seeing that the lung would much more readily give way by pressure than the chest-walls. I do not seem to remember ever seeing an empyema make its way externally until the lung had first become compressed. To return to the question of risks of allowing a localised empyema to remain, I consider that they are great, having seen of late so many fatal cases. If this be so, the better method is to tap them. In the first instance, an exploratory needle may be used, and then a larger trocar, followed by a drainage-tube, or closing the opening. I think, in the first instance, I should be inclined to close the opening, as a partial evacuation might cause the absorption or drying-up of the rest, as is sometimes seen.

The question is: given an abscess, shall we, as the surgeon recommends in ordinary abscess, evacuate it externally, fearing it may take a dangerous course internally. Under both circumstances, it must take time for the cavity to close, seeing that on one side is the bony wall of the chest, and on the other indurated tissue formed by pleura and adjacent lung. The diagnosis of the abscess I put on the simple grounds already mentioned: a localised dullness and absence of breath-sounds, remaining after any inflammatory attack of the chest.

Mr. Goodhart has placed under the microscope some sections of lung adjoining an abscess, displaying its hardened walls, and showing, therefore, the difficulties under which closure must take place.

Finally, I must apologise for having spoken so dogmatically on some points, but time does not allow of argument; and offer a special apology to you, sir, considering I am making statements before one who is regarded a master in all matters relating to chest-disease.

CASE OF ABSCESS OF THE BRAIN FOLLOWING A BLOW ON THE HEAD.

By J. D. MACLAREN, M.D.,
Physician to the Glasgow Royal Infirmary.

THE following case of abscess of the brain, of which I preserved notes, was under my care in the Glasgow Royal Infirmary five years ago. It was brought to my recollection by reading Dr. Burney Yeo's case of abscess of the brain in the *BRITISH MEDICAL JOURNAL* of 7th June. It has many points of resemblance to it, and may be read with advantage along with it. I agree with Mr. Lister in thinking such cases "are only met with once in a lifetime".

Margaret L., aged 23, a sewing girl, was admitted to the Royal Infirmary September 17th, 1874, suffering from hemiplegia of the left side. On the 18th July, she met with an accident to which she ascribed her illness. A smoothing-iron accidentally fell from a height of three feet, and struck her on the vertex. Though stunned by the blow, she was not rendered insensible. Her scalp was cut in an antero-posterior direction, a little to the right of the middle line, an inch and a half in extent, and the anterior end of the wound was within an inch of her forehead. It bled profusely, but healed up in three weeks without further treatment than keeping it clean and covered. Ten days after the accident, and while the wound was still open, she began to lose the power of her left arm; a week afterwards, her left leg was affected; and, at the end of another week, she was completely hemiplegic, and continued so till her admission.

On admission, there was hemiplegia of the left side. Her mouth was slightly twisted to that side, but she could protrude her tongue in a straight line. Her intellect was unaffected. She complained of headache. Her pupils were normal. The lungs and heart were normal. The tongue was dry and slightly furred. Her appetite was much impaired. She complained of thirst, and vomited frequently. The bowels were regular. Temperature normal. A firm healthy looking scar was observed on the scalp at the seat of injury. The urine was normal. The palsy slightly abated, so that on October 6th it was noticed that she could flex her leg up to the abdomen, and could bend her arm till she could almost touch her shoulder with the left hand, and she could close her fist. On October 17th, she could stand and partially bear her weight on her left leg, but could not walk without assistance. Her headache was often very troublesome, however, and came on in agonising paroxysms, the pain being chiefly confined to the forehead. She often vomited suddenly and easily, and apparently without any connection with her food. Towards the end of November, the headache had diminished, but her palsy increased. On December 5th, she had a well-marked epileptiform convulsion, lasting for ten minutes, with frothing at the mouth and tonic spasm of the fingers. She continued in a semicomatose condition for twelve hours afterwards, with slight delirium, and occasional spasmodic movements of the hands and dilatation of pupils. Another similar fit occurred next day, with occasional squinting. On the 11th, she had two convulsions, and lay in a semi-

conscious state in the interval. On the 12th, she had three fits, and died on the evening of that day, nearly five months after the receipt of the injury.

The necropsy took place on December 14th. On removing the scalp, a depression was noticed on the skull corresponding to the situation of the scar. A portion of the external table of the skull was driven into the diploë, and lay as a sequestrum. The internal table of the skull was intact, except at one point where there was an opening sufficient to allow a probe to pass. No pus could be observed in the neighbourhood of the injury. It was the frontal bone which had sustained the injury, at a point midway betwixt the supra-orbital ridge and the coronal suture, and a little to the right of the middle line. The depression was about an inch and a half in length, and three-eighths of an inch in breadth. The dura mater was generally somewhat hyperæmic, and slightly adherent to the arachnoid. The surface of the brain was dry and sticky, and the sulci were glued together slightly. The surface of the right hemisphere was more prominent than the left; and on separating the edges of the longitudinal fissure, that side was seen to bulge beyond the middle line. The convolutions over the middle right lobe were rather pale-coloured, and slight fluctuation could be detected. On slicing across the right hemisphere above the level of the corpus callosum, an abscess was revealed in the white matter of the brain, enclosed in a well-marked pyogenic membrane. The pus was green and of creamy consistence; it had no bad odour, and was about two or three ounces in amount. The brain-substance around the abscess was slightly altered in appearance, and the right ventricle was hyperæmic. The right corpus striatum was slightly softened. The other parts of the brain were normal.

TRAUMATIC OPHTHALMITIS: TREPHINING THE SCLEROTIC: RELIEF.

By W. SPENCER WATSON, F.R.C.S.,
Surgeon to the Central London Ophthalmic Hospital, etc.

THE following is the history of a case of traumatic ophthalmitis with eyeball-tension following the operation for juvenile cataract, in which Dr. Argyll Robertson's operation of trephining the sclerotic was performed with relief of the more urgent symptoms.

A. P., a delicate lad aged 14 years, with juvenile cataracts and a congenital deformity of the left arm, was operated on by the needle-operation in February 1879. Acute ophthalmitis set in, and treatment by mercurials and the local application of belladonna produced some improvement, but the eyeball remained tense and congested, and with doubtful perception of light, but great photophobia, till May 2nd. On that date, the friends having resisted the proposal to perform enucleation, which was strongly urged upon them, I determined to trephine the sclerotic as an alternative. The lower and outer quadrant of the sclerotic, between the outer and lower recti muscles, was the spot chosen, and a disc of sclerotic was removed. The patient was under the influence of the mixed anæsthetics but was not very quiet, and the trephine penetrated the choroid as well as the sclerotic, allowing a protrusion of the vitreous body, which was tolerably healthy in appearance. Part of the protruding vitreous was cut away by the scissors. No bad symptoms followed, and the eyeball at the present date (June 11th, 1879) is free from congestion, though there is a return of tension, which remained at first normal. Photophobia has disappeared, and there is now some little improvement of vision, so that he can count fingers held between his eye and the window. The operation of trephining has, in this case, been so far a perfect substitute for the more severe measure of enucleation. The latter may possibly at some future time be required, but for the present the danger of sympathetic irritation of the fellow eye is not imminent. The relief of tension was at first most complete, and the patient himself and his friends are convinced that the operation has been highly beneficial to him.

Doubtless the measure is one which is of a temporising character; but in cases in which the consent of the friends to the removal of the eyeball cannot be obtained, it is a matter of great moment to be able to gain time, and especially if a tangible benefit can be relied upon as in the case related. An eyeball in which the tension is excessive is as a rule much more likely to be dangerous to its fellow than one in which the tension is normal. If, by trephining, the tension can always be relieved, as I believe it can, there is a good reason for preferring it to less certain measures in traumatic cases of ophthalmitis, especially when there has been somewhat prolonged iritis with matting together of the iris and ciliary processes. In such cases, attempts at iridectomy almost always fail, and sclerotomy is hardly less likely to succeed. Hence in

Dr. Argyll Robertson's operation, we have an alternative which, when enucleation is declined, offers perhaps the best chance of averting the terrible calamity of sympathetic ophthalmia, and the inevitable blindness which it involves.

A FORM OF HERNIA-KNIFE.

By P. J. HAYES, L.R.C.S.I.,

Surgeon to the Mater Misericordiae Hospital, Dublin.

THE little instrument which I have designed, under the impression that it will be found an useful addition to the armamentarium of the operating surgeon, possesses no claim for position in the class of surgery-made-easy contrivances; it is merely a form of hernia-knife, with the aid of which, I anticipate, the surgeon can safely and efficiently overcome strangulating pressure in cases of femoral hernia where necessity for incision through the base of Gimbernat's ligament exists. This may be thoroughly accomplished, even in the event of an anomalous obturator artery taking a course directly across the line of action.

The essential characters of the knife are few and simple. The outer part of the instrument consists of a long slender sheath of steel. This sheath is compressed so as to present two flat sides or surfaces and two thin rounded margins. The distal end or extremity is also smooth and rounded. At a quarter of an inch from the extremity, one margin is interrupted by a transverse notch or fissure nearly one-eighth of an inch in depth, and rather more than the sixteenth of an inch wide. Within the sheath, a thin flat blade having blunt edges, but with an oblique, sharp, chisel end, is arranged to slip up and down after the manner of a pocket slide-pencil. The instrument is to be employed in the following way. The blade having been drawn down, the sheath is applied to the finger on the flat, like an ordinary hernia-knife, and guided through the inner part of the crural ring. When sufficiently within the aperture, the instrument is to be turned with the notched margin inwards, so that the aperture shall correspond to and receive the base of Gimbernat's ligament. I need hardly say how, by a little upward and downward movement of the sheath, the surgeon can cause the edge of the ligament to enter the notch, and so be presented for incision when the chisel-blade is pushed up. Of course, one small cut in the base of Gimbernat's ligament may not prove sufficient to permit reduction of the hernia, but the wound can be enlarged to the required extent by withdrawing the blade a little and pressing inwards the sheath until a fresh portion of membrane becomes stretched across the opening and exposed to the blade during another upward movement. It is clear that any vessel resting upon the upper surface of Gimbernat's ligament must be pushed inwards by the edge of the sheath immediately above the notch, and so protected from the possibility of being wounded. Also, the operator can regulate to a nicety the extent of incision through the ligament, and preserve his patient from all risk of being left with an unduly enlarged femoral ring.

The accompanying woodcut represents the instrument as made by Messrs. Fannin and Co. of Grafton Street, Dublin. The dotted line shows the position of the blade within the sheath when ready for use.

NOTE ON STITCHES OF RELAXATION.

By J. C. OGILVIE WILL, M.D.,

Surgeon to the Aberdeen Royal Infirmary.

IN one of Professor Lister's papers, "On Recent Improvements in the Details of Antiseptic Surgery", which appeared in 1875, he alluded to the utility of button-sutures, a name which he applied to a form of stitches of relaxation. His observations are doubtless familiar to all surgeons; it is therefore needless to review them, so I shall content myself with the statement that I can, from a not inconsiderable experience of button-sutures, bear testimony to the advantages accruing from their use; and the object of the present communication will be amply

fulfilled if I succeed in furthering the employment of this mode of keeping cut parts together by the description of a modification of the button which I had made for me soon after the appearance of the paper referred to, by which the use of the appliance is rendered easier, and which, I think, removes the only difficulty connected with the manipulation of the buttons originally suggested.

Professor Lister's stitch of relaxation is thus described by him. "It consists of two oval pieces of sheet-lead, about one-twentieth of an inch thick, with a central perforation to receive a moderately thick silver wire. The silver wire is first passed as an ordinary suture, except that it is carried at an unusually great distance from the edge of the wound, both as regards surface and depth; each end of the wire is then passed through the hole in the corresponding lead button, and secured by being wound once round the shorter diameter. The two buttons thus take the place of the tips of two fingers of the two hands in giving support to the deeper parts of the wound, while leaving the cutaneous margins free; and, when the wound is at all extensive, several pairs of buttons are applied in this way, constituting a sort of interrupted quilled suture." If it be necessary to relax the wire, this is readily done "by unwinding the wire from one of the buttons, and, after straightening it, allowing the button to slip upon it to any degree to which the tension disposes it, and then fixing it again by winding the wire round it". The difficulty to which I have alluded as attending the use of the buttons recommended by Professor Lister consists in twisting the wire round the disc of lead so accurately that it will maintain its position, this being materially increased by the slippery condition of the operator's hands at the conclusion of an operation, or by the benumbed condition of the fingers induced by prolonged exposure to the influence of carbolic spray. This difficulty I experienced when first employing button-sutures, and frequently since then when using them; but the mode of fastening the wires now proposed disposes of this obstacle most effectually, and thus removes the only possible objection to the employment of stitches of relaxation.

The button which I now use is exactly similar in shape and size to Professor Lister's; but, as may be seen from the accompanying figures,

a little knobbed stem springs from each side of the central aperture, round which the wire is twisted in figure-of-eight fashion; thus the wire can be drawn well home, is kept in exact position, and can be relaxed at will, and reapplied with the greatest ease. If chromic catgut be employed in place of wire, a thread long enough to allow subsequent relaxation and retying should be used, the superfluous catgut being twisted round and round the little pins. The buttons are made of silver, and are therefore comparatively costly; but were any demand to arise for them, the makers (Jamieson and Son, Union Street, Aberdeen) would make them of plated material, by which their price would be rendered extremely trifling. Being pliable, the button can be bent so as to accommodate itself to any surface, while the material of which it is composed renders its thorough cleansing both easy and certain.

The button depicted is slightly larger than is necessary, the largest and most generally useful of three sizes which I have by me measuring three-fourths of an inch in length by half an inch in breadth. In using the smaller ones, they should be kept flat, while the wire is being twisted round the pins, by pressure with the finger-nail on the point of a sharp-pointed scissors. Any enumeration of the conditions where the use of this retentive appliance is indicated is uncalled for, as they must be sufficiently apparent to all; and as the paper quoted is in an eminent degree suggestive, it only remains for me to direct attention to its utility in those cases where amputation by a rectangular or other long flap is performed. Possessing, as I do, a strong preference for the operation originally proposed by the late Mr. Teale, I resort to his method of amputation in every case where I can, without any undue sacrifice of parts, put it in force; and in these cases, almost more than in any others, I have seen the usefulness of button-sutures. The use of plasters is hardly compatible with that of the antiseptic method; therefore some other means are frequently necessary for the purpose of supporting the long and somewhat unwieldy flap resulting from Teale's amputation; and even in those cases where antiseptic treatment is not pursued, plasters, although undoubtedly useful in keeping the cut parts