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MEDICAL INSPECTION

SUGGESTIONS TO TEACHERS AND SCHOOL PHYSICIANS

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SUGGESTIONS

TO

TEACHERS AND SCHOOL PHYSICIANS

REGARDING

MEDICAL INSPECTION.

ISSUED BY THE
MASSACHUSETTS BOARD OF EDUCATION.

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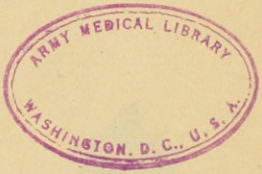

(2-1-53)

Commonwealth of Massachusetts.

State House, Boston, Jan. 23, 1907.

In order to render the medical inspection required by chapter 502, Acts of 1906, effective and uniform throughout the State, His Excellency Governor Guild appointed a committee to prepare a circular of advice to the school physicians of the State.

This committee consisted of Dr. Henry P. Walcott, Dr. Charles Harrington and Dr. Julian A. Mead, representing the State Board of Health; Mrs. Ella Lyman Cabot, Mr. George I. Aldrich and Mr. George H. Martin, representing the Board of Education; and Dr. Robert W. Lovett, Dr. Harold Williams and Dr. W. H. Devine, representing the medical profession.

A sub-committee of this body arranged for conferences with the heads of departments and others connected with the medical schools and hospitals in and about Boston, and with physicians who have had experience in school inspection. These gentlemen have given freely of their time and thought, and have furnished to the committee the suggestions contained in this circular.

These suggestions cover the ground included in the clause in section 5 of the law: "The school committee of every city and town shall cause every child in the public schools to be separately and carefully tested and examined at least once in every school year, to ascertain whether he is suffering from defective sight or hearing, or from any other disability or defect tending to prevent his receiving the full benefit of his school work, or requiring a modification of the school work in order to prevent injury to the child or to secure the best educational results."

The Board of Education issues this circular in the assurance that it represents the highest professional authority in the specialties covered by the law, and commends it to the careful attention of all teachers, school physicians and other school officers.

The following are the subjects treated, with the names of the physicians who have contributed suggestions: —

1. *Infectious Diseases.* — Dr. John H. McCollom.

2. *The Eye.* — Dr. Myles Standish, Dr. Henry B. Chandler, Dr. Charles H. Williams, Dr. David W. Wells.

3. *The Ear.* — Dr. Clarence J. Blake, Dr. D. Harold Walker.

4. *The Throat and Nose.* — Dr. Samuel W.

Langmaid, Dr. Algernon Coolidge, Jr., Dr. Frederic C. Cobb, Dr. George B. Rice.

5. *The Skin.* — Dr. John T. Bowen, Dr. James S. Howe, Dr. George F. Harding, Dr. Charles J. White, Dr. C. Morton Smith, Dr. John L. Coffin.

6. *Diseases of Bones and Joints.* — Dr. Edward H. Bradford, Dr. Augustus Thorndike, Dr. Charles F. Painter, Dr. George H. Earl, Dr. Robert Soutter.

7. *Children's Diseases.* — Dr. Thomas M. Rotch, Dr. John L. Morse, Dr. John H. Moore, Dr. Robert W. Hastings, Dr. Edmund C. Stowell.

8. *The Teeth.* — Dr. Edward W. Branigan, Dr. George A. Bates, Dr. Eugene H. Smith, Dr. Samuel A. Hopkins.

9. *Nervous Diseases.* — Dr. James J. Putnam, Dr. George L. Walton, Dr. Morton Prince, Dr. William N. Bullard, Dr. Edward W. Taylor, Dr. John J. Thomas, Dr. Walter E. Fernald.

10. *School Hygiene.* — Dr. Henry J. Barnes.

11. *School Furniture.* — Dr. Frederick J. Cotton, Mr. R. Clipston Sturgis.

12. *School Inspectors.* — Dr. George S. C. Badger, Dr. H. Lincoln Chase, Dr. Harry M. Cutts.

DISEASES.

Infectious Diseases.

Diphtheria. — It is a well-recognized fact that nasal diphtheria of a mild type without constitutional disturbance is one of the most important factors in causing the spread of the disease, and also that children very frequently have profuse discharges from the nose. It therefore follows that, in order properly to inspect the public schools, it is important that cultures should be taken from the nose in every case where there is a persistent discharge, particularly if there is any excoriation about the nostrils.

The throat should be examined at varying intervals, depending upon the physical condition of the children. Any hoarseness or any thickness of the voice should cause an examination of the throat. If the tonsils are enlarged, if the mucous membrane is congested, if there is swelling of the palate, a culture should be taken. These symptoms precede diphtheria.

A child with positive cultures should be excluded from school until two consecutive negative cultures at an interval of forty-eight hours have been obtained.

Scarlet Fever. — If there is a sudden attack of vomiting, if there is any redness of the throat, if the child complains of headache, if there is an unexplained rise in temperature, the child should be isolated at once. Any desquamation (peeling of the skin) should be looked upon with suspicion. If there are any breaks at the finger tips, if on pressing the pulp of the finger there is a white line at the juncture of the nail with the pulp of the finger, particularly if this occurs in the majority of the finger tips, the child should be excluded from the school.

A child who has had scarlet fever should not return to school until the process of desquamation has been entirely completed, and all discharge from the nose and ears has ceased.

Measles. — Running from the nose and slight intolerance of light may call for an examination of the mucous membrane of the mouth for Koplik's sign. Koplik's sign, so called, is the presence on the lining membrane of the mouth, near the molar teeth, of minute pearly white blisters, without any inflammation around them. There may be only two or three of these blisters, and they may easily escape detection if the patient is not carefully examined in a good light. These blisters are certain forerunners of an attack of measles.

No child should return to school after an attack of measles until the desquamation is en-

tirely completed, and the child has recovered from the intercurrent bronchitis.

Mumps. — Any swelling or tenderness in the region of the parotid glands (situated behind the angle of the jaw) should be looked upon with suspicion. It is important to notice any enlargement or swelling about Steno's duct (inside the mouth, opposite the second upper molar tooth), as this is a very frequent symptom of mumps.

A child should be excluded from school until one week has elapsed after the disappearance of all swelling and tenderness in the region of the parotid glands.

Whooping-cough. — A persistent paroxysmal cough, frequently accompanied with vomiting, no matter whether there is any distinct whoop or not, is indicative of whooping-cough. In cases of whooping-cough of long standing, even if there has been no distinct whoop, an ulcer on the band connecting the lower surface of the tongue with the floor of the mouth is found in a certain number of cases. If there is no distinct ulceration, there may be a marked congestion of the band.

As long as there is any cough, the child who has had whooping-cough should be looked upon with suspicion.

Varicella (Chicken Pox). — A few black crusts scattered over the body are evidences of

an attack of chicken pox. The crusting seen in impetigo must be differentiated from that of chicken pox.[1]

No child should return to school until all crusts have disappeared from the body, particularly from the scalp, for in this region the crusts remain longer than elsewhere.

The Eyes.

[Supplement to circular already issued.]

There are certain children who show normal vision by the ordinary tests, yet whose parents should be notified to have the eyes examined. These are: (1) children who habitually hold the head too near the book (less than twelve to fourteen inches); (2) children who frequently complain of headache, especially in the latter portion of school hours; (3) children in whom one eye deviates even temporarily from the normal position.

It should be remembered that the following symptoms are at times indicative of trouble with the eyes: (1) habitual scowling and wrinkling of the forehead when reading or writing; (2) twitching of the face; (3) inattention and slowness in book studies in a child otherwise bright.

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[1] See Diseases of the Skin.

The Ears.

See circular of directions for testing hearing, already in hands of teachers.

The Throat and Nose.

In all cases of acute illness the throat should be examined for the presence of the eruption of scarlet fever and measles and for the exudation or membrane of tonsilitis and diphtheria, and a culture taken in any suspected case of the latter.

The presence of discharge from the nose should be noted, and if it is thick and creamy, a culture should always be taken. In all cases of severe hoarseness, with difficult breathing, diphtheria should be suspected. If the discharge from the nose is only from one nostril, a foreign body in the nose should be looked for.

In cases of chronic nasal obstruction, as evinced by mouth-breathing, snoring, continual post-nasal catarrh or recurring ear trouble, the presence of an adenoid growth (third tonsil) should be suspected, and the child referred for special examination and treatment. As a rule, digital examination for adenoids should be made only by the operating surgeon. Obviously large tonsils, recurring tonsilitis and enlargement of the glands of the neck, suggest the advisability

of referring the child to the family physician as to the propriety of removing the tonsils.

Recurring nose-bleed should be referred for special treatment.

In cases of eczema about the nostrils, a cause may be sought in pediculi capitis (head lice).

In referring cases for treatment, school physicians, in addition to the diagnosis, should state the symptoms upon which the diagnosis is based, for the benefit of the family physician or specialist.

Diseases of the Skin.

Scabies (*the Itch*). — A contagious skin disease, due to an animal parasite which burrows in the skin, causing intense itching and scratching. The disease usually begins upon the hands and arms, spreading over the whole body, but does not affect the face and scalp. Between the fingers, on the front of the wrist, at the bend of the elbows and near the arm pits are favorite locations for the disease; but in persons of cleanly habits the disease may not show at all upon the hands, and its real nature is determined only after a most thorough and careful examination. There is a great variation in the extent and severity of this disease, lack of personal care and cleanliness always favoring its development. Scratching soon brings about an

infection of the skin with some of the pus-producing germs, and the disease is then accompanied by impetigo, or a pus infection of the skin.

At the present time itch is very common and widespread, and, because of the great variation in its severity, mild cases have been mistaken for hives, eczema, etc., the real condition not being recognized, and the disease spread in consequence. All children who are scratching or have an irritation upon the skin should be examined for scabies.

It is very important that all infected members of a family be treated till cured, else the disease is passed back and forth from one to another. It is also important that all underclothing, bedding, towels, etc., things that come in contact with the body, be *boiled* when washed.

All cases of scabies should be excluded from school until cured.

Pediculi Capitis (*Head Lice*). — An extremely common accident among children, either from wearing each others' hats and caps, or hanging them on each others' pegs, or from combs and brushes. No person should be blamed for *having* lice, — only for *keeping* them.

The irritation caused by vermin in the scalp leads to scratching, which in turn causes an inflammation of the skin of the neck and scalp. The skin then easily becomes infected with some

of the pus-producing germs, and large or small scabs and crusts are formed from the dried matter and blood. Along with this condition the glands back of the ears and in the neck become swollen, and may be very painful and tender.

The condition of pediculosis is most easily detected by looking for the eggs (nits), which are always stuck onto the hair, and are not readily brushed off. The condition is best treated by killing the living parasites with crude petroleum, and then getting rid of the nits. With boys, this is easy, — a close hair cut is all that is needed; with girls, by using a fine-toothed comb wet in alcohol or vinegar, which dissolves the attachment of the eggs to the hair. All combs and brushes must be carefully cleansed.

Children with pediculosis should be excluded from school until their heads are clean. By chapter 383, Acts of 1906, parents who neglect or refuse to care for their children in this respect may be prosecuted under the compulsory attendance law.

Ringworm. — A vegetable parasitic disease of the skin and scalp. When it occurs upon the skin, it yields readily to treatment; but upon the scalp it is extremely chronic. Ringworm of the skin usually appears on the face, hands or arms, — rarely upon the body, — in varying

sized more or less perfect circles. One or more, usually not widely separated, may be present at the same time. All ringed eruptions upon the skin should be examined for ringworm.

When the disease attacks the scalp, the hairs fall or break off near the scalp, leaving dime to dollar sized areas nearly bald. The scalp in these areas is usually dry and somewhat scaly, but may be swollen and crusted. The disease spreads at the circumference of the area, and new areas arise from scratching, etc.

Another disease, somewhat like ringworm of the scalp, is known as favus, — a disease much more common in Europe than America. In this disease quite abundant crusts of a yellowish color are present where the process is active. The roots of the hairs are killed, so that the loss of hair from this disease is permanent, a scar remaining when the condition is cured.

Care must be taken to see that all combs and brushes are thoroughly cleansed, and to prevent children wearing each others' hats, caps, etc.

Children with ringworm should not be allowed to attend school.

Impetigo. — A disease characterized by few or many large or small flat or elevated pustules or festers upon the skin. The condition is often secondary to irritation or itching diseases of the skin (hives, lice, itch), and scratching starts up a pus infection.

The disease most often appears upon the face, neck and hands; less often upon the body and scalp. The size of the spots varies very much, and they often run together to form on the face large superficial sores, covered with thick, dirty, yellowish or brownish crusts.

The disease is contagious, and often spread by towels and things handled.

Children having impetigo should not be allowed to attend school until all sores are healed and the skin is smooth.

Diseases of the Bones and Joints.

All noticeable lameness, whether sudden or continued, may indicate serious joint trouble, or may be due to improper shoes. These cases, as well as curvatures of the spine, as indicated by habitual faulty postures at the desk or in walking, should be referred for medical inspection.

Spinal curvature should be suspected when one shoulder is habitually raised or dropped, or when the child leans to the side, or shows persistent round shoulders.

Complaints of persistent "growing pains" or "rheumatism" may be the earliest signs of serious disease of the joints.

SOME GENERAL SYMPTOMS OF DISEASE IN CHILDREN WHICH TEACHERS SHOULD NOTICE, AND ON ACCOUNT OF WHICH THE CHILDREN SHOULD BE REFERRED TO THE SCHOOL PHYSICIAN.

Emaciation. — This is a manifestation of many chronic diseases, and may point especially to tuberculosis.

Pallor. — Pallor usually indicates anæmia. Pallor in young girls usually means chlorosis, — a form of anæmia peculiar to girls at about the age of puberty. It is usually associated with shortness of breath; the general condition otherwise usually appears good. Pallor may also be a manifestation of disease of the kidneys; this is almost invariably the case if it is associated with puffiness of the face.

Puffiness of the Face. — This, especially if it is about the eyes, points to disease of the kidneys; it may, however, merely indicate nasal obstruction.

Shortness of Breath. — Shortness of breath usually indicates disease of the heart or lungs. If it is associated with blueness, the trouble is usually in the heart. If it is associated with cough, the trouble is more likely to be in the lungs.

Swellings in the Neck. — These may be due to mumps or enlargement of the glands. The

swelling of mumps comes on acutely, and is located just behind, just in front and below the ear. Swollen glands are situated lower in the neck, or about the angle of the jaw. They may come on either acutely or slowly. If acutely, they mean some acute condition in the throat. If slowly, they are most often tubercular. They may also be the result of irritation of the scalp, or lice in the hair.

General Lassitude, and Other Evidences of Sickness. — These hardly need description, but may, of course, mean the presence or onset of any of the acute diseases.

Flushing of the Face. — This very often means fever, and on this account should be reported.

Eruptions of Any Sort. — All eruptions should be called to the attention of the physician. It is especially important to notice eruptions, because they may be the manifestations of some of the contagious diseases. The eruption of scarlet fever is of a bright scarlet color, and usually appears first on the neck and chest, spreading thence to the face. There is often a pale ring about the mouth in scarlet fever, which is very characteristic. There is usually a sore throat in connection with the eruption. The eruption of measles is a rose or purplish red, and is in blotches about the size of a pea. It appears first on the face, and is usually asso-

ciated with running of the nose and eyes. The eruption of chicken pox appears first as small red pimples, which quickly become small blisters.

A Cold in the Head, with Running Eyes. — This should be noticed, because it may indicate the onset of measles.

Irritating Discharge from the Nose. — A thin, watery nasal discharge, which irritates the nostrils and the upper lip, should always be regarded with suspicion. It may mean nothing more than a cold in the head, but not infrequently indicates diphtheria.

Evidences of Sore Throat. — Evidences of sore throat, such as swelling of the neck and difficulty in swallowing, are of importance. They may mean nothing but tonsilitis, but are not infrequently manifestations of diphtheria or scarlet fever.

Coughs. — It is very important to notice whether children are coughing or not, and what is the character of the cough. In most cases, of course, the cough merely means a simple cold or slight bronchitis. A spasmodic cough, that is, a cough which occurs in paroxysms and is uncontrollable, very frequently indicates whooping-cough. A croupy cough, that is, a cough which is harsh and ringing, may indicate the disease diphtheria. A painful cough may indicate disease of the lungs, especially pleurisy

or pneumonia. A long-continued cough may mean tuberculosis of the lungs.

Vomiting. — Vomiting usually, of course, merely means some digestive upset. It may, however, be the initial symptom of many of the acute diseases, and is therefore of considerable importance.

Frequent Requests to go out. — Teachers are too much inclined to think that frequent requests to go out merely indicate restlessness or perversity. They often, however, indicate trouble of some sort, which may be in the bowels, kidneys or bladder; therefore, they should always be reported to the physician.

The Teeth.

Unclean mouths promote the growth of disease germs, and cavities in the teeth are centers of infection. Pus from diseased teeth seriously interferes with digestion, and poisons the system. It causes a lowering of vitality, and renders mental effort difficult. Diseased teeth, temporary as well as permanent, are frequently the cause of abscesses, and should be carefully watched and treated.

Irregularities of the teeth, especially those which make it impossible to close the teeth properly, lead to faulty digestion, to mouth-breathing, and to other diseases and evils which an insufficient supply of oxygen produces.

The first permanent molars are perhaps the most important teeth in the mouth, and are the most frequently neglected, because they are so often mistaken for temporary teeth. (It should be remembered that there are twenty temporary teeth, ten in each jaw, and that the teeth that come at about the sixth year immediately behind each last temporary tooth — four in all — are the first permanent molars.)

The teacher should be on the lookout for pain or swelling in the face. When the child keeps the mouth constantly open, an examination of the teeth should be made. When symptoms of indigestion occur, or physical weakness or mental dullness are observed, the teeth should be inspected. It should be remembered that disease of the ears, disturbances of vision and swelling of the glands of the neck may be caused by diseased teeth.

It should be known that decay of the teeth is caused primarily by the fermentation of starchy foods and sugars, and that the greatest factor in preventing dental caries is the removal of food particles by frequent brushing. Children should be prevented from eating crackers and candy between meals, and when possible the teeth should be cleaned after eating. Inspection of the teeth by a dentist should be made at least once in six months.

NERVOUS TROUBLES AND MENTAL DEFECTS.

Teachers and medical inspectors of the schools should investigate children who show certain physical and mental symptoms. Especially should they take notice of the presence of these symptoms in a child who did not formerly show them. The most important of these are the following: —

I. — Restlessness and inability to stand or sit quietly, in a previously quiet child, especially if to this is added irritability of temper and loss of self-control, as shown by crying for trifles, or inability to keep the attention fixed.

There may also be present quick, twitching movements of the muscles of the trunk, face, and especially of the hands, fingers, arms or legs. If severe, these may cause the child to drop things, render its work awkward, or interfere with buttoning the clothes, writing or drawing. Such children are often scolded for being inattentive or careless.

These symptoms are the slighter ones of chorea (St. Vitus' Dance). With these should not be confounded other forms of twitching of muscles, such as the blinking of the eyelids, the slower twisting movements of the face or shoulders, or other parts of the body, often called habit spasms, which may be due to defects of vision, adenoid growths or other reflex causes.

These latter cases do not usually need to be withdrawn from school work, though often requiring treatment; while the former class should be removed from school at once, both for the child's sake, and to prevent an epidemic of imitative movements, such as sometimes occurs.

II. — Another class of symptoms requiring investigation are repeated faintings especially if the child's lips become blue; attacks, often only momentary, in which the child stares fixedly and does not reply to questions, or in which he suddenly stops speaking or whatever he is doing, and is unaware of what is going on about him. These lapses of consciousness may be accompanied also by rolling up of the eyes, drooling, or unusual movements of the lips, and often appear like a "choking" attack.

Sudden attacks of senseless movements of various sorts, such as twisting and pulling at the clothes or handkerchief, fumbling aimlessly at the desk, especially if there is no recollection afterwards of what was done, are often another expression of the same conditions.

Such attacks, particularly if repeated at varying intervals, even when not accompanied by complete loss of consciousness, are frequently as characteristic of epilepsy as the severe convulsions.

Epileptic convulsions usually involve the entire body in sharp jerking movements, with

blueness of the face or lips, complete loss of consciousness, and are usually followed by a period of sleep or drowsiness, and are frequently accompanied by frothing at the mouth, biting of the tongue, and occasionally by wetting or soiling of the clothes.

Another class of convulsions is the hysterical, which are often difficult to distinguish. The hysterical convulsion, however, differs from the epileptic in the following respects. The hysterical patient often shouts, cries or raves, not only previous to but frequently throughout the attack, and is often able to reply to questions during the convulsion. The epileptic gives a single cry, immediately followed by unconsciousness and the spasm. The movements in the hysterical convulsion are often accompanied by bowing of the body backward, and very frequently simulate intentional or voluntary movements, such as tearing the hair, pulling at the clothes, and such things; while the epileptic movements are characterized by their jerking or twitching character. The hysterical patient, also, in place of a convulsion, may strike an attitude, such as of fear or entreaty, often accompanied by raving or singing. This again may follow the convulsion, taking the place of, and strikingly contrasted with, the almost invariable sleep of the epileptic, which is almost never seen in hysteria. Hysterical patients if

they fall seldom injure themselves by the fall, as epileptics frequently do. Biting the tongue almost invariably indicates an epileptic seizure, as does wetting or soiling the clothes when it occurs.

Cases of epilepsy, whether mild or severe, require treatment, and advice as to whether they should be removed from school. Many cases do not require to be withdrawn from school, and are benefited by its discipline.

III. — Excessive nerve fatigue, which is shown by irritability or sleeplessness, may indicate a neurasthenic condition, that is, a threatened nervous breakdown. Such symptoms may be due to irregular habits, want of proper sleep, lack of suitable food, poor hygienic conditions, or simply from the child being pushed in school beyond its physical or mental capacity.

Excessive fear or morbid ideas, bashfulness, undue sensitiveness, causeless fits of crying, morbid introspection and suspiciousness may also be symptoms of a neurasthenic condition, and call for investigation, and for the teacher's sympathy and winning of the child's confidence, to prevent developments of a more serious nature.

This nerve fatigue may result in a child being unable for the time being to keep up in its work in school.

Forgetfulness, loss of interest in work and

play, desire for solitude, untidiness in dress or person, and like changes of character, are sometimes incidental to the period of puberty.

IV. — Mentally defective children in the public schools exhibit certain common characteristics. The essential evidence of mental defect is that the child is persistently unable to profit by the ordinary methods of instruction, as shown by lack of progress or failure of promotion through lack of capacity. After one, two or three years in school, they are either not able to read at all, or they have a very small and scanty vocabulary. One of the most constant and striking peculiarities is the feebleness of the power of voluntary attention. The child is unable to fix his attention upon any exercise or subject for any length of time. The moment his teacher's direction is withdrawn, his attention ceases.

These children are easily fatigued by mental effort, and lose interest quickly. They are not observant. They are often markedly backward in number work. They are especially backward in any school exercise requiring judgment and reasoning power. They may excel in memory exercises. They usually associate and play with children younger than themselves. They have weak will-power. They are easily influenced and led by their associates. These children may be dull and listless, or restless and excitable.

They are often wilful and disobedient, and liable to attacks of stubbornness and bad temper. The typical "incorrigible" of the primary grades often is a mentally defective child of the excitable type. They are often destructive. They may be cruel to smaller children. They are often precocious sexually. They may have untidy personal habits. Certain cases with only slight intellectual defect show marked moral deficiency.

The physical inferiority of these defective children is often plainly shown by the general appearance. There is generally some evidence of defect in the figure, face, attitudes or movements. They seldom show the physical grace and charm of normal childhood. The teeth are apt to be discolored and to decay early.

It is a most delicate and painful task to tell a parent that his child is mentally deficient. This duty should be performed with the greatest tact, kindness and sympathy. It would be a great misfortune for the school physician and teacher, as well as for the child, to designate a pupil as feeble-minded who was only temporarily backward.

Temporary backwardness in school work may be due to removable causes, such as defective vision, impaired hearing, adenoid growths in nose or throat, or as the result of unhappy home conditions, irregular habits, want of

proper sleep, lack of suitable food, bad hygienic conditions, etc. Great care must always be used in order not to confound cases of permanent mental deficiency with cases of temporary backwardness in school work, due to the causes mentioned above, or those described under the head of excessive nervous fatigue.

In some cases, where the existence of mental defect is in doubt, accurate information is usually to be obtained in the early history of the child. The time of first "taking notice," the time of recognition of the mother, that of beginning to sit up, to creep, to stand, to walk and to talk should be learned. Marked delay in development in these respects is usually found in all pronounced cases of mental deficiency.

It may be found useful to require teachers to refer at stated intervals to the medical inspectors for examination all children who, without obvious cause, such as absence or ill health, show themselves unable to keep up in their school work, who are unable to fix their attention, or are incorrigible, — though it does not follow that all such cases have either physical or mental defects.

School Hygiene.

The school physician should notice the ventilating, lighting and heating of the rooms, and the location of the source of water supply with reference to possible pollution. In case pollu-

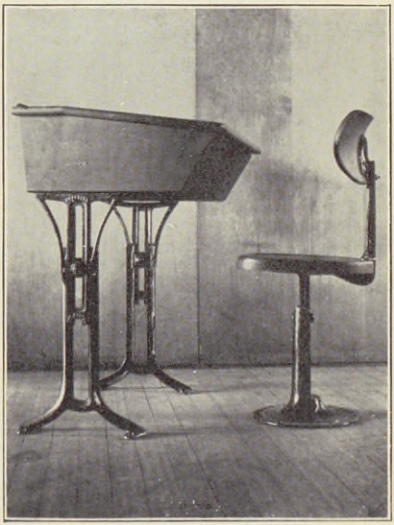
tion of the water supply is suspected, application should be made to the State Board of Health for an examination of the water. The general cleanliness of the schoolroom is of importance, and the admission of sunlight when possible is desirable.

The Closets. — The school physician, accompanied by the janitor of the school, should inspect the toilet rooms, to see if the floors are clean and dry, that the bowls of the closets are properly emptied and kept clean. (If outhouses are used, a large supply of earth will aid in keeping the place in a sanitary condition.) A few simple directions as to the cleanliness of the room should be posted in the closets.

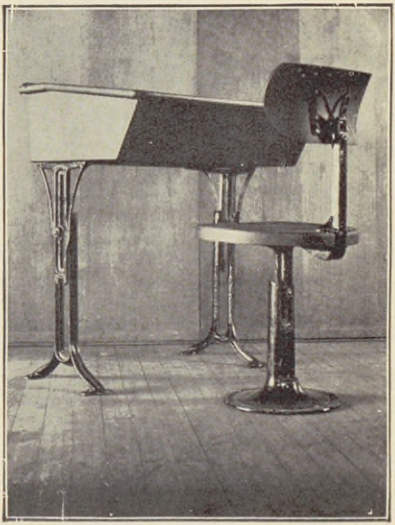
Cups. — The use of one drinking cup for a number of children is to be condemned, as tending to spread the infectious diseases from child to child. The so-called hygienic drinking fountain, now in more or less general use in progressive cities and towns, is to be recommended where running water is available. If there is no running water, each child should use his own cup.

School Furniture.

Any proper sort of school furniture should furnish a seat of such height that the feet will rest easily on the floor. It should have a desk high enough not to touch the knees. It should have a desk low enough for the arm to rest on



BOSTON SCHOOL-DESK AND CHAIR



BOSTON SCHOOL-DESK AND CHAIR

comfortably without much raising of the elbow; not, however, so low that the scholar must bend down to write on it.

The seat should be near enough so that the scholar may reach the desk to write on it without leaning forward more than a little, and without entirely losing the support of the back-rest. The seat should not be so close as to press against the abdomen nor near enough to interfere with easy rising from the seat. This means a distance of ten and one-half to fourteen and one-half inches from the edge of the desk to the seat back; it also means that the seat must not project under the desk more than an inch at most.

The seat should have a back-rest that will support the "small of the back" properly, without having the scholar lean back excessively. Whether it also supports the rest of the back or not is of small consequence; support of the back carried up to the level of the shoulder blades is likely to do more harm than good.

These are given as the minimum requirements. Whether or not regular adjustable furniture is in use, we should not be content with less than the accomplishment in one way or another of these primitive adjustments. More accurate adjustment is desirable, and less care in adjusting would be hard to justify, in the light of our

present knowledge of the results of faulty attitude.

The furniture shown in the accompanying photograph conforms to these requirements. It was devised by physicians at the request of the Boston Schoolhouse Commission, and is adapted to the physiological requirements. The expense is no more than that of ordinary school furniture. It is for sale in the open market. In the Boston schools there are twenty-two thousand in use, and it is being adopted elsewhere.

MEDICAL INSPECTION OF SCHOOLS.[1]

CHAPTER 502, ACTS OF 1906, AS AMENDED.

APPOINTMENT OF SCHOOL PHYSICIANS, ETC.; ALSO MEDICAL INSPECTION OF SCHOOLS, AND OF WORKING CHILDREN BETWEEN THE AGES OF FOURTEEN AND SIXTEEN.

SECTION 1. (*As amended by chapter 257, Acts of 1910.*) The school committee of every city and town in the commonwealth shall appoint one or more school physicians, shall assign one to each public school within its city or town, and shall provide them with all proper facilities for the performance of their duties as prescribed in this act; and shall assign one or more to perform the duty of examining children who apply for health certificates in accordance with this act: *provided, however,* that in cities wherein the board of health is already maintaining or shall hereafter maintain sub-

[1] For the requirements for physical examination prior to obtaining an employment certificate, see section 58, chapter 514, Acts of 1909, as amended; also, section 18, chapter 779, Acts of 1913.

stantially such medical inspection as this act requires, the board of health shall appoint and assign the school physician.

Examination and Diagnosis to be made.

Section 2. (*As amended by chapter 257, Acts of 1910.*) Every school physician shall make a prompt examination and diagnosis of all children referred to him as hereinafter provided, and such further examination of teachers, janitors and school buildings as in his opinion the protection of the health of the pupils may require. Every school physician who is assigned to perform the duty of examining children who apply for health certificates shall make a prompt examination of every child who wishes to obtain an age and schooling certificate, as provided in section sixty of chapter five hundred and fourteen of the acts of the year nineteen hundred and nine, and who presents to said physician an employment ticket, as provided in said section, and the physician shall certify in writing whether or not in his opinion such child is in sufficiently sound health and physically able to perform the work which the child intends to do.

Section 3. The school committee shall cause to be referred to a school physician for examination and diagnosis every child returning to

school without a certificate from the board of health after absence on account of illness or from unknown cause; and every child in the schools under its jurisdiction who shows signs of being in ill health or of suffering from infectious or contagious disease, unless he is at once excluded from school by the teacher; except that in the case of schools in remote and isolated situations the school committee may make such other arrangements as may best carry out the purposes of this act.

NOTICE TO BE SENT TO PARENT OR GUARDIAN.

SECTION 4. The school committee shall cause notice of the disease or defects, if any, from which any child is found to be suffering to be sent to his parent or guardian. Whenever a child shows symptoms of smallpox, scarlet fever, measles, chickenpox, tuberculosis, diphtheria or influenza, tonsilitis, whooping cough, mumps, scabies or trachoma, he shall be sent home immediately, or as soon as safe and proper conveyance can be found, and the board of health shall at once be notified.

TESTS OF SIGHT AND HEARING, AND EXAMINATION FOR DISABILITY OR DEFECTS.

SECTION 5. The school committee of every city and town shall cause every child in the public schools to be separately and carefully tested and examined at least once in every school year to ascertain whether he is suffering from defective sight or hearing or from any other disability or defect tending to prevent his receiving the full benefit of his school work, or requiring a modification of the school work in order to prevent injury to the child or to secure the best educational results. The tests of sight and hearing shall be made by teachers. The committee shall cause notice of any defect or disability requiring treatment to be sent to the parent or guardian of the child, and shall require a physical record of each child to be kept in such form as the state board of education shall prescribe.

SECTION 6. The state board of health shall prescribe the directions for tests of sight and hearing and the state board of education shall, after consultation with the state board of health, prescribe and furnish to school committees suitable rules of instruction, test-cards, blanks, record books and other useful appliances for carrying out the purposes of this act, and shall

provide for pupils in the normal schools instruction and practice in the best methods of testing the sight and hearing of children. The state board of education may expend during the year nineteen hundred and six a sum not greater than fifteen hundred dollars, and annually thereafter a sum not greater than five hundred dollars for the purpose of supplying the material required by this act.

Section 7 is repealed by chapter 412, Acts of 1908.

SECTION 8. This act shall take effect on the first day of September in the year nineteen hundred and six.

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