In the discussion which followed, the paper was subjected to much hostile criticism; the senior members especially being very sceptical about the possibility of any movement of the child sufficient to communicate itself to the handles of the forceps taking place while the head is wedged in the maternal passages. In reply, I pointed out that the movement I had described could only be felt during an interval between two pains, when the head always receded slightly; and that the presenting vertex being more or less wedge-shaped, such recession must of necessity involve a certain amount of freedom of movement, not very much, certainly, but quite sufficient for vibration to be felt, and even enough to cause visible movement of the handles, as I have myself seen.

One member suggested that the best plan for dealing with such a contingency, assuming that it was possible to tell that the child was in danger, which he was not at present prepared to admit, was, to turn.

Since reading the paper, I have received the following interesting letter from a member who was not at the meeting:

Dear Dr. Daniel,—At the last meeting of the British Medical Association in your Division, I am told by Dr. Barling that you read a paper on A. Point in Obstetrics; the point being a certain movement of the handles of the applied forceps caused by convulsive efforts at respiration by the still unborn child. The indication, I understand you made out, was for rapid delivery to avoid suffocation of the child, as the convulsive movements were evidently a sign of obstruction of the placental circulation. I am writing to you because of a case which I attended last month, in which, having applied forceps in a primipara, having had them on for five or ten minutes, I noticed the handles (I used axis-traction forceps) give two distinct movements forwards to the pubes and back again. I at once thought of what Dr. Barling had told me about your paper, and decided that if there were anything in it, I had better deliver at once—which I did, not sparing the perineum. In the result it was most fortunate I did so, because on delivery the child was not breathing, was black in the face, and the cord was twisted over the shoulders. It took me nearly five minutes to bring the child round by artificial respiration.

I must acknowledge myself much indebted to you for your hint, and think you will be interested in this case. I had never noticed the movement before, or if so, had paid no attention to it.

I am, yours sincerely,

JAS. A. GIBSON.

ADDENDUM.

On February 21st, 1904, I had a most instructive experience, this time with a multipara.

I had been sent for a month previous to the confinement for prolapse of the cervix. I found an enlarged and oedematous cervix protruding from the vulva about the size of a small orange. I replaced it, and advised patient to keep in the recumbent position during the remainder of the pregnancy. There was a history of a ruptured perineum at the first confinement.

I was sent for again on the above date and told that labour had commenced, and on examination found the abdomen enormously distended, a widely dilated os, and the membranes protruding. I could not make out the presentation, as I was unable to reach any part of the fetus with my finger; so ruptured the membranes, when a very large amount of liquor amnii escaped, and with it, unfortunately, a loop of the funis. I now found that the vertex presented, with the face anteriorly, the os was drawn very much forward and embraced the head, nipping the cord. I quickly applied the long forceps, though with some difficulty, owing to the position of the head, which was lodged above and almost in front of the os pubis; and though I apparently got them satisfactorily in position, I could not have done so, as when I applied traction, I felt them slipping. I should have said that I attempted to replace the funis as soon as it came down, but, as will be understood by those who have met with these cases, with no success. As the forceps seemed inclined to slip, and as there was no time to be lost, I quickly decided to turn. But, while the forceps had been partly embracing the head, the convulsive movements on the part of the child were most plainly to be seen and felt.

After sterilizing and introducing my hand I with some trouble brought down a leg. While my hand was in the uterus I could feel the child gasping for breath, and if confirmation were wanted as to the cause of the movement felt through the forceps, here it was.

I delivered the body and shoulders without much trouble, but it was a long time before I effected delivery of the head. The cause of the delay was afterwards apparent in a large hydrocephalic head. The child was, of course, dead.

This case proves beyond the possibility of a doubt that the gasping of a child for air occurs *in utero*, that it is caused by the suspension of the supply of aerated blood, and that it can be felt by the practitioner through the forceps.

SOUTH AFRICAN LEPROSERS.—It is stated that the possibility of removing the leper settlement from Robben Island to the mainland, and of some relaxation of the regulations at present in force with regard to leprosy, is under the consideration of the Cape Government.

CLINICAL NOTES ON THE USE OF BOSSI'S DILATOR.

By W. B. ARMSTRONG, M.B., C.M.,
Kirkintilloch.

DURING the past year I have on several occasions made use of Bossi's dilator. The ease, safety, and rapidity with which the cervix can be dilated by it give me confidence in recommending its use to the medical profession. There is no doubt that the instrument can be misused, but the same may also be said of the use of forceps. The method adopted by me is as follows: Chloroform is administered to its full surgical extent, and the patient placed in the left lateral position.

If the os be only slightly dilated the cervix is carefully pulled downwards with vulsellum forceps and the dilator, with the sheaths removed from the points, is introduced with a gentle screwing motion. Dilatation is begun and gradually maintained until the os is the size of half-a-crown. The dilator is withdrawn and reintroduced with the sheaths adjusted to the points. Dilatation is very gradually continued, the blades are frequently relaxed and their position changed circularly so that all parts are uniformly pressed upon. When the os is fairly well dilated the finger is used to assist in the dilatation. It is well to remember that the index of the instrument gives only very approximately the amount of the dilatation. When dilatation is complete the membranes are ruptured and the child delivered in whatever manner is indicated.

The following cases, which under ordinary circumstances would have been, to say the least, worrying ones, will illustrate the use of Bossi's dilator.

CASE I.

Mrs. A., aged 30, a multipara, and pregnant a little over eight months. The membranes had ruptured some hours before I was called. There were no pains. On examination the cervix was found to be soft and patulous, it was dilated to the size of half-a-crown and the vertex was presenting. The patient was tired and nervous, and in a weak condition generally. I sent her to bed and gave an opiate, etc. In about ten hours I saw her again. The condition had not improved, the pulse was quick, and the patient showed signs of collapse. I determined to deliver at once. Chloroform was administered, and the os gradually dilated with Bossi's dilator, the dilatation taking fully twenty minutes, then by means of forceps the patient was delivered of a still-born child.

She made a perfect recovery, and on subsequent examination I found the cervix in a normal condition with, it is true, a slight laceration but nothing more than one would expect in any multipara who had been delivered several times with forceps.

CASE II.

Miss B., aged 18. Primipara. I was asked by Dr. W. T. Blakley to see this case in consultation. She had had four convulsive seizures in the three hours previous to my seeing her, and there was a history of albuminuria. The patient was in a very weak condition, the pulse was rapid, and there was a complaint of severe abdominal pain. The cervix was found to be in a softened condition, but there was only very slight dilatation.

We agreed that she should be delivered at once, and as Dr. Blakley was suffering from a dislocated thumb I was asked to operate. Chloroform was given, the cervix was pulled down with vulsellum forceps, and the bare points of the dilator introduced in a screwing fashion. There was considerable difficulty in the introduction of the dilator, and it was slowly accomplished. Very gradually and with great care, the parts being kept in view with the vulsellum, the cervix was dilated sufficiently to allow of the sheaths being put on to the points. Dilatation was continued until complete, the time taken being about an hour. The membranes were ruptured, and a full-time living child was delivered with forceps. The mother made a splendid recovery. There were no more eclamptic manifestations, and Dr. Blakley reports that the patient is in perfect health.

CASE III.

Mrs. C., multipara. I was called to this case on account of her having labour pains accompanied with severe haemorrhage. I found that she had lost a great quantity of blood, she was pale and nervous and in great fear of the return of a pain with its accompanying haemorrhage. The cervix and surrounding parts were in a soft patulous condition, the os was dilated to about the size of a five-shilling piece and the placenta was presenting.

After giving chloroform I detached as much as possible of the placenta from the lower uterine segment, and, introducing the dilator, quickly dilated up to almost full extent. The membranes were then ruptured at the margin of the placenta, version was performed and a full-time living child delivered. The uterus contracted well and the placenta was expelled easily. The whole time occupied was about twenty minutes and the patient made an uninterrupted recovery. There was no laceration of the cervix.

CASE IV.

Mrs. D., aged 35, a most nervous and hysterical patient, had been in labour some hours before I saw her, the membranes having ruptured early. The os was dilated to the size of a shilling and the vertex was pressing on the lower uterine segment. The patient complained of great pain and the uterine contractions were of little or no use as regards further dilatation.

I administered chloroform to a slight extent and waited for three hours. The condition did not improve, and as the patient was worn out and in an exceedingly nervous state I pushed the chloroform, gradually dilated the os and, applying forceps, delivered her with difficulty of a large stillborn child. The patient made a splendid recovery.

A CASE OF TUBAL GESTATION:

PRIMARY INTRAPERITONEAL RUPTURE: OPERATION: RECOVERY.

By BRENNAN DYBALL, M.B., B.S., F.R.C.S.,
Exeter.

ON November 18th, 1903, I received a message from Dr. Arthur Bird, of Sidmouth, asking me to come over at once to see a patient with him with a view to operation. On arrival I found the case to be as follows:

The patient, Mrs. M. M., was aged 42.

Family History.—No bearing on the case.

Previous History.—She had had three children and two miscarriages. Was strong and healthy up to 1897, when her second miscarriage occurred (at Pietermaritzburg), and was followed by a slight attack of peritonitis, and apparently by some endometritis, as the uterus was soon afterwards curetted. Her youngest child was 14 years old.

Present Illness.—On November 17th, while at lunch, she was seized with sudden sharp abdominal pain, which speedily became very severe, was most marked in the lower half of the abdomen, and seemed to her like labour pains. She went to bed, and as the pain continued sent for Dr. Bird, who found her rather pale, with normal temperature, and a pulse of 120. She complained of feeling sick and faint, but there had been no vomiting. Later in the evening Dr. Bird saw her again, and made a vaginal examination, without detecting anything abnormal, but with a speculum a little blood-stained mucus was seen to be coming from the os. The patient complained of bearing-down pains, and again said she felt as if in labour. It was then found that her last period had occurred seven weeks previously. She was put on fluid diet, hot opium and belladonna fomentations were applied to the abdomen, and a quarter of a grain injection of morphine was given on account of the pain. She passed a fair night, but the following day was found to be much worse: very blanched, with small rapid pulse which could hardly be counted; the abdomen much distended, tympanitic above the umbilicus, dull below and in the flanks. She was given an injection of one-twentieth of a grain of strychnine, and shortly afterwards one-quarter of a grain of morphine, and was then removed to the private ward of the Cottage Hospital. Dr. Bird having diagnosed internal hæmorrhage probably due to a ruptured tubal pregnancy. (The above notes were kindly furnished me by Dr. Bird.)

Operation.—When I saw the patient at 4.30 p.m. her condition was much as described above. There could be no doubt as to the correctness of the diagnosis, but the patient's condition was so bad that one feared she would not be able to stand an operation. Her lips were almost colourless, and her pulse could only just be felt, but not counted, at the wrist. In the carotid it was made out to be 130. It was therefore determined to see if infusion would improve her condition, and two pints of normal saline, with liq. strychn. mv and brandy 3ss were thrown into the right median basilic vein, effecting an immediate and marked improvement, the pulse at the wrist being easily felt and counted afterwards, and its rate diminished somewhat. The patient's limbs were then enveloped in cotton wool, and she was taken to the operating theatre, where A.C.E. was administered by Dr. Leon. With Dr. Bird assisting me, I opened the abdomen below the umbilicus by a median incision large enough to admit a hand, and found the lower left quadrant of the peritoneal cavity occupied by blood-clot, which was scooped out in handfuls. While doing this the uterus could be felt pushed over well to the right of the midline. After removing all clots it was found that the innermost inch of the left Fallopian tube was enlarged, and was ruptured nearly across close to the uterus. There was no bleeding at the seat of rupture. The left ovary contained a corpus luteum of pregnancy $\frac{1}{2}$ in. in diameter. Silk ligatures were placed round the tube and ovarian artery on each side of the rupture, and the distal portion and the ovary were ligatured off and removed. A few small clots which had slipped down from among the intestines were removed. The pelvis was sponged out, the abdominal wound closed in layers, and a dressing of cyanide gauze and wool applied. No drainage was employed. There was no sign of old peritonitis on the tube removed; the abdominal ostium was patent, and a probe could be passed down it to within a $\frac{1}{2}$ in. of the situation of the pregnancy.

After-history.—The patient's condition during the operation (which occupied a little over half an hour) necessitated injections of strychnine (one-tenth of a grain in all). She was quickly put back into bed, the foot of which was raised on blocks, but her pulse was so bad that it was thought wise to give another infusion of one pint of normal saline with half an ounce of brandy. This again had a most excellent result, and on seeing her a couple of hours later the pulse at the wrist was 100, and

very fair in quality. She passed a good night, and the next morning her pulse was 90, and her general condition most satisfactory. Her recovery, thanks to the care of Dr. Bird, was uninterrupted; the incision healed by first intention; she was able to get up a month after the operation, and has now quite regained her usual good health.

TREATMENT OF PUERPERAL ECLAMPSIA BY A
COMBINED METHOD.By JOHN LITHGOW, M.D.,
Cleland.

SOME time ago I had occasion to report two cases of puerperal eclampsia, in both of which the fits ceased after the delivery of the child, the women recovering, and in one of which the child also was saved. In that article I commented on the evident good results obtained by delivery of the child, and had resolved that my next case should at once be subjected to that treatment.¹

On January 6th I had another and most severe case of this dreadful condition, which I venture to put on record for the following reasons—namely, the large number of fits which the girl suffered from; the method used to dilate the os in the operation of *accouchement forcé*; treatment adopted; and the presence of urea being demonstrated in the blood.

An unmarried woman, aged 19½ years, sent for me by telephone message about 4 p.m. on January 6th. Being out visiting I did not see her till nearly 6 p.m., and was then informed she had taken six fits. I waited for a few minutes in order to ascertain the nature of the fits; another seizure soon confirmed my suspicion that they were eclampsia. I found she was about full term, the cervix being obliterated and the head presenting. The os was felt as a depression, and as there were no labour pains I proceeded to perform *accouchement forcé*. With difficulty I passed my forefinger through the os, and ruptured the membranes with a wire, but was unable to make further progress with my fingers. During this time she had another fit. I drove home for my midwifery bag, etc., and on my return found that she had had four more fits. Before proceeding to sterilize my instruments, I pressed a piece of lint saturated with a solution of cocaine through the os. The cocaine solution was made up by sprinkling a few grains of cocaine powder on the lint which was wet. I then tried to make out the fetal heart sounds and movements, but could get neither. The patient was put under chloroform, which was administered by a neighbour woman, then with a two-pronged dilator (Stevenson's?), with the greatest ease, I stretched the os that I could apply the forceps. The forceps applied, a few minutes sufficed to bring the head through the os. There was more difficulty from this stage till the child was delivered, a fairly strong pull being required; altogether about thirty minutes elapsed from the time I introduced the cocaine till the child was delivered, and during that time the patient had three fits, which, owing to the administration of chloroform, were not severe. The child—a full-term, well-formed male—was stillborn. There was no laceration of perineum or of os requiring attention. Before I left the house at 8.30 she had 3 more seizures, and from this time till my return again at 12 she had 16; altogether from the commencement at 4 p.m. till 12 p.m. she had 34 fits; 12 before, 3 during, and 19 after delivery. It was evident that in this case something more than delivery of the child was required if the patient was to be saved. She had been unconscious for several hours. I thought that if there was any abnormal ingredient in the blood which was acting as a poison, the treatment now would be to remove that poison, and, if necessary, the blood. Fortunately I had my pocket case with me, which contained a saline injection needle, and having obtained permission, opened a vein in her arm, from which I allowed blood to flow till it ceased spontaneously; the quantity removed I did not measure, but it was considerable. Then with a Higginson's syringe I injected into the cellular tissue underneath the breast over two pints of normal saline solution. During the time I was there—till 1.30 a.m.—she had six fits. From this till 8 a.m., when they ceased, she had twenty-nine seizures. She remained unconscious for two days. Owing to incontinence of urine, I was unable to obtain a specimen for testing till the second day, when I drew off some with a catheter; this showed presence of albumen, and also gave 9 gr. of urea to the oz. I tested a portion of the serum from the blood withdrawn, and found it contained 2½ gr. of urea in the oz. For several days she complained of severe headache, ultimately making a good recovery, and is now quite well.

In discussing this case I would desire to draw attention to:

1. The survival of the patient after the extraordinary large number of eclamptic fits; altogether she had sixty-nine severe seizures. There was every condition present in this case to make the prognosis extremely grave. The fits appeared before labour had commenced, were violent, with short intervals, and the patient was unconscious. As to the number of fits, it is said as a rule the occurrence of ten fits constitutes a severe case. In a recent article by Dr. Munro Kerr, when discussing the effect of dilators, he mentions that in one of his cases where death had followed the dilators