infirmary, and it was decided unanimously that Cæsarean section afforded to the patient the best chance of escape; and, as the labour had made no progress during the last six hours, although the pains had increased in frequency and severity, it was deemed useless to postpone the operation, lest the patient, by becoming exhausted, would have to incur still greater risks than those necessarily attached to the operation itself.

The temperature of the room was now elevated to nearly 70° Fahr.; and, the patient being placed under the influence of bichloride of methylene, the operation was commenced. An incision was made in the median line from the umbilicus to near the pubes. No hæmorrhage took place from the parietes. The uterus was then opened in the middle line, and the child extracted without difficulty. Its left knee was found to be the presenting part; and its right foot rested on the symphysis, the dorsal aspect of the child being in front. The placenta was then removed, and great hæmorrhage took place from its uterine attachment; and at the same time very alarming hæmorrhage occurred from the uterine sinuses, and great difficulty was experienced in checking it. Five vessels in the uterine incision were tied with ligatures of Chinese twist, and the ends cut short. The uterus not contracting, cold sponges were applied to its interior, and, with the aid of ergotine (half a grain) injected hypodermically, secured at last a permanent contraction. It was thought well to use fine carbolised catgut sutures in the uterine wound; but, before introducing them, a large India-rubber tube was passed from the uterus into the vagina, for the purpose of drainage. (This, however, came away a few hours later.) During the operation, the intestines did not come much into view; and what blood escaped into the abdominal cavity was carefully sponged away before the external wound was closed with seven silk ligatures. A pad of lint was next placed on the abdomen, and covered over with a thick layer of cotton-wool; the application of a flannel bandage completing the operation. The quantity of methylene used was ten drachms; but it did not produce any nausea or vomiting.

The child, whose weight was 5 lbs. 10½ oz., was a male, and cried immediately on being born. It seemed very healthy and well proportioned, and measured twenty inches and a quarter, or, in other words, half the height of its mother.

I will not try your patience by reading the daily report of the patient, but shall content myself instead with giving a *résumé* of the more important features of the case during its progress towards recovery.

1. With respect to the temperature. On inspecting the temperature-chart, one sees at a glance that a distinct rise took place at three different periods of her illness.

The first and highest was on the fifth day, when the thermometer registered 102°; and, from the tender and tympanitic condition of the abdomen at the same time, was owing most probably to peritonitis.

The second rise was on the twelfth day, and was attributed to a moderate attack of phlegmasia dolens, which, commencing three days before, had now reached its climax. It was not ushered in by shivering, or any constitutional symptoms; and, after a duration of twelve days, passed away, leaving for three weeks slight œdema of the left foot.

The third and last rise was on the nineteenth day, and was caused by the formation of an abscess in the right breast. In six days, this was opened, and continued to discharge for nearly four weeks.

Day.	Temperature.		Pulse.	
	M.	E.	M.	E.
June 23	1	100.0 ..	—	130
" 24	2	98.8 ..	108	100
" 25	3	98.0 ..	100	100
" 26	4	99.2 ..	100	100
" 27	5	102.0 ..	120	100
" 28	6	99.8 ..	112	112
" 29	7	98.8 ..	112	100
" 30	8	99.0 ..	100	104
July 1	10	99.4 ..	100	110
" 2	10	99.3 ..	104	114
" 3	11	98.8 ..	100	115
" 4	12	99.2 ..	112	105†
" 5	13	100.2 ..	110	100
" 6	14	97.8 ..	100	100
" 7	15	98.2 ..	95	98
" 8	16	98.6 ..	87	85
" 9	17	97.0 ..	80	82
" 10	18	97.2 ..	85	92
" 11	19	97.6 ..	85	92
" 12	20	97.6 ..	80	81
" 13	21	97.6 ..	80	82

* Peritonitis. † Phlegmasia. ‡ Mammary abscess.

Abdominal pain was complained of for the first ten days, and was most severe on the fifth day. Most of this time, poultices were applied to the abdomen.

Her bowels were moved on the fifth day by a dose of castor-oil.

During her illness, they were sluggish, generally requiring a dose of oil or an enema to produce an evacuation.

The lochia ran a natural course. The wound suppurated very little, and at no time was the discharge offensive. The sutures were found loose on the seventh day, and then removed; the wound was completely cicatrised in four weeks.

The patient was allowed from the first a fair amount of fluid nourishment, including wine in the middle of the second week; on the fourteenth day, she commenced taking solid food, beginning for a few days with fish and fowl; all through her illness, her appetite was good.

The infant thrived very well, but was bottle-fed after the fourteenth day, on account of the mother's nipples being sore.

On the twenty-sixth day, the patient was sitting up in the ward, and rapidly regained her strength, being discharged from the infirmary at the end of six weeks.

The successful termination of the case was doubtless owing to the early recognition of the pelvic deformity, and the promptitude exercised in the performance of the operation before symptoms of exhaustion had shown themselves.

SHOCK OR ETHER?

By PAUL SWAIN, F.R.C.S.,
Surgeon to the Royal Albert Hospital, Devonport.

At the present moment, when deaths from anæsthetics are being prominently brought under our notice, the following case will be of interest.

On November 17th, I was sent for by Mr. Butters of Horrabridge to see a farmer, who, on the previous day, had received a gunshot wound in the leg. The accident happened at a farm, in a remote district, called Beeralston, on the banks of the Tamar. The party were returning from shooting, when a gentleman, carrying his gun under his arm, accidentally let it off—the charge entering his friend's leg at the back, blowing away the whole of the inner side of the ankle-joint, and reducing the lower third of the leg to a pulp. Most profuse hæmorrhage immediately ensued; and, as no medical assistance could be obtained for four hours, a large quantity of blood was lost. The unfortunate man was removed to the farm-house; and Dr. Philpots of Tavistock was the first to render him any assistance. He, in conjunction with Mr. Butters, remained with him during the night; and it was only by the most assiduous care that life was maintained. I saw the patient, at 3.30 P.M., on the following day. He had then just sufficiently recovered from shock to warrant an amputation, about which there could be no second opinion. Ether was the selected anæsthetic; and it was administered by Dr. Philpots on a sponge, placed in a cone formed by a folded towel. The patient inhaled the ether more quietly than is usual, and was not long in getting under its influence. I then proceeded to remove the limb below the knee. The operation was performed as rapidly as possible by double skin-flaps, and the two main arteries were secured, when my attention was directed to the patient's condition. He was perfectly cold and pulseless, and was sweating profusely. His respiration had also ceased. Artificial respiration was immediately commenced; brandy was administered, some of which he swallowed; and the region of the heart was stimulated with clothes wrung out of boiling water. For some little time we could hear the feeble heart-sounds with the stethoscope. All our endeavours to restore animation, however, failed. The man was dead. I gave evidence at the coroner's inquest, and stated my conviction that the death was one purely from shock; and that the ether had no part in producing it. The public mind, in these parts, had but lately been much exercised by a death from chloroform, which had occupied considerable attention in the local papers: I thought it, therefore, wise to tell the jury my reasons for the above conclusions. It appeared to me that the sources of shock were fourfold:

1. There was the shock of a gunshot wound, which *per se* is considerable, even when of less dimensions than this one.

2. The gun having been fired close to the limb, the entire charge had struck the part as one body. The hole in the gaiter, through which the charge entered, was not larger than a half-crown. Thus, added to the shock of gunshot injury, was the well-recognised shock resulting from the blow of a large bullet or round-shot.

3. The ankle-joint was destroyed—so that here also was present the shock of injury to a large joint.

4. Superadded was the final shock of the operation. My idea is that the man commenced to die at the moment when the limb was separated from his body. Hardly a drop of blood was lost—so that the mere division of important tissues must have determined the fatal issue.

The sudden collapse, attended with profuse sweating; the power of deglutition; and the continuance of the heart's action after apparent

death—all seem to me to point to death from pure shock; whilst, on the other hand, the absence of all struggling, as also of noisy respiration and blue countenance, point equally away from death by the inhalation of ether.

A METHOD OF EXTRACTING THE PETROUS BONE FOR A *POST MORTEM* EXAMINATION OF THE EAR.

By ARCHIBALD CLERK, M.B., Glasgow.

THE method which I am about to describe was practised on a boy eight years of age, who died in a fit, after nine days' illness. He had measles when two years of age, and since that time he suffered more or less from chronic purulent inflammation of the ear; but, apart from this, his health was quite good till his last illness, when the inflammation became acute, and extended, as the *post mortem* examination showed, into the interior of the cranium.

I was very anxious to see the exact state of matters; but, as permission was granted to make a local examination only, I was thus prevented from following the method described by Dr. Foulis in the *BRITISH MEDICAL JOURNAL*, or, indeed, any method which involved the removal of the scalp. In these circumstances, I planned and carried out the following operation, by which the petrous bone actually shelled out, and left the dura mater *in situ* and intact. The operation is as follows. 1. Remove the soft tissues in a flap, whose anterior border is made by an incision along the posterior margin of the ramus of the inferior maxilla. 2. Make another incision about half an inch behind the mastoid process, and nearly parallel to the former. 3. Connect these by a transverse cut above the ear. 4. Dissect this flap downwards and close to the bone, and with the ear attached. The limits of these sections will be easily understood when the bony sections are described. These should be made as follows. 1. The articular end of the jaw-bone being pressed slightly forwards, pass the chisel through the thin bony roof of the articular cavity, and continue the line upwards through the posterior root of the zygoma. 2. Cut then transversely in a line parallel to the zygomatic root, and about a quarter of an inch above it. Continue this line backwards through the parietomastoid suture till it meets the posterior section. 3. This posterior section is indicated by a line drawn through the posterior mastoid foramen above to the posterior edge of the jugular foramen below, or, roughly, one quarter inch behind the digastric fossa. This will nearly complete the section. 4. The chisel should now be used as a lever, and the bone pressed out from above, and also at the sides. Lastly pass the chisel between the styloid and spinous processes, and against the root of the latter. This last point of connection being separated, the bone can easily be levered out, and with this the operation is complete. The ear can then be examined at once, or, what is better, if circumstances permit, the bone can be kept for future examination. If the bone is not returned, then fill up its place with a sponge, and when the flap is replaced hardly a trace of interference is visible, as the stitches are mostly covered by the hair. In private practice this much, as in my own case, will often be allowed, when an operation by saw and chisel will not. The chisel must be narrow. The one I used was three-eighths of an inch wide, and eight inches long.

The case itself is interesting. The patient's last illness is said to have followed on a blow received on the ear. Pain behind the ear and fever followed (105° when I saw him), but no delirium or stupor till his sudden death in a fit.

Post Mortem Examination: Extracranial changes.—The periosteum was separated from the bone over the whole surface of the external meatus, and also from a semicircular area of half an inch radius above meatus, but continuous with the latter. A patch of the size of a shilling in the same condition was found over the region of the posterior mastoid foramen, but completely isolated from the ear portion. The formation of this suppurating spot is very curious, and will be explained after. The middle ear was disorganised. Of the ossicles the stapes alone remained. The inner ear was unchanged. The suppurative process had formed a large tunnel backwards through the mastoid cells, and the roof of this tunnel and of the middle ear was reduced to a mere shell. *Intracranial changes.* This shell on its upper or intracranial aspect was roughened, and the dura mater covering it was involved in an inflammatory process. This inflammation passed backwards over the ridge of the petrous bone, and was prolonged into the coats of the lateral sinus, roughening the groove, between which and the coats of the vessel were found pus, and what looked like an ulceration of the sinus. From this the inspection was carried through the posterior

mastoid foramen, and formed on the outside of the cranium the isolated spot already mentioned. The lateral sinus itself was plugged by a large and firm clot, and this was probably the immediate cause of the sudden death.

SURGICAL MEMORANDA.

TREATMENT OF WEBBED FINGERS.

IN cases of webbed fingers, I believe that the method of treatment suggested by Liston is the best; viz., "of making a perforation through the web towards the proximal extremity of the finger; and, by the introduction of some foreign body, as a piece of thick firm cord, preventing its healing. After the edges have cicatrised, then the remainder of the web might be cut at one sweep, and the fingers dressed separately for a sufficient time". It appears to me obvious that the best form of "foreign body" for producing the desired result is an imitation of what has proved in so many thousand cases to be very successful in producing a patent opening through the lobe of the ear, and that a ring of gold or silver would be better than the various clamps in common use.

Having inquired at several instrument-makers, and being unable to obtain a ring for the treatment of these cases, I instructed Messrs. Arnold and Sons of Smithfield to make the one represented in the woodcut. It will be seen to consist of a piece of wire, with a point at one end, and a hollowed portion at the other large enough to receive it. The point having been thrust through the web, the ring is bent, and the point will be found to remain in the hollow part of the wire that has been made for receiving it. It will be seen that, there being no hinge in the middle of the ring, there is no opportunity for matter to collect near the wound.

HENRY F. BAKER.

THERAPEUTIC MEMORANDA.

THE TREATMENT OF ASTHMA.

I AM very glad to see Dr. Marshall's record of his success with the iodine treatment. The following case has occurred in my practice since my former communication, and is a good illustration of the beneficial results of the method. II. H. had suffered for the last six or seven years from attacks of dyspnoea, coming on in the night about 3 A.M., which formerly occurred only in June or July, but latterly throughout the year. I painted the lines of both pneumogastrics with a mixture of equal parts of the liniment and tincture of iodine, and ordered him to repeat it every night. The next time I saw him he told me that "he had not had such a good night's sleep for twelvemonths;" he slept all night, and was so surprised on waking in the morning that he got out of bed to look at his watch before he would believe it. He discontinued the iodine after a few applications, as the skin became sore, but he has had no return of the attacks.

ROBERT SAUNDY, M.D.

71, New Hall Street, Birmingham, Jan. 1st, 1881.

THE PHARMACOLOGY OF CHLORAL-HYDRATE.—M. Dmitrieff, in a recent inaugural dissertation published at St. Petersburg, states that he has tested the effect of chloral-hydrate, both clinically and experimentally, on unhealthy, badly granulating, wounds. By excision of a piece of skin in dogs, and infection of the wound with putrefying matter, he produced unhealthy ulcerating surfaces. Some of these he dressed with one or two per cent. solution of chloral-hydrate, while the rest were simply covered with a moist cloth. The first very soon became healthy, and cicatrised before the others. The ulcers, on microscopic examination, were found covered with a layer of micrococci, which disappeared after two or three days' dressing with chloral-hydrate. These results were confirmed clinically; and the writer has also shown that an equal quantity of a one per cent. solution of chloral-hydrate destroyed, in twenty minutes, all mobility of the bacteria in a putrefying infusion of flesh.