from 8 in September. This increase went on until the month of March, 1872, when the maximum (97 admissions) was reached. March was, indeed, a little colder than February; and I have already mentioned the intense cold (for the time of year) which characterised the latter portion of the former month. In April, the admissions rapidly declined; in May they remained almost stationary, and in June even a slight increase in this number is noticed. This anomaly, I cannot but think, was connected with the persistently low mean temperature, coupled with the diminished humidity of the three weeks dating from the 5th of May. The mean temperature of the week ending the 5th of May, 1872, was 53.4 degs.; of the following three weeks it was 46.6 degs., 47.6 degs., and 46.4 degs. respectively. The temperature then increased to 53.7 degs. in the week ending June 1st; but, in the next week, it again fell to 51 degs. From June, the admissions fell uninterruptedly to 7 in September. A check in their fall is now observable, and, from November to December, even a slight increase in their number occurred. The epidemic was now virtually at an end, and, in March, 1873, not one small-pox patient was admitted to the wards, which were soon afterwards closed.

It now remains merely to inquire into the probable causes of this seasonal prevalence of small-pox. It is to be regretted that but little can be said upon this subject in the present state of our knowledge. One cause I have already mentioned, namely, the overcrowding of the poor in winter. Another is the lowering of the vital powers of the population in the cold season, and the consequently increased receptivity of and liability to infectious disease. But there must be something beyond all this, for these causes operate in the case of other infectious diseases also which do not attain their maximal degree of prevalence in winter. Thus, measles is most prevalent in early summer, scarlatina in autumn, and so on. A possible cause of the diminution of small-pox in early summer may be sought for in the influence of the leafing and flowering season upon the atmosphere. But this explanation has its shortcomings also, and is inadequate in its application to the disease we are considering. Theory, no doubt, is useful when kept within proper bounds; but to theorise on such a subject would be unprofitable, and we must wait, trusting that, with the advance of our knowledge of disease, further light will ultimately be shed upon this interesting question.

NOTES ON A NEW PERIMETER.*

By C. S. JEAFFRESON, F.R.C.S.E.,
Surgeon to the Eye Infirmary, Newcastle-on-Tyne.

THE introduction of a new instrument to the profession, like that of a new work, seems always to demand an apology from the author. I trust, however, that my readers may find such points of merit and novelty in the description I am going to lay before them, as will redeem me from the feeling of having uselessly trespassed upon their time and the valuable columns of this JOURNAL.

Many, like myself, must have felt the difficulty and want of taking an accurate chart of the field of vision with rapidity; and this want has led to the development of many instruments and devices. No one of these performs, to my mind, what is required of them rapidly and efficiently; and, for clinical purposes, it is highly essential that these two qualities should be combined. Thus, in hospital practice, most surgeons continue the old custom of making the patient fix his eye upon their own, and then rapidly moving the fingers in the different parts of the field of vision. No doubt this practice (which cannot be registered, and must leave but a doubtful impression on the mind of the surgeon) is continued on account of the facility and rapidity with which it is carried out, and also because, up to the present time, no instrument has been devised the use of which does not take up more time than can well be spared, except under special circumstances.

The instrument which I have devised, and which is represented in Fig. 1, enables the operator to map out the field of vision with as great rapidity as, perhaps greater than, it could be done according to the old method described above, and which is in general vogue. With its help, the greatest accuracy can be obtained; and, if necessary, the limits of the field can be immediately transferred to a chart, and kept for future reference. But it not only fulfils the duties of a perimeter in an ordinary sense; it will also test the field of vision for colours, transmitted or spectral; and, by a very simple addition, it can be made to indicate the presence of astigmatism, and show the meridian in which this exists, if present. Some other indications it can fulfil, which I shall speak of by and by, as they will be more readily understood when the instrument has been fully described.

* Called a Photo-perimeter.

The perimeter is a hollow hemisphere of light metal (zinc or copper), hammered out with great accuracy, its diameter being twenty-four inches. The concavity of the hemisphere is painted white, and divided into degrees of latitude and longitude. The meridians of longitude commence at the pole, and between each is a space equal to

Fig. 1 represents a front view of the Perimeter, with the chin-rest and mirror *in situ*.

Fig. 2.—a. The Diaphragm, containing various sized apertures. b. The Colour-Discs: these are attached behind the Perimeter, and are drawn in Fig. 1 with dotted lines.

15 deg. The parallels of latitude encircle the pole; the first being at 10 deg. from it, and each successive one placed at an interval of 10 deg. The pole itself is occupied by a circular opening about three-quarters of an inch in diameter, the purpose of which will be shortly explained, as will also some further markings on the surface of the perimeter.

In order to measure the field of vision, it is necessary, whatever the instrument employed, to have a fixation-point, and an object which can be made to travel over the parts of the retina which do not occupy the fixation-point. In the instrument which I am describing, these two indications are fulfilled in the following manner. A gas-lamp upon a movable upright stand is so adjusted behind the perimeter, that the rays from it pass through the aperture which occupies the pole of the

Fig. 3 shows the patient in position for taking the field. The position of the mirror is not quite exact: it should be nearer and more to the side of the eye.

hemisphere in a diverging beam. These rays fall upon the mirror, which is (as seen in Fig. 3) attached by a rod to the chin-rest; and this mirror, being ground to a focus of a little less than twelve inches, will form a small and bright dispersion-circle upon the surface of the peri-

meter. To enable this disc of light to be thrown in any direction required, the mirror is attached to its connecting rod by a ball-and-socket joint. To use the perimeter for testing the field of vision, we proceed as follows. The chin-rest is placed opposite the concavity of the hemisphere; its height is so adjusted that, when the patient's chin is placed upon it, the eye to be examined is opposite the aperture at the polar extremity of the hemisphere. (Fig. 3.) The reflecting mirror is now adjusted and made to occupy a position slightly below and to the outside of the eye to be examined. The other eye is covered by a shade. By a little management, the beam of light, which passes through the aperture in the perimeter, is made to fall, not directly upon the eye, which it would dazzle, but upon the mirror, which reflects it, as before said, in the form of a bright dispersion-circle, upon the perimeter. The light, not falling directly upon the eye, renders the fixation-point less dazzling, and more easy to look at for some length of time.

When a patient is placed in the position above indicated, his eye being directed upon the central aperture, an image of the perimeter is projected upon his retina; and it is, so to speak, artificially mapped out into exactly the same divisions as are present on the instrument—the central aperture lying exactly at the yellow spot, the peripheral parts of the instrument occupying the peripheral parts of the retina. The concavity of the retina becomes, therefore, an exact counterpart (of course inverted) of the concavity of the instrument. Now, it is evident that, if a disc of light be made to travel over the surface of the perimeter, this will also travel over the surface of the retina (in an opposite direction to that in which it is passing over the instrument); and that, if it should come to a portion of the retina whose sensibility is lost or impaired, or to the natural limit of the sensitive retina, we shall know by the degrees of latitude and longitude the exact bearings and position of the spot whose sensitiveness is impaired, and where the natural limit of the sensitive retina terminates. Let us illustrate this. A patient is placed in position, with his right eye opposite the perimeter, fixed upon the central aperture spot; we wish to examine the spot or optic nerve entrance in this eye; we know that its situation anatomically is slightly to the inner (nasal) side of the yellow spot; we therefore gradually move the travelling disc outwards; and, when it arrives at a position about 15 deg. to the outer side of the central aperture, it disappears.

If we wish to ascertain the limits of the field of vision, we cause the disc to travel along the various meridians of longitude, marking the exact position in which it ceases to be visible. As in many cases it is necessary to measure the exact size and limits of the optic nerve entrance, the surface of the perimeter, in the region which this portion of the fundus occupies, has been carefully divided into spaces of 3 deg. each.

In order to enter the cases examined, charts of the perimeter can be obtained, drawn up on a scale of half or a quarter the real size. Attached to the back of the perimeter, will be found two sets of diaphragms (Fig. 2). One, the inner, contains apertures of various sizes; and the other, the outer, contains discs of variously coloured glass; also a disc which has a fine slit and revolves upon its own axis, for testing for astigmatism.

The use of these parts will now be explained. Of course, in many cases, where the sensibility of the retina is much impaired, a small aperture and a small disc of light will not be available for measuring the field; hence the large apertures. The smaller, especially the smallest, is for taking exact measure of the blind spot, the area of which can more easily be measured by a fine point of brilliant light. The intensity of the light may be varied by regulating the amount of gas burnt.

To test the field of vision for colour, we proceed in exactly the same way as under ordinary circumstances; the glass discs of the colour required being interposed between the flame and the aperture in the perimeter.

The processes above described only enable us to test what is termed the quantitative field of vision, or that portion in which a person can distinguish roughly a spot of light. To measure the quantitative field of vision, a stencil letter is inserted in an inverted position in the aperture of the perimeter. Immediately the mirror forms a bright erect image of it upon the perimeter; and the operator thus ascertains the distance from the fixation-point, in different directions, at which the patient still recognises this letter. This forms a severe but very useful quantitative test, and the shape of the test-object can be varied *ad infinitum*.

I must now show how the instrument is used in the diagnosis of astigmatism. In astigmatic persons, as is generally known, all the rays of light falling upon the eye (owing to some changes, congenital or acquired, in the refracting surfaces) are not brought to a focus on the

retina at the same point. Hence if an object made up of radiating lines, like a wheel, be looked at from a distance, all the lines will not be distinctly visible. If the refraction of the eye be normal in one plane, the lines which lie at right angles to that plane will be distinctly visible, whilst those occupying it will be indistinct, or perhaps almost invisible. Now these changes, which are well marked when looking at a drawing such as we have named, become much more obvious when a luminous streak is employed. In the perimeter, a diaphragm with a slit equal in thickness to No. xx Snellen, is placed in the aperture at the back of the perimeter, and is illuminated with the gas through an intervening portion of ground glass. This slit can be made to revolve upon its own axis, and thus pass through all the planes in which incident rays can fall upon the cornea. If the sight be normal, the slit at twenty feet has a well defined margin in all directions; but if astigmatism be present when the slit is passing through the plane at right angles to which it exists, its contour will become blurred, and assume a shape which will vary according to the degree of the astigmatism. Thus, supposing we produce an artificial degree of myopic astigmatism in the horizontal direction by placing a +30 cylindrical lens before the eye with its axis occupying the vertical meridian, and we then rotate the slit in front of this eye, we shall observe that when it occupies the horizontal direction its form of a slit will be retained, though it may appear somewhat elongated horizontally, but when it occupies the vertical meridian it assumes the form of a thickened band. A small point of light may be used, if required, for the same purpose, by bringing the smallest aperture of the diaphragm into the centre of the perimeter. The value of testing the field of vision for colour is greatly enhanced when the pure colours of the spectrum are employed; and I find that, with sunlight, this can very readily be accomplished. In a darkened room, a beam of sunlight is allowed to enter by means of a slit in a shutter; this beam is made to fall upon a prism, and a large spectrum is immediately formed. The perimeter is so adjusted that the band of any one colour in the spectrum shall fall upon the central aperture at the back of the perimeter; the rays of this colour will then pass through and be reflected by the mirror in the same way as usual, forming a disc of the colour which at that point corresponds to the back of the central aperture. A spectrum, when necessary, can be produced by artificial light, and then thrown upon the back of the perimeter; but, although it answers its purpose fairly, it cannot compete with the light of the sun. In the vertical meridian, it will be observed that the perimeter is marked off by fine lines into spaces each of one degree. This is to enable the operator to mark the distance of the double images from each other when diplopia is present. To use the instrument for this purpose, the perimeter is placed upon its side, so that the vertical meridian becomes the horizontal one. By means of a wand, the patient is made to indicate the position of the second image, and the number of degrees which separate it from the central image will indicate the angular displacement.

THE ANTICIPATION AND TREATMENT OF POST PARTUM HÆMORRHAGE.

ABSTRACTS OF PAPERS BY MR. QUIRKE, MR. TRESTRAIL, MR. J. THOMPSON, MR. TURNER, MR. HOUGHTON, MR. GURNEY, MR. KNIGHT, DR. BOULTON, DR. EDIS, MR. PARSONS, DR. HADDEN, DR. DONALDSON, MR. WOODMAN, MR. DATE.

[Concluded from page 723 of last number.]

MR. JOSEPH QUIRKE of Birmingham states that he has employed the intrauterine injection of iron as a *dernier ressort* in three cases of *post partum* hæmorrhage, with the effect of immediately arresting it in each case, the patients recovering without bad symptoms. In spite of firm and continuous pressure and manipulation of the uterus, the employment of cold, the application of the child to the breasts, the administration of brandy, the introduction of the hand, and the injection of cold water into the uterus, the formidable loss continued, and death was imminent. The injection of a solution of iron (1 to 20) caused the uterus to contract with great energy, expelling the hand that had been passed in, together with a number of clots, not another drop of blood being lost. He considers that the risk of embolism is obviated by the firm contraction of the uterus and the consequent closure of its vessels; and that metritis and peritonitis are not likely to occur, if too strong a solution be not employed. He thinks its employment should be restricted to those cases where all ordinary remedies fail.

MR. H. ERNEST TRESTRAIL of Harston endorses the views of those who employ ergot as soon as the head is born, and carefully follow down the uterus with the hand as the child is expelled, continuing to support it until the application of the bandage after the placenta is removed, the

binder having been placed in position before delivery. Where these means fail, and cold injection is not efficacious, in place of relying on pressure on the aorta or on galvanism, he advocates the injection of a solution of iron or some other powerful styptic, the danger being in using too strong a solution. He prefers chloralum, being less likely injuriously to affect the tissues with which it comes into contact, and being at the same time a more powerful antiseptic. He thinks that ergot is given in too large doses generally, having seen violent shaking, a sense of sinking, sickness, etc., and even symptoms of collapse and thrombosis, as results. Again, one of the most distressing results is powerful contraction of the uterus, producing "continuous pains", and threatening injury to the womb. He has also seen it produce irregular contraction, the cervix acting so forcibly as to interfere with the extraction of the placenta. He considers five to ten minims of the liquid extract of ergot sufficient in all ordinary cases as a safeguard against *post partum* hæmorrhage.

Dr. J. ASHBURTON THOMPSON thinks that sufficient stress has hardly been laid, if it have not indeed been entirely overlooked, upon the administration of a full dose of ergot at such a stage of labour as, it may be calculated, will allow the drug to take effect just before the final act of expulsion. It should be given twenty or thirty minutes before delivery is expected. He has been in the habit of giving it invariably to every case in which there is no obvious mechanical contraindication. No harm accrues to the fœtus; and the ergot has on many occasions obviated a flooding which there was every reason to anticipate, and also diminished the severity of the after-pains. If there be any septicæmic element in the case, its influence must probably be diminished by the more efficient and lasting contraction of the uterus. Special precaution should be taken to prevent any sudden evacuation of the uterus after the administration of ergot; otherwise the placenta may be with difficulty extracted. Grasping the uterus by the hand, after immersion in cold water, will both expedite the expulsion of the placenta and also lessen the tendency to hæmorrhage. He then gives the outlines of eight cases occurring in his own and Dr. Brunton's practice, in which flooding had taken place in previous labours, but was obviated by the administration of a full dose of ergot in the present deliveries. In one case, the intrauterine injection of a solution of iron was resorted to without permanent effect, continuous pressure ultimately succeeding. Ergot prevented flooding on the next occasion.

Mr. JOHN SIDNEY TURNER of Norwood thinks *post partum* hæmorrhage occurs more particularly in women of relaxed habit, where labour is long protracted, and there have been long intervals between the pains in the last stage. He inculcates avoiding haste in delivery, and waiting patiently for the extraction of the placenta, giving ergot prior to the birth of the child. Compression of the aorta should be resorted to where practicable. Galvanism with hand-kneading is the special means which he has found of very decided advantage; one hand being placed in the uterus, and the galvanism being applied externally. He considers this far more philosophical treatment than that by injection, intensifying the physiological mode by which uterine hæmorrhage is arrested, and imitating Nature's process in the closest degree.

Mr. J. HYDE HOUGHTON of Dudley, a pupil of the late Dr. Rigby, writes in praise of the binder applied before the birth of the child, and tightened as soon as this takes place. He says that, out of a very extensive midwifery practice, he has had only one fatal case during thirty-three years. During the last eight or nine years, he has carried about a binder with buckles, and has not had a single case of hæmorrhage that has given him the least anxiety.

Mr. THOMAS GURNEY of Stoke Newington advocates ergot and pressure by the hand externally on the uterus, together with the application of cold plates dipped in water, or a sponge saturated with cold water introduced into the uterus; failing this, the introduction of a Barnes's bag and its distension with cold water.

Mr. H. J. KNIGHT of Rotherham endorses Dr. Mushet's views on the value of cold-water uterine injection. He has employed it in several cases, and has never seen any ill effects follow this simple and effective mode of treatment.

Dr. PERCY BOULTON replies to Dr. A. B. Steele's strictures on his previous communication respecting the abdominal binder, and states that it is not the *bandage* for which he claims any special advantage, but *perfect rest* after delivery. He expresses also his appreciation of the value of the injection of iron-solution when hæmorrhage with inertia of the uterus occurs.

Dr. EDIS thinks that, in the multiplicity of methods of treatment, we are apt to lose sight of the importance of *anticipating post partum* hæmorrhage, to which Dr. Whittle's original paper and Dr. Lombe Atthill's remarks were almost exclusively confined. Attention to the condition of the health of the patient preceding parturition is as important as the training of the athlete, and yet how seldom is it thought

of! Iron and strychnia are of great service in improving the general tone of the general system. "Where we have any reason to expect hæmorrhage, every precaution should be taken to obviate this, by refraining from the administration of chloroform except just at the completion of the second stage; by applying the forceps, if there be any unusual delay from inefficient uterine action—not waiting for the natural powers to exhaust themselves; by assisting the expulsive efforts by means of the abdominal bandage; by giving ergot just before the final throes; and by not hurrying the extraction of the child or of the placenta, but following the uterus down with the hand externally, allowing an interval to elapse between the birth of the child and the expulsion of the placenta. Then, again, anticipate your wants; have a second skilled assistant, to attend to the child, and so leave you free to devote your attention entirely to the mother; have plenty of ice as well as ice-water at hand, with a proper syringe and tube, and your iron-solution ready mixed. Have some ergot poured out, and brandy within reach. See that the arrangement of the bed is such as to leave you room to move. Have a hot-water bottle, ready filled, to place under the lower back, thus increasing the determination of blood to the spinal cord, and so intensifying the nervous supply to the uterus. Forget not your transfusion apparatus, including a subject able and willing to supply the life-giving stream if requisite; compression of the aorta; ligatures to the extremities; hips raised above the level of the pelvis; free ventilation; and exclusion of all unnecessary attendants. Above all, a quiet and confident manner on the part of the attendant will inspire hope and ensure success; and, if every one who practises obstetrics will *think* beforehand and *act* when called upon in such emergencies, we shall less frequently have to deplore the sad issue of these anxious cases."

Mr. FRANCIS J. C. PARSONS of Bridgwater states that his experience is diametrically opposed to that of Dr. Lombe Atthill and Dr. Steele. He thinks that, the placenta acting as a foreign body, its speedy removal is of vital importance; and the rule he invariably adopts is to remove the placenta as soon as the child is born and the umbilical cord secured. "Placing the left hand on the fundus uteri, and gently moving my fingers backwards and forwards, accompanied by slight pressure, I feel the uterus, thus excited, to contract, and almost immediately the placenta is expelled. I continue my command of the uterus for ten or more minutes, and then substitute a pad in place of my hand beneath the binder, before applied, during the second stage. By these means, *post partum* hæmorrhage is with me of most rare occurrence." He agrees with Dr. Barnes that "the removal of the placenta is the first great end to be attained as a security against hæmorrhage", and refers to the practice of Hardy and McClintock as corroborating this view.

Dr. H. R. HADDEN of Rathmines, Dublin, narrates the particulars of a case where Cæsarean section was performed. "On the removal of the child and placenta, severe *post partum* hæmorrhage set in. Here there was no difficulty in the fullest application of the hand to the interior of the womb, nor even to grasping the organ in both hands, and firmly compressing it; but neither this, the application of cold, nor any other means, was of the smallest avail in controlling the hæmorrhage or stimulating the organ to contract and close the gaping orifice which my incision had made, till I resorted to the diluted solution of perchloride of iron, when immediately the exact appearances described by Dr. Barnes were seen by the eye; the uterus contracting; the styptic serving to seal up the mouths of the vessels and corrugate the inner surface of the uterus."

Dr. JAMES DONALDSON of Glasgow writes to record his experience of these cases when senior civil medical officer on the Neilgherry Hills, 7,500 feet above the sea-level, where local hæmorrhages were common. Epistaxis was frequent, and at times troublesome, even serious and copious oozing ensuing after extraction of teeth; and the ordinary monthly flow in women, often excessive, became at times dangerously profuse. During nearly four years' tenure of office, *post partum* hæmorrhage was of constant occurrence; but he did not lose a single case. Thoroughly alive to the great danger and responsibility, he always went prepared. In one case of rapid labour, "everything went on well, the placenta being expelled, and the uterus contracting. In less than an hour, the patient became suddenly restless and began to shiver. On removing the binder, the uterus was found to be relaxed, and internal bleeding going on. All ordinary means failing, the hand was inserted, and the clots extracted. This had to be repeated thrice, the hand being kept *in utero* for nearly an hour. The patient recovered. In a second case of natural labour, a portion of retained membrane was found to be keeping up hæmorrhage, and was removed. In another case, a full dose of ipecacuanha, bringing on rapid emesis, caused strong contraction after inertia, where introducing the hand was not thought desirable. In another case, where the uterus was well contracted, plugging the vagina with sponge steeped in perchloride of iron

lotion arrested hæmorrhage from the cervix. Where it is necessary to introduce this lotion into the uterus, it is much more effectually and safely done in most cases by the hand guiding a sponge and applying it as required. Many cases are lost where the hæmorrhage occurs from the lower part of the uterus and upper part of the cervix, and is unsuspected. The plug with iron lotion is the best and surest remedy for this."

Mr. JOHN WOODMAN of Exeter writes to corroborate the advantages and success of the treatment by free injection of cold water, as advocated by Dr. Mushet. He has tried it in several cases, and always with success, and has found it to produce contraction of the uterus when galvanism and all other means had failed. It is essential that the water be quite cold. Occasionally he has used a little vinegar mixed with the water, but he believes that the good effects are entirely due to the direct application of cold to the uterus. He has never had any bad results from this treatment.

Mr. WILLIAM DATE of Crewkerne, Somerset, states that he has attended over two thousand cases of labour, and has never lost a patient from *post partum* hæmorrhage. He advocates grasping the uterus and keeping up pressure—kneading it if necessary—until firm contraction ensues; pressure being kept up for an hour, if requisite. A firm broad binder is then applied. He refers to the fact of ergot not being under all conditions absorbed by the stomach, and thus failing to exert its well known action.

CLINICAL MEMORANDA.

SUDDEN DEATH FROM AORTIC CONTRACTION.

E. H., aged 59, had never suffered an hour's illness since the birth of her only child, twenty-four years ago. She died suddenly on the 11th of March, 1873, after eating a moderate dinner. At the *post mortem* examination, twenty-four hours after death, the cranial and abdominal organs were healthy; the lungs were congested; the heart was larger than natural, but unaltered in structure; the left ventricle was considerably dilated; the aortic valves were sound; the calibre of the aorta was enlarged in its ascending portion; and, immediately beyond the point at which the left subclavian artery was given off, close to the termination of the ductus arteriosus, there was a circular contraction of the aorta, as if a cord had been tied round it. On the proximal side of the stricture, a line of the wall of the vessel was so thin, as to be almost transparent; the ascending aorta was large enough to admit an index and middle finger, while the contracted portion would barely permit the little finger to enter. There were round and oval atheromatous patches in the innominate, left carotid, and left subclavian arteries, and at the punctum of the ductus arteriosus. The contraction of the artery was found in the usual place. The peculiarity in this case consisted in the total absence of any other lesion, or of any symptom during life. In this it differed, so far as I know, from all other cases on record. There was probably a sufficient channel for the aortic current under ordinary pressure. In the *British and Foreign Medico-Chirurgical Review* for April, 1860, Dr. Peacock published an abstract of forty cases of aortic contraction, which comprised all that was then known on the subject. It is, however, not unlikely that more extended observation will show this defect to be a not unfrequent cause of sudden death.

HENRY DAYMAN, F.R.C.S. Eng., Millbrook, Southampton.

THERAPEUTIC MEMORANDA.

ON THE EMPLOYMENT OF NUX VOMICA.

IN THE BRITISH MEDICAL JOURNAL for October 11th, there is a report of a very interesting paper, which was read before the British Medical Association, by Dr. Thompson, of Leamington. The author refers to the possibility of abusing nux vomica, and cites examples of cases where it was abused.

Some time ago, a case came under my observation, in which the patient could not get along without what she termed her "heart medicine." This mixture contained chloroform and tincture of nux vomica. The lady was in a miserable state of nervous debility, bordering on hypochondriasis; but she said that the medicine "pulled her up." She valued the prescription so highly, that she had the medicine dispensed from a copy, while the original was kept in her own possession.

I lately had a case of scarlatina under my care in the hospital. The patient progressed very favourably; but, during convalescence, she had

a remarkably slow pulse. I resolved to give her tincture of nux vomica as a nerve tonic. On September 30th, she got a ten-minim dose of the tincture of nux vomica during the day and another in the evening. I was hastily called about 2 A.M. The patient had had a sort of cold shivering, with pain and fluttering at the heart, and the nurse observed that her teeth were clenched. I found the pulse much more rapid than it had been for some days before. The patient was in a state of fear and apprehension. This state of things gradually passed off. At the evening visit on the 30th, the pulse still remained good (72).

On October 1st, the patient's pulse was slow again (no more of the nux vomica mixture had been given). I ordered five-minim doses of the drug to be again administered: *i.e.*, two drachms of a mixture containing 160 minims of tincture of nux vomica in eight ounces of water. The patient got a dose about half-past 2 P.M. and another in the evening. Between 11 and 12 P.M., I was called to see the girl, who had been seized, as before, with weakness and shaking of the legs. There was no clenching of the jaws; the pupils were dilated; pulse 65. In this instance, the dose was smaller and the symptoms were less formidable. The increase in the rate of the pulse was not so great as on the previous occasion. Seeing that so small a dose produced disagreeable symptoms, I left off the drug altogether. Probably the state of debility after the fever rendered the patient peculiarly susceptible to the influence of this powerful remedy. The girl left the hospital quite well.

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REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORTS FROM THE METROPOLITAN HOSPITALS ON THE USE OF TORSION IN SURGICAL OPERATIONS.

[Continued from p. 756 of last number.]

Mr. BRYANT (Guy's Hospital) remarks: The more I see of torsion in surgical operations, and the more I practise it, the more convinced am I of its superiority over every other known method for the control of hæmorrhage. Whilst, in a physiological point of view, it utilises more fully than any other known plan all the physiological processes employed by nature to prevent and arrest bleedings, places them in the most favourable position to take effect, and leaves no foreign body in the wound, as a ligature, to irritate or to become a source of future danger, by undoing at a later period what has been done at an earlier, by Nature's own efforts; in a clinical point of view, it allows the repair of wounds by immediate and primary union, and practically almost does away with the fear of secondary hæmorrhage, except as a consequence of a general sloughing of a stump or wound. It is applicable to all arteries, large or small; it may be employed with confidence to the femoral or the brachial, and it has been applied with success to the external iliac and subclavian. It can be applied with safety even to atheromatous vessels. Under all circumstances, when torsion is successful at the time of operating, it may with confidence be trusted. When it fails, it fails at the time. When once by torsion the flow of blood is arrested, there need be no fear of any subsequent hæmorrhage. Its application is possibly more difficult than that of the ligature, for, to prove successful, it requires that the artery should be isolated, seized firmly, drawn forward, and twisted sharply; it is apt to fail when a mass of tissue or the sheath of the vessel is taken up with the artery; this latter peril being rarely regarded as of importance in the application of the ligature. To practise it with safety, the vessel should be twisted till resistance has ceased, but not longer; and, in the larger arteries, it is wise to allow blood to flow into the twisted end before the torsion-forceps is removed, with the view of gaining the full benefit of the valvular incurvation of the inner coats of the vessel. In atheromatous arteries the same rules hold good; but the necessity of observing them is greater, for, from the brittleness of the inner coats of the vessel, the slightest twist breaks them up, and any excess in twisting breaks them off, together with the external and cellular coat; and to break off the external coat under these circumstances, means failure; whereas, with the external coat entire, the breaking up and the incurvation of the inner coat, and the coagulation of the blood within the vessel, success may generally be achieved under all circumstances. Acting on these principles, I have successfully twisted many very diseased vessels, and, on one occasion, a femoral artery by means of one complete twist, where two twists had previously failed. Where