the head is the most effective factor in the increase of myopia. The question of the improvement of the posture of the scholar involves in the first place the question of the seats. The oculist is thus led from the cause to the cure of the defect, and is so brought into the department of the hygienist. I thank the President of this Section for allowing me to direct your attention to the question of the claims of school-seats. I must beg most impressively your indulgence—the more as I have to speak a language foreign to me. We consider English a language full of beauty and richness, but also full of difficulties for a stranger.

In the first place, we have to regard the size and the measurements of the school-seats. It is absolutely impossible that a tall and a short boy will both sit equally well on the same seat, and at the same desk. It is just as unlikely as that the same clothes would fit the same pupils. Yet in many schools we find desks and seats of the same size for all. In some regulations of school-boards, I found the seats adapted according to the age of the pupils, but it is plain that the question depends not upon age, but height. The answer how the seat and desk are to be constructed, is only to be obtained by measurement. For this purpose, I constructed an appropriate seat for measurement, the different parts of which can be altered at will. With this, we measured the pupils at several schools. We found, as might be expected, that the different individuals—pathological cases being excepted—grow regularly; that is to say, all parts are proportional to the whole. Thus we require school-seats in a series of regular progression, of which all parts increase proportionally to each other. From experiments on the amount of digression which may be allowed for each shape, I found that a fair proportion was $\frac{1}{4}$. If we commence with the very smallest size of a pupil of one metre, and multiply each time by $\frac{1}{4}$, we get by eight multiplications the size of two metres. The lowest and the highest numbers are exceptionally required, so we want generally six numbers of seats, of which, as a rule, two are required in each class, with a very few of lower or higher numbers.

In taking the measurements of the pupils in the sitting position, I chose, as a starting point, the posterior aspect of the knee-joint. The average distance from the knee to the foot is found to be two-sevenths of the whole height. Thus, the height of the smallest seat has to be two-sevenths of our measure. The distance from the knee to the back we found equal to the former measure, but by preference we do not use the whole length of the thighs to sit on. The pressure on the more superficial arteries behind the knee would impede the circulation; and so 75 per cent. of its height may be taken for the depth of the seat. For the required relative height from the table to the seat I found—I confine myself here to the account of the results—60 per cent. of the height of the seat. Thus, by multiplying these numbers each time by $\frac{1}{4}$ we get a naturally progressing series of measurements. I first gave the desk the same progressive dimensions, but this was objectionable because it exaggerated the principle. The books and slates, as used in the schools, do not grow or increase as regularly as the size of the scholars; consequently we adopted only two dimensions of desks.

Next to the dimensions of the school-seats comes the relative distance between desk and seat. A different posture is required for reading and for writing. For reading, it is desirable that the positive distance from desk to seat be 25 per cent. of the height of the seat. This allows the scholar to move freely, and also to stand up between the desk and seat. For writing, however, the desk must come much closer, so that there be even a negative distance, the edge of the desk may extend over the seat. Dr. Schildback and Mr. Kunze, in Germany, have been the first to show the advantages and the necessity of a movable desk. They have introduced a desk which can be shifted up or down. Others have replaced this by desks provided with a flap that folds over, and so admits a different inclination for reading and for writing. Both methods find, on the Continent, their warm defenders and opponents. I myself have suggested another form of desk, which, I think, will answer all requirements. The top of my desk consists of two parts provided with two sets of hinges; by drawing up, the two lids are inclined opposite to each other, the inner edge of the table-top is retained behind an elevated border, which permits having a table without a border for writing, and with one for reading.

But the change of distance acquired by this method is not quite sufficient. It is therefore to be combined with another arrangement, which, at the same time, provides for a demand which has been lately put forward. For this, I beg to bring you again to the oculist's dominion.

Both eyes, used for binocular vision, are tired if they have continually to converge to an object which is near, and not straight before the face. In most schools, it is the rule to force the children to put the copy-books at the right-hand side, and parallel to the edge of the table. The effect of this must be that the pupil gets a tendency

to turn his head sideways, and to adopt a slanting posture, in order to bring both eyes at an equal distance from the object, and to produce a more symmetrical convergence of both eyes. It is more and more generally admitted that the copy-book should lie with an inclination to the left, just in front of the body.

Proceeding from these considerations, I have made my desk to turn to the left on an axis, applied at the nearest right-hand corner of the desk. This brings the desk nearer to the body at the left-hand side, and allows the left elbow to get the required rest, whilst it permits free movement to the right hand. At the same time, it remains parallel to the edge of the table.

There are other questions regarding shape and construction of the different parts of seats and desks; but they seem to me of secondary value. The form of school-furniture will vary in different countries and different places, according to local want and desire. But I think it is of great consequence that the appreciation of the value of the right sizes and dimensions, and of the relation between desk and seat, should be generally acknowledged.

INJURY TO HEALTH FROM THE PRESENT SYSTEM OF PUBLIC EDUCATION.

Read in the Section of Public Medicine.

By JOHNSON MARTIN, L.F.P.S.Glasg., and L.S.A.Lond.,
Medical Officer of Health to the Bolton Rural District.

THE subject I have chosen to discuss with you, is one of vital importance to the life, health, and prosperity, of the greater portion of the people of this and of every country in the civilised world. At present there is a mania for excessive education in books, to the exclusion of learning the ordinary duties of everyday life. This applies particularly to girls being able to make their present and future homes comfortable and clean, or miserable and dirty. For several years, I have been frequently consulted, by parents whose children were suffering from the excessive strain put on the brain and nervous system, by the present mode of education. In consequence of this I considered it a duty, as medical officer of health to the Bolton rural sanitary authority, to make the following remarks in my annual report for 1882. "It is very important that children who have a capacity for education in the higher branches of knowledge, should have every opportunity of gaining such knowledge, and that the State should assist. It is also very necessary that a child or young person be at school five or six hours a day. But I often see children whose health is injured by over study or brain-work. Such children might very properly be excused what teachers call home-work, to enable them to assist their parents or guardians. At the same time, it would make them more healthy and more fitted to the wants of the country." I wrote the above to bring the subject before the public, with a hope that steps would be taken to impress upon the Government the absolute necessity. There is that a less rigid, and a less injurious, and harrassing, course of education ought to be adopted.

It is my opinion, and the opinion of many medical gentlemen who have spoken to me on the subject, that the present system of cramming will not produce any talent or any advancement in science or art, but that it will and does depress, enervate, make dyspeptic, and stunt the growth of many who would otherwise be strong and healthy. There are, and will be, those whom no amount of teaching would make fit for any other than manual labour, and an allowance ought to be made in every school for these in the examinations. A fair knowledge of reading, writing, and arithmetic to be the standard for those who were always intended by nature to work under the superintendence of others. It is perfectly impossible for the pupil-teachers, or even the senior teachers (except in few instances), to carry out the work they are expected to do, without serious injury to their health. A dull, morose, and irritable state of the body, with disease of the heart and brain, will follow, and many of them will die of premature decay, or be so injured in health as to unfit them for their usual duties, or any vocation, and by this means be made wholly dependent on others. A class of men and women so important to the wellbeing of the community ought to have their health taken into consideration.

It is no new thing I have brought before your notice. The ancients knew that too much learning made people mad; and Henry VIII knew the sympathy there was between the brain and the stomach. When he dismissed Wolsey from his government, he added: "Read over this, and after this, and then to breakfast, with what appetite you may." The king knew well that the letter would have such an effect upon the brain of Wolsey, that it would take away his appetite.

I will not take up your valuable time with a long list of

cases (which I could do), but will briefly name one which came under my notice last month, and two now under my care.

The father of a little girl, in giving me the reason of her illness, said: "These teachers and school-board officers will kill my girl; she is at her lessons as soon as she gets out of bed, then at school, and when she comes home at night she has so many lessons to learn that she cannot eat, and is going as thin as a lath."

I have now under my care a little girl, who has not been able to attend school since last summer; her parents are intelligent and industrious, and are anxious the little girl should go to school; but she was so pressed with her lessons last year, that she broke down in health, talked about her lessons in the night, and was subject to vomiting frequently. I ordered her to have rest. She knows she is getting behind others at school, and is anxious to go; yet, when her parents speak of her going, the vomiting comes on again, as well as the sleeplessness. I have another, a dull little girl, under my care, who suffers in a similar manner.

A CASE OF EMBOLISM(?) OF THE CENTRAL ARTERY OF THE RETINA CONNECTED WITH FACIAL ERYSIPELAS.

Read in the Section of Ophthalmology.

By A. EMRYS-JONES, M.D.,

Surgeon to the Manchester Royal Eye Hospital.

On March 6th, 1882, I saw Mrs. V., in consultation with my friend Dr. Fiddes of Urnston, who had been attending her for the past three weeks, first of all for a very painful pimple on the chin, which, after poulticing for a few days, suppurated. On February 7th, the abscess was opened, and this was followed, in three days, by erysipelas, which extended at first to the left side, and afterwards to the right side of the face. When I saw her, both eyelids were much swollen, and very puffy; fluctuation could be detected in the right lower eyelid. The conjunctiva and cornea of the left eye were normal. In the right eye, the conjunctiva was deeply injected and chemosed, the cornea was intact; there was no intolerance of light; the pupil was active; she had no perception of light. The abscess was freely opened, and a great quantity of pus escaped; it was evidently already burrowing down to the orbit. Several smaller abscesses had to be opened, and ultimately the suppurative process subsided, and the eyeball was retained intact. Ophthalmoscopic examination at the time revealed the typical appearances of embolism of the central artery, viz., thready shrunken vessels, pale optic nerve, a hazy white appearance around the disc, and well marked cherry-red spot at the macula lutea. I saw her again last April, and found no eversion of the lower lid. Ophthalmoscopically, I detected well marked atrophy of the optic nerve.

I am not aware of any cases where the appearances of embolism have been observed at the time, unless the slight reference to a case made by Stellwag von Carion means this.

I think it most probable that, in this case, the optic nerve must have been compressed by the effusion into the orbit, and a thrombosis had followed. It has been stated that mere stretching of the optic nerve will cause atrophy, or that a retrobulbar neuritis occurs, followed by abundant secretion of morbid product, and consequently a contraction of the space and lessening of the calibre of the vessels.

OBSTETRIC MEMORANDA.

SUSPENDED ANIMATION.

In reference to Dr. Norry's interesting memorandum, in the BRITISH MEDICAL JOURNAL of January 26th, page 162, under the above heading, I remember having had a case, about twelve years ago (which I reported at the time), at the Limerick Lying-in Hospital, in which I persevered for four hours in all manner of restorative tactics, on a newly born full-term infant, which I had delivered by version, ultimately succeeding in permanently establishing the heart's action, the child being alive two years later. In this case, cold water sprinkling and "artificial respiration" (raising and depressing the arms, and rolling from side to side) produced no effect, the child not gasping till I forced my own breath, by the mouth to mouth process, into its lungs, while the arms were being raised, and expelled the same by depressing the arms against the chest-walls. These tactics had to be kept up, as I have said, for four hours, as, during that time, the infant relapsed about a dozen times, each "term of life" becoming longer till

it finally took to breathing regularly and looked about it. I shall look with great interest for replies from some of our more experienced brethren to Dr. Norry's question: How long (whether in a hurry or at leisure) ought we to try to restore what is apparently a corpse?

JOHN J. MARSHALL, L.R.C.S.I., Lamberhurst, Kent.

HOURLY CONTRACTION OF THE UTERUS.

I WAS called to a primipara on January 6th; the case progressed favourably, though slowly, until the head was close upon the perineum; when the pains became feeble, the head ceased to advance, and the patient began to show signs of exhaustion. I gave three half-drachm doses of the liquid extract of ergot at intervals of a quarter of an hour, and applied a binder to the abdomen, to exert pressure during the pains, but to no purpose. I then applied the short forceps, and extracted the head in a quarter of an hour, the body following in a short space of time. After waiting for twenty minutes, the patient had a slight pain, accompanied by the usual amount of discharge. I made a vaginal examination, and found that the placenta was still in the uterus, which was well contracted. I waited half an hour longer, employing pressure on the uterus at intervals, there being an absence of pains; but the placenta did not descend. I then passed my hand into the vagina, and inserted two fingers into the cavity of the uterus. There was no constriction at the os. I found that the lower part of the placenta was detached, but I was unable to draw it down by gentle traction. I then passed my hand into the cavity of the uterus, when I came upon a constriction, which firmly nipped the placenta about its middle. In about ten minutes, I was able to get my fingers, one after the other, through the constriction, which gradually gave way. I then passed my fingers over the upper edge of the placenta, drew it down, and extracted it, the uterus contracting firmly on my hand as I withdrew it. No hemorrhage followed, and the case did well. I used no traction on the umbilical cord, and no undue friction of the uterus, and so am at a loss to account for the placenta being caught in the constriction, half being in the upper, and half in the lower cavity of the uterus. I have frequently employed ergot in the same way previously to using the forceps, but have never found it cause any irregular contraction of the uterus.

ALFRED JAMES, Biggleswade.

CLINICAL MEMORANDA.

PROGNOSIS IN HEART-DISEASE.

DR. BROADBENT'S interesting lecture in the JOURNAL of January 26th reminds me of the important fact that, as a man grows older, he begins to find, in medical experience, that there are not a few singular exceptions to what, in earlier life, he may have considered as absolute rules. Dogmatic assertion is accepted without question by ingenuous youth, while, at the same time, it is rather a characteristic of an imperfectly cultured mind than of philosophical attainment. Accurate prognosis in all serious diseases is a matter of the highest importance, and in a very special manner in cases of cardiac affections. I recently examined a case which has made a lasting impression upon me, the particulars of which are as follow. W. J., now about twenty-eight years of age, was well known to me as a boy, and has been under my constant observation since the age of sixteen or thereby. About this time I discovered that he had a distinct double aortic *bruit*—a condition of things diagnosed also by my friend, Professor Simpson, of this city, who had also been consulted. About five years ago, he resolved upon marriage; and, my opinion being asked as to the expediency of this step, I advised against it. The patient for the past five years had no special treatment for this affection, and he continued in such good health that his condition was dismissed entirely from his mind. He is now the father of three children; since his marriage, I have never had occasion to treat him for his heart-affection; and, on carefully examining him a few days ago, to my great surprise, I found that not a trace of the *bruit* remained. Very different is another case, which recently terminated fatally, and which I have been in the habit of seeing at least about three or four times yearly. P. S., a gentleman of middle age, suffered from a marked double aortic *bruit*, accompanied with more or less dyspnoea. Being of an excitable disposition, he was warned against every form of mental excitement, and taking undue exercise. He left his house one morning recently in his usual health, mounted a scaffolding at a new building in which he was interested; after which he proceeded to take an accustomed walk; he was seen to stumble, and was carried home dead. J. McN., a middle-aged gentleman, in extensive commercial business in