

sition to the horizontal, the muscles have to bear the strain. If you use an ordinary ophthalmoscope you will get your axis of 90 degrees. Your weak muscle is not put upon such a strain and your strong muscle is not put upon so much tension, and you do not get the pronounced effect until the patient recovers. I have made mention of but three cases for the simple reason that I knew it would be tiresome.

QUESTION—Why not use a prism instead of the cylinder after exercise, if there is no astigmatism in the case?

DR. PRICE.—One point about this detection of cyclophoria is—I have thought that probably I could take an ordinary prism—

DR. EATON—You don't think I question that the superior and inferior obliques rotate the eye?

DR. PRICE—Not a bit—I am satisfied that they do. The Doctor said and said decidedly yesterday in his paper that a cylinder twenty-five or fifty hundredths would produce no effect.

DR. EATON—I did not say anything of the kind. I said that a cylinder of 2 D. will produce three-fourths of a degree at the approach to the eye, but I said that I can not make the movement with a one-half D. cylinder.

DR. PRICE—My experience is this: I have cyclophoria; I have never subjected myself to systematic and constant exercise, but occasionally I take exercise for this reason, that after prolonged work I slip up with a case of neuralgia. If I exercise for five minutes with these cylinders, exercise my inferior obliques, the trouble begins to disappear and I begin to come out of the shadow of the vale and feel better. The oblique cylinder in this case is like the oblique cylinder in the case represented in his paper by the Doctor. It makes no difference whether it is one one-hundredths or 10 D. If that cylinder is incorrectly placed, it will give trouble. I have seen patients with the axis 140 in one eye and 135 in the other, and I have seen them with twenty-five one-hundredths place 15, 20, 30 or 10 degrees even from the line of horizontal, or proper correction, and that patient never gets any satisfaction until the cylinder is changed in position. Why is it that exophoria should be such an annoying factor? If one muscle is insufficient, why not another muscle insufficient? There is not a man in the room that can stand perfectly still for five minutes. Watch a body of men in a military company—every man is swaying, because there is always a slight adjustment. The same thing occurs with the eyes. The opposing muscles on some side are a little too strong. Show me a man with his head on one side and he has hypophoria. It is a strange thing to me that the Doctor seems to think that because certain investigators have discovered that in most cases there is this variation from the normal, in all eyes that they have examined, that consequently it is normal. That is a great mistake. Gentlemen, I could relate case after case, but cases are not the thing. If you can get it into your mind that these cases do occur and are there, it is all right and you can demonstrate it. A man can oppose anything in the world, because he believes he says what is right and his experience is along that line. I trust the Doctor will yet become converted.

THE CHAIRMAN—We have one very interesting subject to come up this evening, but it is getting so late and we all want to attend the dinner, so that the first order of business to-morrow morning will be Dr. Southard's paper.

**The Sir Astley Cooper Triennial Prize.**—The next triennial award of this prize takes place early in 1895. The value thereof is £300. All competing essays should be in the hands of the physicians and surgeons at Guy's Hospital before Jan. 1, 1895. The subject for the competition is "the anatomic distribution of the lymphatic vessels and the physical forces concerned in the movement of the lymph." This prize is open to the whole world, except certain of the attachés of the Guy's and St. Thomas' Hospitals, London.

## SCHOOL CHILDREN'S EYES—A PLEA FOR THE EXAMINATION OF EVERY CHILD'S EYES, WHEN COMMENCING TO ATTEND SCHOOL.

Read in the Section on Ophthalmology, at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5-8, 1894.

BY W. F. SOUTHARD, M.D.

SAN FRANCISCO, CAL.

Looking over the annual report of the public schools of the city of San Francisco for the year 1893, I find that there was an average daily attendance of 31,002 pupils between the ages of 5 and 17. Of this number 69 and sixty-three-hundredths per cent. were in the primary grades. This includes all children between 5 and 10 years of age. Twenty-six and six-hundredths per cent. were pupils in the grammar grades, while but 4 and thirty-one-hundredths per cent. were high school pupils. These pupils between say, the ages of 10 and 17 were divided between the grammar grade and the high school. I wish to emphasize the point that, though this does not state the total enrollment of pupils, it does very correctly give the daily attendance throughout the year. An analysis of these figures will give us some very important results. In the first place, you will observe that from the primary grades over one-half, or 50 and forty-three-hundredths per cent. fail to enter the grammar grades. These children at this time are about 10 years of age. At the close of the grammar grades, 71 and sixty-eight-hundredths per cent., or more than three-fourths, fail to enter the high school.

Finally, to show more vividly the enormous decrease of school attendance between the tenth and seventeenth years, we learn that there is a total loss of 96 per cent. as between the primary school attendance and the high school attendance. Let us see if we can discover the cause for such a tremendous variation in attendance between the three departments of our public schools. We shall find, I think, that not one only, but many circumstances, conspire to bring about these results. The average person will be very likely to say that removals, deaths, sickness and discouragement ought to be a sufficient explanation. I am sure that a more thoughtful examination into the causes will convince us, that not only the above mentioned, but other reasons exist for such a condition of affairs. To my mind this fact is a cause for greater surprise and alarm than that but 4 per cent. of our primary pupils reach the high school, insignificant as is that number. At the age when pupils enter high school a very large number are withdrawn to become wage earners; they must assist in providing for the family. A very large percentage of the parents of these pupils think that completion of the grammar grade is all that their children need to fit them for all ordinary vocations. But this can not be the case at 10 years of age, for the percentage of permanent bread winners of 10 or 12 years of age must be very small in this State.

We find on examination, that is, by questioning teachers, superintendents and those who are daily brought into contact with children, that the number dropping out because of their inability to keep up in their studies must be very large. It is possible that as we examine this particular cause for loss more carefully, we may discover the very material we are after by which our proposition may be maintained. I have held for some time in my arguments with edu-

cators, that if curves showing the mental capacity of a thousand children of the same age, could be drawn, they would show but a very slight variation one side or the other from a given mean. I believe that we shall find that the brain capacity of our children can be measured with as good results as we have obtained in other branches of anthropometry, a study which has been brought to a very high degree of accuracy. For example, Prof. Bowditch, of Harvard University, Prof. Gihon, of Annapolis, and Prof. Hitchcock, of Amherst, have together measured some 40,000 persons between the ages of 5 and 25; the design being to show the rate of growth of the body, for the different ages. From these measurements a certain mean standard of physical development, height, weight, chest measurement, length of body sitting and standing, etc., to which the great majority nearly attain has been found. The deviation above or below this mean is found to be about the same.

That there is a facitly recognized uniformity in brain capacity, powers of comprehension and general intelligence among children of the same age is proved by the fact that school books have been prepared, hours of study, and the studies themselves arranged to meet this. We may question the wisdom of making text-books on such a rigid plan; we can not deny the facts. It follows therefore, very clearly, it seems to me, that very nearly equal results should be attained by the great majority of pupils. If this is not true then there can be no law governing our intellectual powers. If, then, we find in the same grades at school a very wide departure from the standard, we must conclude either that the general standard is too high or a very large percentage of our children have some disability. Why should so many children become discouraged? Their work is not particularly difficult, their hours are comparatively short, and in the primary grades they are not expected to study at home. Ill health is an important factor; thousands of children are already invalids before going to school; inherited weak constitutions; impoverishment of bodies from deficient or unwholesome food, bad hygienic surroundings at home, all unite to handicap such children in school work. The stooping forms, eyes bent close to the desk before them; the shuffling walk; the notched teeth; thin faces and other physical defects are to be seen every day and in every primary school. If we examine this class of children we find that they have in nearly every case marked deficiency in visual acuteness. We cease to wonder that such pupils can not compete in the struggle for an education.

There is again, a large percentage who fall out of the ranks from among the apparently healthiest and brightest children. For a term or two they may have no trouble, but later on they drop behind, when they in turn become discouraged. We are able to positively state that they have no impoverished bodies, that they have always been well and have never complained before going to school. As they fall behind their classmates they are called mischievous, stupid and other epithets of like character are bestowed upon them. Many of these children come home every afternoon complaining of headache, or if they have no headache they complain of feeling tired, they get listless and hang about the house. They are being constantly corrected for not paying attention. In fact one of the most frequent complaints from teachers is, that such children never look upon the

work before them more than a moment or two at a time. They are being constantly diverted to whatever is going on about them. It is needless to ask what is the outcome of this condition; the teachers get impatient and become constant fault finders, the child gets discouraged, and the parents in many cases become dissatisfied and remove their children from school. It is among just such material as this that we find the evidences which confirm us in our theory that there can be but one way to treat this whole subject. We find that the very largest proportion of these children have errors of refraction or some disturbance of the visual organ. We find also on looking into the matter more closely that the school environment is not of the best, school rooms are imperfectly lighted in most every case, the proportion between windows and floor space is less than the standard. Many rooms are so situated as regards light that they can not by any means get good direct light. But too often the best light in the school rooms is a reflected light from some adjoining high building. Such a light is most injurious to the eyes and to the nervous system. Then there is the question of heat and ventilation, serious questions too. The proper seating of the pupils at their desks, the character of the seats themselves are in too many cases the cause of permanent injury to the growing child. Poorly printed books, and poor paper have much to do with strain upon the eyes. Though much has been attempted to remedy some of the most evident of these defects, we can not but feel that the rights of the child have not been considered when we let contracts for building school houses. Politics govern our school system, in most places, to too great an extent. We spend money enough to get the very best results; it is, however, becoming evident that enormous sums are most unwisely spent. Each of these points just mentioned needs more discussion than can be given at this time. Given these imperfect surroundings together with some defect of vision, and we have a combination which must sooner or later be detrimental to the child, physically or mentally. Is it any wonder that he has no concentration?

In pursuing this subject of our public schools a little further, we have to note that in the primary grades there was enrolled at the commencement of the year a number equal to thirty-two and thirty-five hundredths in excess of the number in regular attendance. They mostly dropped out during the first two or three weeks of school. Such a number of units thrown upon the community unable to read or write must become in time a serious burden upon it. I am most firmly convinced from personal observation that poor eyes must be a leading factor in causing this great loss. A law compelling a rigid examination of the eyes of every child when he begins to go to school would seem to be demanded. Let every child come to school bearing a certificate stating the exact condition of its eyes. By such means the teacher will be put in possession of facts which will be of inestimable use to him and to his pupils. A plan so simple ought to commend itself to every physician, to every educator and to every parent.

Having shown the intimate relationship existing between imperfect eyes and lack of power to apprehend, a long step forward has been taken. Statistics have been made of many thousands of school children in Europe and America, by a large number

of competent observers during the past twenty years. An examination of these results most clearly shows that there is a most intimate connection between education and defective vision. It has been proved that myopia (that form of defect to which all eyes tend) exists in but 1 per cent. of the primary scholars in country districts. This is due to obvious causes; country children go to school a less number of hours daily, or if they attend, less is expected of them. They also attend a less number of weeks during the year and they read or study but little at home. An examination of the city schools shows at a glance a different condition of affairs. Myopia is found in these schools in far greater proportion. As we ascend from grade to grade, from primary school to grammar school, from grammar to high school, from high school to colleges and universities, up to the highest institutions of learning, myopia is found ever on the increase, until in the very highest schools in Germany over 90 per cent. have been found myopic. In other words it is now an accepted fact that myopia is a product of civilization, one of the results of our modern methods of education. It is not our purpose to discuss these methods on this paper, simply to draw your attention to a fact now generally accepted.

Having shown that there is this relationship between myopia and education it may be said, But this does not account for the first proposition, viz.: That such a vast percentage of pupils drop out of the ranks at the early age of 10 years. At 10 years of age myopia has been found even at its maximum to be only 10 per cent. Myopia, then, can not alone be a sufficient cause for so great a loss at so early an age. This is very true, but myopia is not the only error of refraction causing disturbances. It has been very satisfactorily shown that all infants are born hyperopic. We may also assume that a very large percentage are born astigmatic; of these probably 75 per cent. have hyperopic astigmatism. From 5 to 15 years the child's body is developing most rapidly. A greater amount of nutriment is now being taken in proportion to its weight than by adults. Tissue changes are taking place in a most rapid manner. Physiologists claim that during these years a large part of the twenty-four hours should be given to body building by means of sleep, food and exercise. The visceral organs, for example, may be altered by too great and too continuous compression. It needs no philosopher to tell us that we must expect more or less alteration in the shape of the eye-ball from too great and too continuous use of the eye at the near point. If we admit that this may take place in the so-called normal or emmetropic eye, how much the more likely are changes liable to follow over use when the eye is in its undeveloped stage? We know that the ciliary muscle of the hyperopic or undeveloped eye, from its very nature must be in a constant state of activity during all the waking hours. At the far point as well as the near point the effort is being constantly made to force the rays to a focus upon the retina. This effort means strain, and the strain means disturbance of the nervous system. The effort to maintain visual acuteness by the expenditure of force upon the ciliary muscle is not the whole story. According to the degree of hyperopia there is a change in the angle, "alpha," which means that the attempt to maintain binocular vision must be attended with expenditure of force, and this often

leads to strabismus. This proposition brings us to the point I am to make, viz.: That children's eyes are from their very construction just the sort of eyes which will cause the greatest discomfort from over exertion. The two factors, the attempt to produce visual acuteness by forcing the ciliary muscle to powerful contractions, and the effort to maintain binocular vision by forcing the extra ocular muscles, is liable to produce varied and peculiar symptoms upon the nervous system. I assert, then, that those children having hyperopia and hyperopic astigmatism are the real sufferers. Their constantly nagged nervous apparatus tends to become wearied to the extent that they can not give close attention to the work before them. They must look up often to rest their wearied muscles. Therefore, to expect continuous application and good attention is most unreasonable. That such children may lose interest in their school work on account of the difficulties surrounding them we can readily understand. We could, did space permit, show that these imperfections may have a very marked effect in the development of the child's character.

In my examination of the eyes of the students of the University of California, for the past five years, I found that the percentage of refractive errors was 68 per cent. Of this number only 6 per cent were myopic. In a detailed analysis of 1,300 errors of refraction I have shown that 75 per cent. were hyperopic in some degree. I found in looking over the list of symptoms attending these cases that pain of eyes, headache, muscular spasms and nervous symptoms generally were confined to this class of cases. The myope but rarely complains of anything more than inability to see at a distance.

It is not to be denied that myopia is greatly to be dreaded; since it can not be stayed in its progress in many cases, even though corrected with glasses. We are willing to believe that it is the end toward which a vast proportion of eyes tend when overworked. We claim, however, that our sympathies are rather to be directed to the youthful hyperope. Could we but examine every case during the first few years, we would not be sending to our universities young men and women with eyes just ready to break down. The remedy is examination and constant watchfulness. We must bear in mind that the tremendous waste unnecessarily taking place through the effort to work under the disadvantages of a refractive error is not easily measured. Individual suffering, and loss of power to work, may cause great material loss. From this cause the community has to be taxed to support asylums; from this cause many eyes tend toward disease and ultimate blindness. These are among the possible results of neglect on our part to do our whole duty. We may build asylums for the blind, we may do everything possible to remedy the defects already existing, yet unless we go down to the very foundation of the trouble and alter existing causes for disturbance we shall in time have as great a percentage of spectacled beings as is now seen in Germany. Remember that this is an age of conservation of energies, not waste.

#### DISCUSSION.

DR. MILLER, Los Angeles—This subject is of great importance. The too familiar statistics of Germany are highly instructive. While examination of the eyes of young school children is highly important we must inquire still farther

as to the causes of these troubles. I am not satisfied in my own mind just what those causes are. Our people seem to be becoming more and more neurotic. Children living in cities should have more outdoor exercise. The result of our higher state of civilization is to develop a decidedly neurotic state in our entire population. I think we must look well to this and develop a state of general health if possible—greater freedom and more outdoor exercises. I think also that particularly in this State the great variety of work ordinarily given to children at schools is prejudicial. It seems to me there are educators undertaking to cover too much ground, and there are too many studies in our schools requiring numerous and rapid transitions of the mind from one subject to another, and maintaining constantly a high degree of nerve tension. It takes some little time for the pupil to get his mind onto a given subject, and about the time he begins to get well under way he must suspend that and take up something else, and so on—we have a constant rapid change from one subject to another, which brings about the nervous tension. This I believe to be operative, as well as several other causes. Much more attention must be given to lighting, warming, and ventilating your school rooms. It might be well when the child enters school to have him present not only a certificate from his physician that he has no ocular impediment, but that he has no nervous or other impediment to his doing the work ordinarily done by children of a corresponding age.

DR. L. R. RYAN, (Galesburg, Ill.)—I think the question is not so much to get at the cause of myopia because that is well known among the fraternity. The main thing is to get the people to appreciate the disease and take the means to prevent it, and we have to get the people who have an influence with the children interested, especially the teachers. I can recall a great many cases where children had been forced out of school absolutely on account of defective vision; the teachers have classed them as dullards simply because they could not read or study. And it is only a few days ago that a little girl came to me almost crying because the teacher said she was lazy, and she had a very high degree of hypermetropic astigmatism. It was absolutely impossible for the little girl to study; her sister who was a twin was very bright indeed and the two were compared and she was almost driven out of school. I think we ought to enforce upon the teachers the idea of paying attention to hygienic conditions as far as the eye is concerned—to have the light properly arranged, to have the desks arranged so that the children can study in school without getting into a cramped position; to instruct them in hygienic means and to have the idea carried to the parents at home so that everything can be arranged and they can study properly. You will find in a great many cases, especially among children of the lower classes, that the children are packed off in a dark corner and compelled to study there, while the old people are given all the advantages as far as light is concerned. I think if you will visit the great majority of our public schools and examine the hygienic arrangement as to light and desk facility you will find that they are sadly at fault. I can recall cases where the primary children have been put away down in the basement where the light was very poor indeed and where it was absolutely impossible to see an ordinary pin. Then, too, I have studied the question of the arrangement of the desks. You take the little children in the primary department and you will find that they have their chins right on the edge of the desk and the book is set at such an angle that it is absolutely impossible for them to read without getting their noses onto the books, and in writing or getting their lessons their chins will be down at this angle. (Describing the angle). Now any one who knows the question at all knows

that the eyes are used under such circumstances at a very great strain, and the development of myopia is very easily produced, and I think as a Society we ought to try to get the people and especially the teachers to appreciate those hygienic conditions.

DR. F. P. EATON, Portland, Oregon—Mr. Chairman: What the doctor preceding me said in his closing remarks I think has hit the main point of this matter. We are quite well aware of the injury done to the school children, but the problem is how to work upon the public. Ordinarily the public understands that the myopic eye is the product of school work. It is not, however, clear at all to the public that the hypermetropic eye, and the astigmatic eye are both of them equally productive of misery and discomfort and injustice on the part of adults to children. I hesitate myself to make a motion as far as this Section is concerned in any way that would call attention of the educational portion of our communities to the importance of having the eyes of children examined. It has occurred to me and I suggested it to Dr. Southard that some such committee be appointed by this Association or by this Section to endeavor to have the various State Medical Societies formulate certain resolutions so that the various Legislatures, or at least the municipal authorities, might act upon the school teachers in such a way for the benefit of the children as we have heard this morning.

DR. H. M. STARKEY, of Chicago—Mr. Chairman: I am very glad indeed that I am one of the few here to hear this paper of Dr. Southard's. It is a very important subject. I don't know that I can add anything to it that hasn't been entered into in the question of the general examination of the eyes of school children. I think the point of the education of teachers is a very important one. We see a great difference in teachers, and their treatment of pupils; for instance I not infrequently have children sent to me and say the teacher told them they could not come to school again until they had their eyes examined. The teacher has seen that there is something wrong with their eyes, and having said two or three times that they should go and see a doctor and they not having done it, the teacher after a time has said: "You can not come back until you have your eyes examined and see what is the trouble." It certainly is a most important point as we all know from experience. We see the pupils ordinarily—that is if we see them at all—when they have been overtaxing the eyes which are hypermetropic or having hypermetropic astigmatism, go on for years perhaps until a permanent injury has occurred. And if by precept and example or even by legislation at a later time, when we have inculcated into the public mind the necessity for such legislation, if anything can be done so that every school child in his study whether in the public school or otherwise shall have the eyes thoroughly tested it will be a great advance.

DR. H. B. YOUNG, Burlington, Iowa—Mr. Chairman: Following the line of thought suggested by Dr. Eaton and the last speaker, I desire to call the attention of the Section to the fact that in many of the States the school teachers are very strongly organized; in fact it is a compulsory organization known as the State Normal, and by addressing our communications to the State Teachers' Association we perhaps could get an entering wedge which would be very valuable in this connection. As far as I individually am concerned, I have for some years past at the invitation of our local Normal Teachers' Association, had some talk on the subject; and I think every member of this Section would be very willing to volunteer such instructive talks to the Association in his own respective district. I know I have done so upon the express invitation of the Superintendent of the Normal department.

DR. SOUTHARD—I would like to hear from the President; I think he has had some experiences in that line.

THE CHAIRMAN—It only occurs to me to say that I have had some experience in the examination of school children's eyes and I think that this subject would perhaps be a very profitable one for a special discussion such as we had this year for the objective tests, and to make that suggestion to the Nominating Committee, which I think would be the proper one to bring forward the subject at the next annual meeting. It is certainly an extremely important subject, and one which can be elucidated by general discussion—at least by general discussion we can arrive, I think, at practical means of working out the result that we want to accomplish.

DR. SOUTHARD—I will not occupy much of the time of the Section. I am not egotistical enough to believe that I have written anything at all in this paper that is new to any of the gentlemen present. I did not expect to bring in any array of scientific data, but thought it would be well to have the subject started. There is no member of the Section, but who is fully aware and well posted on all statistics that have been made, and during the past twenty years the enormous amount of the statistical matter which has been made is sufficient in itself to prove the point that there is abundance of errors. I want to bring it in shape to get an expression of opinion as to some method of procedure. I myself believe that that idea of engaging the attention of the government of municipalities is a very good method; but my purpose has been to show that the great failure is in the schools in the early age, that is the primary schools. I do not expect that we can correct it after 20 years of age; we don't expect to make changes then. We then give them glasses and let them go on as best they can. It is at the primary schools that we must commence if we are to make the change. Now the fact is as I said, I do not present any array of statistics but I simply say this: As between the primary schools in this city which have an average attendance of 31,000, and the grammar grade which is the next grade above that, and begins at 10 years of age—I say that with an average of 31,000, say up to 10 years of age, that that attendance at the next grade above, within a comparatively few weeks drops over 50 per cent. That can not be all due to the causes which I have enumerated—a desire to work, and so forth—because we don't have much of that in this State with children at that age. I have had the privilege of speaking to the State Teachers Association in this State; and several times I have talked upon the subject with different County Teachers Associations; I have had the privilege of bringing this question in a little different but analogous form to the Stanford schools, and I have endeavored to show them that the immediate cause for a great deal of our disturbance, this inability to concentrate the mind, is that children get disturbed because they can not concentrate their minds where they ought to be able to use their eyes, for instance ten or fifteen minutes at a time, and they are the ones who deserve our sympathies whatever it may lead to. I speak of myopia in my paper, but as we know it does not exist in our country to a very large extent. A myopic child can see pretty well. It is hypermetropic and astigmatic cases and, as I have stated, the results that I have obtained are entirely under the average. When I say that hypermetropic and astigmatic cases are 75 per cent. of all, I am within the bounds of my own personal examination of those cases. And I believe this, that if we were to make a change by which we could analyze a larger percentage of the pupils through the schools up to the high school though not beyond, but to the high school point, where they are then fitted to go to work, that this is a very important point. Now I acknowledge that there are a great many other

causes as Dr. Miller says; for instance, the hereditary tendency to disease is very apparent, especially among certain classes. If our Section could give some inducement to this question of the necessity for a compulsory law, there is no doubt in my mind but what the law can easily be carried out. In this State we have a compulsory law for vaccination. It is a law that does not need the approval of every member of the community, but it meets the approval of such a large number that we carry it out very effectually, and it is a law which has been passed upon by the Supreme Court as a constitutional law. Therefore it is not a law that might be put under the head of class legislation. A law which would perhaps be of greater value than even that, if we can allow such a thing, would not only meet the support of physicians and teachers and educators, but of those who are interested and who have children themselves. The methods of getting at it are to be developed later on. I am sure that it could be done, but the teachers and educators and politicians and all this class of people must have this thing brought to them by inducement of those who have had experience, such as the men in this Section have had.

In answer to a question as to what kind of certificate would be required of children, the Doctor replied as follows:

The provision should be that every child when it first comes to the primary school shall bring a certificate to the teacher; that when that child enrolls its name it shall have a certificate saying that its eyes are in a condition which will permit it to take up the ordinary course of studies that children of the same age usually do. Now it does not mean that there are to be paid oculists for every school. But it means that their eyes are normally constituted to do that, and if they are not normally constituted that they are to have glasses fitted to them to pursue the studies which children of the same age take up. You see how it is. I have found in my experience among teachers in the schools here, those so ignorant on the subject, that they have pointed out to me in the schools that such and such children were probably deficient in mental power, and I have seen those children and can call to mind several of them in fact. But there is one case that came under my observation—a child who was sent to the Home for Feeble-Minded Children. That child is wearing glasses and is now one of the brightest pupils of his age. There was nothing at all the matter with the child but inability to concentrate himself upon his work; he could not see; his whole horizon was bounded by just the little about him and his contact with the world was such that he knew very little of it. He was sent to the Home for Feeble-minded Children and the intelligent man at the head of it saw at once there was eye trouble, and that was corrected at once.

(Question was asked as to re-examination.)

I have no doubt but that every five years they should be re-examined. That would be included in the law. It would be easy enough to have the thing worked up in time. The object is now to get at the point that there is a necessity and that we are in favor of this law.

### SHOULD CASES OF TUBERCULAR CONSUMPTION BE REPORTED TO LOCAL BOARDS OF HEALTH?

Read at the Meeting of the Northern Tri-State Medical Association, held at Angola, Ind., July 17, 1894.

BY J. F. JENKINS, M.D.

MEMBER OF THE MICHIGAN STATE MEDICAL SOCIETY, NORTHERN TRI-STATE MEDICAL SOCIETY, AMERICAN MEDICAL ASSOCIATION, THE NINTH AND TENTH INTERNATIONAL CONGRESS, TECUMSEH, MICH.

The question with the above heading should be stated somewhat after the following manner: Should a case of pulmonary tuberculosis be reported to the local board of health as a case of contagious disease?

It has been estimated by very competent men, that tubercular consumption carries off about one-seventh of the human race. When we take into con-