....	The Feeble-Minded Immigrant.....	The Training School	Nov., 1912
*Goddard, Henry H....	Feeble-Mindedness and Immigration..	The Training School	Oct., 1912
*Goddard, Henry H....	Kallikak Family.....	New York: Macmillan Co.	1912
Goddard, Henry H....	The Menace of the Feeble-Minded....	Pediatrics	June, 1911
*Goddard, Henry H....	The Responsibility of Children in the Juvenile Court.....	Journal of Law and Criminology.	Sept., 1912

Juvenile Court		Journal of Law and Criminology.	Sept., 1912
Goddard, Henry H.	Ungraded Classes	N.Y.C. Education Report	1912
*Goddard, Henry H.	The Binet-Simon Measuring Scale of Intelligence	The Training School	1911
Goddard, Henry H.	The Form-Board as a Measure of Intellectual Development in Children.	The Training School	June, 1912
Goddard, Henry H.	Four Hundred Feeble-Minded Children Classified by the Binet Method	Jour. Psycho-Asthenics, Vol. XV, No. 1	Sept., 1910
*Goddard, Henry H.	Standard Methods for Giving the Binet Test	The Training School	Apr., 1913
*Goddard, Henry H.	Two Thousand Normal Children Measured by the Binet Measuring Scale of Intelligence	Ped-Sem, Vol. XVIII, page 232-259	June
*Goddard, Henry H.	How Shall We Educate Mental Defectives?	The Training School	May, 1912
*Goddard, Henry H.	The Basis for State Policy, Social Investigation and Prevention	Survey	Mar., 1912
Goddard, Henry H.	The Elimination of Feeble-Mindedness.	The Annals of the American Academy of Political and Social Science	Mar., 1911
Goddard, Henry H.	Sterilization and Segregation	American Academy of Medicine.	Aug., 1912
Goddard, Henry H.	Height and Weight of Feeble-Minded Children in American Institutions.	Journal of Nervous and Mental Diseases	Apr., 1912
Goddard, Henry H.	Feeble-Mindedness, Its Causes and Consequences	Macmillan	1914
Greenwood, Allen	Some Eye Defects of Feeble-Minded and Backward Children	Nat. Educ. Association	Apr., 1912
Guille, Dr.	Instruction and Amusements of the Blind	London: Sampson & Low	1894

Author.	Book.	Publisher	Date
Gulick, Luther.....	Gymnastic Treatment of the Feeble-Minded	Journal Psycho-Asthenics, Vol. IV, 113	1898
Gulick and Ayres.....	Medical Inspection of Schools.....	New York: Survey Associates..	1913
Hall, G. C.....	Adolescence, Vols. I and II.....	New York: D. Appleton & Co. ..	1905
Hall, G. C.....	Education Problems, Vols. I and II....	New York: D. Appleton & Co. ..	1911
Hall, W. S.....	The Evolution of Anthropometric Data	Journal American Medical Association	Dec., 1901
Hammerberg, Carl....	Studien uber Klinik und Pathologie der Idiote.....	Berlin: Upsala	1895
*Haney, J. D.....	Registration of City School Children..	New York: Columbia University.	1910
Harris, William T....	The Study of Arrested Development in Children as Produced by Injurious School Methods.....	Southern Educational Association	
*Hebberd, Robert W...	Development of State Institutions for the Mentally-Defective in this State for the Next Decade.....	Albany (N.Y.) State Board of Charities	1912
Herfort, Karl.....	Die Pathologische Anatomie der Idiotie	Eos	1908
Heron, D.....	The Influence of Defective Physique and Unfavourable Home Environment in Intelligence of School Children	Galton Laboratory Pub., London.	1910
Hinshelwood, Jas.....	Letter, Word, and Mind-Blindness....	London: H. K. Lewis.	1900
*Hogarth, A. H.....	Medical Inspection of Schools.....	London: Henry Frowde & Co. ..	1909

*Holmes, W. H..... School Organization and the Indivi-

*Holmes, W. H.....	School Organization and the Individual Child	Worcester (Mass.) Davis Press..	1912
Holmes, Arthur.....	Moral Imbecile or a Bad Boy, Which?.	Psychological Clinic	June, 1910
*Holmes, Arthur.....	The Conservation of the Child.....	Lippincott, Philadelphia	
Howe, Samuel G.....	On the Causes of Idiocy; being a supplement to a report by the author, appointed by the Governor of Massachusetts to inquire into the condition of the Idiots of the Commonwealth	Edinburgh	1858
*Huey, E. B.....	Backward and Feeble-Minded Children.	Baltimore: Warwick & Co.	1912
Ireland, William W...	The Mental Affections of Children; Idiocy, Imbecility, and Insanity.....	London: Churchill	1898
James, William.....	The Principles of Psychology.....	New York: Henry Holt	1893
Johnson, A. V.....	Bavaria, the Ursberg Colony.....	Nat. Assoc. for the Feeble-Minded	1911
*Johnstone, E. R.....	Defective Child.....	Training School	1909
*Johnstone, E. R.....	How to Get Best Results in Training the Mentally-Deficient Child.....	Training School	1910
*Johnstone, E. R.....	Inadequacy of Our Care of the Feeble-Minded	Training School	1909
*Johnstone, E. R.....	Prevention of Feeble-Mindedness.....	Jour. American Public Health Association	1911
*Johnstone, E. R.....	What we Do and How We Do It, Educationally	Journal Psycho-Asthenics, Vol. II, page 98.....	1896
*Johnstone, E. R.....	What Teachers of Normal Children May Learn from the Teaching of the Feeble-Minded	Pa. School Journal	1905
*Johnstone, E. R.....	Forward Teachers for Backward Children	Charities	Sept., 1904

Author	Book	Publisher	Date
Kelly, H.	Band in Musical Development of Defectives	Training School	Mch., 1913
King, Irving	The Psychology of Child Development.	Chicago University Press	1903
Kinsey	Speech for the Deaf	London: Allen	1880
*Kite, Elizabeth S.	Research Work in New Jersey	Department of Charities and Corrections	1914
Kraepelin.	Clinical Psychiatry, Trans. by A. D. Defendorf	New York: Macmillan Co.	1904
Kuhlmann, F	Experimental Studies in Mental Deficiency; Three Cases of Imbecility and Six of Feeble-Mindedness	American Journal of Psychology.	July, 1904
Lankester, E. Ray	The Kingdom of Man	London: Watts & Co.	1911
*Lapage, C. P.	Feeble-Mindedness in Children of School Age	England: Manchester University Press	1911
*Lapage, C. P.	Feeble-Mindedness in Children	Medical Chronicle	1905
Lievevouw, Coopman M.	Infants, Imbeciles, and Idiots	Review of Psychology	1908
*Love, James Kerr	The Deaf Child	Bristol: John Wright	1911
MacDonald, Arthur	Man and Abnormal Man	Government Printing Office, Washington, D.C.	1905
MacDonald, Arthur	Mental Stigmata of Degeneration	Buffalo Medical Journal	Aug., 1907
MacDonald, Arthur	Moral Stigmata of Degeneration	Chicago: The Open Court Publishing Co.	1908
*Mackenzie, W. Leslie	The Medical Inspection of School Children	Edinburgh: Hodge	1904
Mackenzie, W. Leslie	The Health of the School Child	London: Methuen & Co.	1906

MacMurchy, Helen ..	Care of the Feeble-minded in Ontario.	Toronto: Canadian Conference of Charities and Correction..	1905
MacMurchy, Helen ..	The Visiting Nurse and the Children requiring Special Education	Cleveland: National Education Association, U.S.A.	1908
MacMurchy, Helen ..	Feeble-mindedness in Children	Toronto: The Bulletin of the Ontario Hospitals for the Insane.	1909
MacMurchy, Helen ..	Can the Mentally-Defective Child be Educated in the Public Schools? ..	Buffalo: Fourth International Congress on School Hygiene.	1913
MacMurchy, Helen ..	How to find the Feeble-minded Child	Albany: Annual Report, New York, State Teachers' Assn.	1911
MacMurchy, Helen ..	What is a Feeble-minded Child?	Toronto: Annual Report, Ontario Women's Institutes ...	1913
MacMurchy, Helen ..	Defective Children	Toronto: Report of Social Service Congress, Ottawa	1914
Macpherson, John....	Problem of the Feeble-Minded.....	Glasgow Medical Journal	May, 1912
*Maennel, B.....	Auxiliary Education	Doubleday Page	1909
Makuen, G. Hudson...	On the Development of the Faculty of Speech	International Medical Magazine.	July, 1903
Makuen, G. Hudson...	Two Hundred Cases of Speech Defects at the Philadelphia Polyclinic Hospital	Therapeutic Gazette	Sept., 1897
Makuen, G. Hudson...	Speech of the Feeble-Minded	Training School	July, 1909
*Mangold, G. B.....	Child Problems	New York: Macmillan Co.	1910
Martin, W.....	Employment of the Blind.....	New York: International Congress of Teachers of Blind....	1883
*Massachusetts	Report of the Commission to Investigate the Question of the Increase of Criminals, Mental Defectives, Epileptics, and Degenerates	Massachusetts	Jan., 1911

Author	Book	Publisher	Date
McCready, E. B.....	How Far Shall the School System Care for the Feeble-Minded?	Bulletin American Academy of Medicine, Boston.....	Aug., 1912
McDougall, William...	Social Psychology	Boston: J. W. Luce & Co.	1899
McKeag, A. J.....	Problem of Defective Children as Discussed in the International Congress on School Hygiene	Psychological Clinic	1907
*Moore, Anne.....	The Feeble-Minded in New York	New York: Pub. by S.C.A.A. ..	1911
*Morgan, B. S.....	The Backward Child	G. P. Putnam.....	1914
Muir, J.....	Analysis of Twenty-six Cases of Mongolianism	Archives of Pediatrics.....	1903
Munroe, J. P.....	Problem of Defectives and Delinquents.	Journal of Pedagogy	June, 1910
Murdock, J. M.....	Notes on the History of Five Microcephalic Children	Journal Psycho-Asthenics	Dec., 1902
*Nash, C. E.....	Industrial Training	Journal Psycho-Asthenics, Vol. 8, page 8	1912
National Conference on the Prevention of Destitution	Report of the Proceedings of the Mental-Deficiency Section	London: P. S. King & Son....	1911
*McMurtrie, D. C.....	Bibliography of the Education and Care of Crippled Children	New York: D. C. McMurtrie ...	1913
*McMurtrie, D. C.....	The Care of Crippled Children in the United States	New York: D. C. McMurtrie ...	1913
Neff, Joseph S.....	Methods of Securing State Appropriations for Proper Segregation and Care of Feeble-Minded	Bulletin American Academy of Medicine	Aug., 1912

Noble, C. P.....	The Law of Degeneracy in its Relation to Medicine	New York Medical Journal	Dec., 1910
Nordau, Max S.....	Degeneration	New York: Appleton	1895
*Norsworthy, Naomi...	The Psychology of Mentally-Deficient Children	Psychological Clinic	1907
*Norsworthy, Naomi...	Suggestions Concerning the Psychology of Mentally-defective Children	Journal Psycho-Asthenics.....	Sept., 1907
Offner, Max.....	Mental Fatigue	Baltimore: Warwick & Yorke ..	1911
Pabst, A.....	Handwork Instruction for Boys	Peoria, Ill.: Normal Arts Press.	1910
Pearce, Rankin and Ormond	Notes on Twenty-eight Cases of Mongolian Imbeciles With Special Reference to Ocular Condition	British Medical Journal	July, 1910
*Pinsent, Ellen F.....	Care and Control of the Feeble-Minded	Nineteenth Century	1910
*Pinsent, Ellen F.....	Our Provision for the Mentally-Defective	Nineteenth Century	1911
Potts, W. A.....	Recognition and Training of Congenital Mental Defectives	British Medical Journal	1908
Powell, F. M.....	Backward and Mentally-deficient Children	Child Study Monthly	Mar., 1896
Preyer, W.....	The Mind of the Child	Appleton, New York	1894
Punnett, R. C.....	Mendelism	New York: Macmillan	1911
Robinson, G. S.....	Treatment of Defective Classes	Bulletin, Iowa State Institution.	Apr., 1902
Roth, M.....	The Physical Education of the Blind.	Conference in York	1883
Sanctis, Sante De.....	Phrenasthenische and Psychische Abnorme	Eos	1911
Sanctis, Sante De.....	Der Mongolismus	Eos	1909
Sanctis, Sante De ...	Mental Development and Measurements of the Level of Intelligence..	Jour. Educ. Psych.	Nov., 1911
Scholz, L.....	Irren und Idiotenanstalt in Kosten.	Berlin: Karger	1911
Scripture, E. W.	Stuttering and Lisping	New York: Macmillan	1912
Seguin, Edouard.....	Idiocy and its Treatment	New York: Wood	1866

AUTHOR	BOOK	PUBLISHER	DATE
Semper, Maurice.....	Les enfants des paralytiques generaux.	Paris	1904
Shaw, E. R.....	School Hygiene	New York: Macmillan	1902
*Sherlock, E. B.....	The Feeble-Minded	London: Macmillan	1911
Shuttleworth, G. E....	Clinical Lecture on Idiocy and Imbecility	British Medical Journal	Jan., 1866
Shuttleworth, G. E....	Differentiation of Mentally-deficient Children	International Congress School Hygiene	1908
*Shuttleworth, G E....	Mentally-deficient Children	London: Lewis	1895
Shuttleworth, G. E....	Mongolian Imbecility	British Medical Journal	Sept., 1909
Shuttleworth, G. E., and Potts, W. A....	Mentally-defective Children, Their Treatment and Training	Philadelphia: Blakiston	1910
Shuttleworth, G. E....	On Some Forms of Slighter Mental Deficiency and Their Treatment ...	British Medical Journal	Oct., 1903
Smart, I. T.....	American Methods of Caring for Feeble-Minded	Nat. Assoc. for Feeble-Minded..	1911
Smith, W. H.	All the Children of all the People	New York: Macmillan	1912
Smith, Wilkinson, and Wagoner	A Summary of Laws of the Several States (on Feeble-Mindedness) ...		1914
Stern, Wm.....	The Psychological Method of Testing..	Baltimore: Warwick & Yorke...	1914
Strumpell, L.....	Die padagogische Pathologie oder die Lehre von den Fehlern des Kindes..	Leipzig: Ungleich	1899
Sucksland, O.....	Die Mongoloide Idiotie	Halle: Pritshow	1909
Talbot, Eugene S.....	Degeneracy, its Causes, Signs, and Results	New York: Scribner	1899
Taylor, J. Madison....	Motor Education for the Child	Popular Science Monthly	Mch., 1911

*Thomas, C. J.....	The Aphasias of Childhood	Public Health, London	May, 1908
Thompson, John.....	Treatment of Sick Children	Edinburgh: Wm. Greene	1908
Tichner, Edward B...	Text-book of Psychology	Macmillan	1909
Tichner, Edward B...	A Primer of Psychology	Macmillan	1900
Tichner, Edward B...	Students' Manual of Experimental Psychology	Macmillan	1901
Town, Clara H.....	Congenital Aphasia	Psychological Clinic	1910
Tredgold, A. F.....	Clinical Lecture on Feeble-Minded Children	Medical Press	Aug. and Sept., 1909
*Tredgold, A. F.....	Mental Deficiency	London: Bailliere	1914
Tredgold, A. F.....	The Mentally-deficient Child	London: Child	1911
Tredgold, A. F.....	Special Training Considered from a Psychological Standpoint	British Journal Children's Diseases	Oct., 1905
Truper, Johannes.....	Die Anfange der Abnormen Erscheinungen im Kindlichen Seelenleben ..	Altenburg: Bonde	1902
*U.S. Bureau of Education	Bibliography of Exceptional Children and Their Education	Washington: Bulletin 32	1912
*U.S. Bureau of Education	Schools for the Defective Classes	Reports	1870 to date
	University Department for Study of Defective Children	Training School	1911
Van Sickle, James H.	How Far Shall the Public School System Care for the Feeble-Minded? ...	American Academy Medicine ...	1912
*Wallin, J. E. W.....	Experimental Studies of Mental Defectives	Baltimore: Warwick & Yorke..	1912
*Wallin, J. E. W.....	Mental Health of the School Child ...	New Haven: Yale Univ. Press.	1914
*Warner, Francis.....	The Study of Children.....	New York: Macmillan.	1897
Warner, Francis.....	Dull, Delicate, and Nervous Children..	In Sir Clifford Allbutt's System of Medicine	

Author.	Book.	Publisher	Date
Weisman, A.....	Essays on Heredity	Oxford: Clarendon Press	1891
Weygandt, W.....	Uber Idiotie	Berlin: Samm. Zwangl.....	1906
*Whipple, G. M.....	Mental and Physical Tests	Baltimore: Warwick & Yorke ..	1910
White and Jelliffe ..	Modern Treatment of Nervous and Mental Diseases	Philadelphia: Lea & Febiger ..	1913
Wilmarth, A. W.....	A Report on the Examination of one Hundred Brains of Feeble-Minded Children	Alien. and Neurol.	Oct., 1890
Winnie, A. J.....	History and Handbook of Day-Schools for the Deaf and Blind	Madison, Wis.: Democrat Printing Co.	1912
Winship, A. E.....	Jukes-Edwards; A Study in Education and Heredity	Harrisburg, Pa.: R. L. Myers & Co.	1900
Wylie, A. R. T.....	Contribution to the Study of the Feeble-Minded in Height and Weight	Faribault, Minn.	
Wylie, A. R. T.....	Emotions and Instincts of the Feeble-Minded	Journal Psycho-Asthenics	
Wylie, A. R. T.....	Reaction Time of the Feeble-Minded..	Journal Psycho-Asthenics	
Wyllie, John.....	Disorders of Speech	Edinburgh: Oliver	1894
Yerkes, R. M.....	Introduction to Psychology	New York: Holt & Co.	1911

MAGAZINES, JOURNALS, AND REPORTS

*The Journal of Psycho-Asthenics, Faribault, Minnesota, U.S.A., published quarterly. (Dr. A. C. Rogers).

*The Training School, published monthly, Vineland, N.J.

*The Psychological Clinic, published monthly, Philadelphia, Pa.

The Annual Charities' Register and Digest, Longmans, Green & Co., London.

*The Braille Review, National Institution for the Blind, Great Portland Street, London, W.

*Report of the Royal Commission on the Care and Control of the Feeble-Minded. 1908; Wyman & Sons, London; Vol. VIII contains the final report. Price, 4s. 4d.

Annual Reports on the Feeble-Minded in Ontario, 1906-1914, Helen MacMurchy, Toronto. Published by Order of the Legislative Assembly.

*Annual Reports of the Institutions for the Feeble-Minded at Waverley, Mass., Vineland, N.J., Faribault, Minn., Elwyn, Pa.

*Reports of the Lancashire and Cheshire Society for the Permanent Care of the Feeble-Minded. 1899-1909; Rawson & Sons, New Brown Street, Manchester.

*Report of the Massachusetts Commission for the Blind. Boston, 1914.

*Reports of the Special Schools After-Care Sub-Committee. P. Jones, Ltd., 148 Great Charles St., Birmingham.

*Reports of Institutions for the Mentally-Defective at Starcross, Darenth, and the Royal Albert Institution, England.

Report of the Royal Commission on Physical Training in Edinburgh, Scotland, 1903.

Report of the Commission of Education, United States Bureau of Education. Washington, D.C., 1913.

*Volta Review (For the Deaf), Washington, D.C.

Acts Relating to Defective and Epileptic Children. Wyman & Sons, London.

Report of the Departmental Committee on Defective and Epileptic Children. Wyman & Sons, London. 1898.

Report of the Royal Commission on the Blind, Deaf and Dumb. Wyman & Sons, London. 1889.

Annual Reports of the Committee of the Society for Training Teachers of the Deaf in the United Kingdom. London.

INDEX