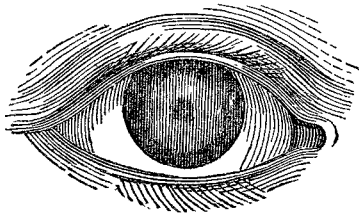


divided by the curved scissors, (fig. 14, B.) But let it not be supposed that such an operation, although productive of a clear black pupil, is always followed by the restoration of the faculty of vision. The injury to the highly sensitive structures of the eye is sufficient to account for the amaurotic condition of the organ, notwithstanding the apparently perfect success of the operation. The ciliary processes likewise necessarily somewhat interrupt the passage of light to the retina, even where the latter has preserved its sensibility.

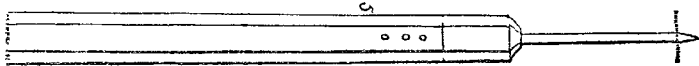
*Drilling.*—The last method of restoring an obliterated pupil is that of "drilling," as it has been termed by Mr. Tyrrell. The cases for which this operation are adapted are those where the cornea is transparent, and where the iris has become adherent to the anterior capsule, as the result of iritis, with or without opacity of the crystalline. Fig. 21 is an example of

FIG. 21.



such a case. I have frequently had occasion to perform this operation, with the happiest results, as a safe and simple one, which may be often repeated. The cornea is wounded by a clean incision with comparative impunity; the wound heals by first intention, without involving the transparency of that structure. The operation is performed in the following manner:—A fine straight needle, (fig. 20,) very sharp at its

FIG. 20.



point and edges, to the extent of half a line, is introduced through the cornea, near its margin, or anywhere outside the circumference of the most dilated pupil, and carried through the aqueous chamber to the opaque capsule, (or to a capsulolenticular cataract, where the lens is either soft or fluid.) A slight rotatory motion is then effected; and on withdrawing the needle, the aqueous humour escapes, and the shreds of capsule, as well as any flocculent or softer portions of the lens, immediately protrude forward into the anterior chamber; the pupil is preserved in a state of dilatation by the belladonna ointment. Other remaining shreds of capsule retract behind the iris. The sharpness of the needle is adequate to divide the toughest capsules. Such an operation may be repeated twice, thrice, or as often as requisite, at intervals of from three to five weeks, with a certainty of ultimate, often of speedy, success, and little or no injury to the visual organ.

*After-treatment.*—I need not insist on the principles which should regulate the after-treatment, being such as should guide us in all instances of wounds of such delicate textures, however scientifically performed. The iris should be kept under the influence of belladonna, and should not be used for some days. Should pain supervene, opium ought to be given in small repeated doses, and inflammation must be treated by calomel and opium, venesection, and other antiphlogistic measures. When too large an incision has been formed, so that the eye is dazzled even by moderate light, it is necessary that the patient should shade the eyes, or wear a piece of pasteboard or light wood, concave within and convex without, blackened on both sides, and having a central aperture of the form and dimensions of the natural pupil. This will considerably assist his vision in looking at large objects, although he will scarcely be able to distinguish small ones even with the aid of this contrivance. Where the eye which has been subjected to operation for artificial pupil has been deprived of the lens, the patient will require the use of cataract glasses.

*Concluding observations.*—It has been observed, in the preceding rules, that simplicity in instruments, and not the attempting too much at a time, form the secret of success in all cases of operation for artificial pupil.

If, notwithstanding every precaution, the capsule and crystalline are wounded, the opacity will soon become visible through the new pupil. It will be necessary, in such cases, to restore the usefulness of the newly-formed pupil, by breaking up the capsule, and exposing the lens itself, which is either soft or fluid, to solution in the aqueous chamber, by the operation of drilling.

Where blood is effused into the aqueous chambers, it will either escape by the corneal incision, if that is large, or will most probably become absorbed. Should it form a coagulum which does not readily become absorbed, it may be requisite to puncture the cornea, and extract the coagulum, by means of the cuvette, or a pair of delicate forceps. Chelius states that he has witnessed the root of the polygala senega "trionpher completement, en quelques jours, d'un épanchement sanguin survenu par suite d'une iridodialyse, et qui existait depuis trois mois."

Artificial pupils are usually divested of all power of contractility to the action of light, especially those situated at the ciliary margin; but pupils formed by a hollowing out of the natural pupil are possessed of some degree of power of contractility.

The eyeball preserves its natural direction whenever the perforation has been practised in the centre of the iris; but a degree of strabismus always ensues whenever the opening occupies any other part; and it has been suggested by Mons. Florent Cunier, a Belgian oculist, to perform the operation of myotomy, so as to produce an artificial squint, and thus to bring the remaining diaphanous portion of the cornea and the newly-formed pupil more towards the natural axis of vision. For this purpose he divided the external or the internal rectus muscle, according as the artificial pupil were situated, more towards the external or the internal angle of the palpebral opening.

I shall only further allude to a method which has been proposed, of forming an artificial pupil by excising a portion of the sclerotic coat, in cases where an immense leucoma obscures the entire cornea. The author, Autenreith, commenced by detaching a portion of the conjunctiva near the cornea, and towards the outer or inner angle of the eye; then, having detached a triangular portion of the sclerotic and its subjacent coats, he replaced the conjunctiva. But, as Mons. Velpeau justly observes—"Le mieux qu'on puisse faire en faveur d'une pareil idée, est de n'en pas parler, et je m'étonne que Beer, Himly, Muller, Guthrie, Ammon, et Ulman, aient pris la peine de l'expérimenter."

## ON A SEVERE FRACTURE OF THE CRANIUM, AND RECOVERY.

By THOMAS BANCKS, Esq., M.R.C.S., Stourbridge.

DANIEL C.—, a boy, aged fifteen years, on the 11th of June last, whilst engaged in a pit-shaft, had his skull dreadfully fractured by a brick falling upon it from upwards of forty yards in height. I did not see him until twenty-one hours had elapsed from the time of the accident; and the surgeon in attendance up to that time, considering the case hopeless, had not thought it advisable to operate. I found him in a state of perfect insensibility; pulse very slow and weak; breathing stertorous; pupils dilated, and insensible to light. Suspecting, from the account I had received, that the only chance lay in trephining, I went prepared. On dividing the scalp, I found an extensive comminuted fracture of the left parietal bone, large portions of which were driven deep into the substance of the brain, much of which, mixed with blood, was oozing from the wound. I immediately proceeded to remove the depressed portions of bone, and as much as a tablespoonful of brain (broken up by the fragments of bone) escaped. One spicula of bone had been driven lengthways into the brain to a great depth, and was only discovered by a sharp point below the level of the brain, after I considered that all had been removed. A strip of plaster brought together the flaps, the whole was covered with lint dipped in cold water, and he was put to bed, apparently little changed since the operation; if anything, having, perhaps, less power in the pulse. I left, after remaining an hour, with directions to administer five grains of calomel if he should rally. At nine p.m. there was a little more power in the pulse, and the calomel was placed on the tongue, with directions to give cold water.

12th.—Much as yesterday; perfect insensibility; stertorous breathing still; pupils dilated; pulse rather inclined to get up. Ordered, spirit lotion to the head, which was directed to be shaved all over, only sufficient hair having been before taken off to make room for the operation. To give tea, and milk-and-water.

13th.—Pulse getting up; more full, and strong. Ordered, leeches to the temples, spirit lotion, and two grains of calomel, every six hours.

14th.—Inflammation of the brain and its membranes has evidently set in; he is very furious, constantly tossing about, and requiring several people to hold him; pupils dilated.

Ordered to lose twelve ounces of blood from the arm; continue spirit lotion and calomel; tea, milk-and-water, &c.

15th.—Inflammation continues as yesterday; repeat leeches; scarcely so much power in the pulse. The faeces pass off involuntarily; portions of brain in a half sloughy state escape from the wound. The external wound has an unhealthy appearance. Continue the calomel; and spirit lotion to the head.

17th.—His pulse to-day is better, but no sign of returning consciousness. From this date up to the 30th he varied, but it would be tedious to give the treatment pursued each day. Suffice it to say, that from the first dawning of returning consciousness, (which took place on that day,) he progressed most favourably; the symptoms of inflammation of the brain gradually subsided, healthy granulations sprang up, and in six weeks he left his room. He is now in excellent health, and with all his faculties as perfect (?) as before the accident. The chief interest, I conceive, consists in the recovery after so large a portion of brain had been lost.

Stourbridge, Worcestershire, Nov. 1846.

## NOTES OF A CASE OF DEATH FROM FRIGHT.

By FREDERICK MANSON, M.D., London.

WE not unfrequently hear of death having been occasioned by fright, but I am not aware of the existence of any well-authenticated case of this kind hitherto on record. A case, however, having come under my notice at the Northern Dispensary, in which death seemed attributable solely to fright, and which became the subject of investigation by the deputy-coroner for Middlesex, (Mr. Mills;) and the jury unanimously agreeing that fright was the cause of death, I deem it worthy to be recorded.

Elizabeth S—, residing at 1, Stephen's-place, Somers-town, aged two years and three months, and previously in good health, was on Friday, the 2nd of October last, carried by a little girl into a "sweet-shop," and whilst there, a little boy, in a red "Guy-Fawkes" mask, made his appearance at the window. This she told her little nurse was "Bogie," and it created such alarm in her mind, that on her return home she was described by her friends to have been in a state of great excitement, trembling violently, and unable, from agitation, to explain the cause of her distress. Her face was, at the same time, expressive of great terror, and her hair wet with perspiration. All that could be elicited from her, when she had partially recovered, was, "The bogie; bogie looked through the window at me." From that time, she never forgot the circumstance, referring to it several times daily, and always with evident dread. From this period, also, her health appeared to be affected, and her spirits depressed. Her mother, supposing the change to arise from her bowels being deranged, gave her a dose of jalap, which purged her a good deal, but did not make her any better; the dejections produced were stated to be unhealthy in appearance, and foetid.

On Wednesday evening, the 14th of October, she was very restless, and started up out of her sleep twice or three times, exclaiming, "Bogie, bogie!" and was with great difficulty calmed and pacified. The following morning, at about half-past ten, she referred to it again with great agitation, and half an hour afterwards, was seized with convulsions. Her friends being greatly alarmed, procured the attendance of the nearest surgeon, (Mr. Roper, of Somers-town,) and that gentleman, on seeing the child, was at once struck with the expression of horror and alarm depicted in her face, and inquired whether she had not been frightened. He ordered some powders, and directed the child to be placed in a warm bath, and two leeches to be applied to each of the temples.

At about half-past one, I was summoned to see the case, and found the child enveloped in a blanket, lying in its mother's arms, very hot, and bathed in perspiration; the head and face were crimson, hot, and perspiring profusely; the arms and legs were perfectly motionless, and the body in a state of repose. The face bore the expression of fright and dread; the eyes were either fixed, or wandering hurriedly; the eyebrows, corners of the nose and mouth, twitched spasmodically; the diaphragm was also violently convulsed, as was evinced by deep and rapid sighs, accompanied by loud sobs; the jaws were clenched, the pupils slightly dilated, and the pulse rapid. The leeches, which had already been applied, bled freely, but without diminishing the heat of the face and head; on the contrary, from being hot and moist, the head and cheeks became hot, dry, and burning. The powder ordered by Mr. Roper not having been taken, three grains of calomel were administered, and two teaspoonfuls of a mixture, composed of one drachm of nitre, a grain and a half of tartar-

emetic, sixteen minims of tincture of opium, and four ounces of water; with directions to repeat it every two hours. The sobbing and sighing diminished in intensity, and the twitching of the face in some degree subsided, as also did the expression of dread; but she never uttered a word. From that time, no change apparently took place; one more dose of the mixture was exhibited, as directed, and the bowels were acted upon, the stool being dark, and rather offensive. At about half-past six o'clock the same evening, she called "Mother," and died almost immediately afterwards.

The death took place on Thursday, the 15th; on Monday, the 19th, the inquest was held, and on the same evening, by desire of the deputy-coroner, the body was examined.

On opening the head, the dura mater, arachnoid, and pia mater, were found perfectly healthy, and no effusion existed in the cavity of the arachnoid; the surface of the brain was, however, at every part, highly congested, the whole of the veins and sinuses being greatly distended, the smaller branches dilated, and the blood itself fluid. On making the usual sections of the brain, the red points and streaks were much more numerous and distinct than in the normal condition; the same appearances were remarkably distinct in the cerebellum. The whole of the brain was very much softened; so much so, as to give way under very slight pressure, or a stream of water, and to tear rather than be cut by the knife. The softening was, most probably, a post-mortem result, and not due to disease. Death seemed to me to be fairly attributable to the fright, for the following, among other reasons:—

1st. Previously to the fright the child was in perfect health. It is true that, six months before, she went through scarlatina; and it was ascertained that three weeks antecedent to death she had a slight fall, but not greater than the tumbles which children at her age are daily experiencing; to neither of these, therefore, can death be attributed.

2nd. The marked effect produced on the mind at first, and the permanence of these impressions, together with the increased fear produced by dreaming of it.

3rd. The derangement of health, and depression of spirits which it evidently produced.

4th. The character of the convulsions, they being confined to the diaphragm and muscles of the face, and the marked expression of horror and dread in the countenance, which induced two medical observers to inquire whether the child had not been frightened, before any relation of the case had been obtained from the friends.

5th. The absence of all symptoms which could point to any other cause of death, and of any other probable existing cause.

6th. The continuance of all the symptoms up to the period of death, without any diminution, excepting from the gradual exhaustion of the vital powers.

7th. The condition and appearance of the brain, as ascertained by dissection, readily understood, on the supposition of fright having caused death; but inexplicable by any other known existing cause.

Park-street, Grosvenor-square, Nov. 1846.

## ON THE SURGICAL AND MECHANICAL TREATMENT OF SPINA BIFIDA.

By C. HAWTHORN, Esq., Surgeon, Sandon.

HAVING observed in THE LANCET of March 7th, 1846, an inquiry if any treatment had been adopted likely to be successful in cases of spina bifida, I respectfully offer the following successful case to public notice, in the hope that it may be the means of leading to such further investigation and observation as may ultimately preserve the little sufferers from an early grave.

M. G— was born on the 2nd of October, 1824. On removing the child from the wrapper, I discovered a tumour, about the size of an Orleans plum, situated between the last lumbar vertebra and the os sacrum, and containing a transparent fluid. On pressure, the fluid receded, and its being confined within the spine did not appear to produce any ill effect on the child. For a length of time, a small pad of lint was immediately applied, secured by a piece of lead plaster, spread on leather, to defend it from the acrimony of the urine and from accidental friction, over which was placed a pasteboard, of the width of the loins, to keep the pressure even. The tumour was examined, and the dressings were removed, every other day, the object of this proceeding being, not to apply pressure, but to assist the integuments in resisting the pressure of the fluid contained in the cavity of the spine, and to prevent the distention of the dura mater until the child was able to undergo operation, which was about seven weeks after-