stance that with the removal of the patches the fever sank, so that with him the opinion became a settled axiom, that diphtheria was a local disease which produced a general infection by the immigration of micrococci into the blood. Oertel, Klebs, and others have demonstrated with a clearness not to be gainsaid that fungi have their seat in the false membranes, and that their multiplication is inversely proportional to the duration of their life. It is therefore plain that a medicine which eliminates the death-bringing infective matter so speedily from the body must be of the highest utility. One disadvantage of this treatment is the high price of papayotine, one gramme costing four and a half marks — four shillings and sixpence.

Professor Dr C. A. Ewald, editor of the Berlin. Wochenschrift, supplements this paper as follows: — Seeing that the influence of papayotine upon diphtheritic membranes has now been confirmed from many sides, seeing that its action is local, and having regard to its costliness, Ewald suggests the employment of a powerful pancreateine. The action of papayotine is manifestly not a specific one specially directed against diphtheritic membranes, but is founded on this, that it represents, in alkaline or neutral solution, a very powerful ferment which can dissolve coagulated albumen. Pepsine has failed because it is only effective in acid solution, and the mouth-fluids are usually alkaline or neutral. But pancreateine, either dry or contained in a glycerine extract of the pancreatic gland, offers us a similar preparation to papayotine so far as regards its albuminolytic properties, and whose cost is much less. The selection of therapeutic materials with which to combat such a malignant and deceitful disease as diphtheria cannot be too large. But let no man believe, either in papayotine or in any other means directed against the local process, that he has found a prophylactic against systemic infection.

PERISCOPE OF GYNAECOLOGY AND MIDWIFERY.

By J. Milne Chapman.

HABITUAL MISCARRIAGE: ITS CAUSES AND PREVENTION (Grandin, American Jour. of Obstet., etc., December 1883). — The writer first insists on the fact that the so-called habit of miscarrying is always due to some unrecognised but still recognisable cause. These causes he proceeds to consider seriatim: — I. Syphilis. — When the mother escapes, so does usually the child. When the mother is affected, then there is not only to be taken into consideration the probable death of the child, but also it must be remembered that probably there will be present some local uterine mischief, most frequently in the endometrium, which may, apart from any fœtal syphilis, lead to abortion. Hence, in treatment, not only must mercury be
given to both parents, in the hope of producing a healthy child, but, in addition, the mother, while pregnant, should take chlorate of potash and iron, the better to nourish the child through the diseased decidua. The author states that he has found those drugs markedly beneficial in such cases. When a syphilitic habitual aborter is not pregnant, means should be taken to improve the condition of the endometrium. In conclusion, the writer advocates the induction of premature labour in such cases "as soon as the child is viable, should there appear evidence of heart failure." 2. Maternal anaemia.—Under this heading the writer quotes from Cazeaux to the effect that paternal anemia may also be a cause of abortion, and advocates that both parents should be treated if there is any ground to suspect such a causation. 3. Uterine disease and diseases of the uterine appendages, especially endometritis, frequently cause repeated abortions, and, if so, demand energetic and prolonged treatment, care being taken, meanwhile, that conception does not occur. 4. Uterine displacements. 5. Chronic cellulitis and peritonitis, especially when adhesions are present. 6. Laceration of the cervix.—"The usual result of this lesion is, as might be expected, sterility." "It is perhaps impossible to do more than infer that laceration of the cervix may be a cause, for it is to be borne in mind that the laceration itself brings in its train many evils, any one of which is sufficient to cause miscarriage—such as inflammation of the cervical and corporeal endometrium, subinvolution, cellulitis." "The treatment lies in the repair of the rent, not neglecting, of course, associated conditions." 7. Intermittent fever, either as a direct result of the fever or from the accompanying anaemia. 8. Chorea.—"Doubtless a partial explanation of its action is succussion of the uterus; it is not unlikely, however, that the associated anemia enters as a factor." 9. Bright's disease.—"The best part of the treatment must be the prevention of conception." Patients suffering from chronic Bright's—particularly the parenchymatous form—had best, where possible, be dissuaded from marriage; in case of marriage, they ought to use means for the prevention of conception, since they are not fitted for the function. Whilst they might go to term, it is questionable whether their own health might not deteriorate. The extra burden imposed by pregnancy cannot but have an unfavourable effect on the mother's health. Should she escapemiscarriage, the child, though born alive, if it do not inherit its mother's disease, certainly stands small chance of good health." 10. Tumours, either by irritation of the uterus or by preventing its proper development. Treatment, of course, is to be undertaken in the interval, and it will be good advice to caution patients suffering from the submucous or interstitial varieties of fibroids, as well as carcinoma, against conception. 11. Lead-poisoning, principally from the anemia occasioned by it, but sometimes by poisoning of the fœtus. Treatment, of course, is obvious when the cause is recognised. 12. Reflex conditions.—
Under this heading the writer only considers cases where, from an unusually excitable nervous system, miscarriages are apt to occur, as in "delicately nurtured," "highly impressionable," "hothouse-plant" women.

**CONTRIBUTION TO THE NATURAL HISTORY OF UTERINE FIBROIDS IN THEIR RELATIONSHIP TO PREGNANCY AND DELIVERY (Dolores, *Archives de Tocologie*, 1883).—This contribution is founded on a clinical and pathological examination of several personal cases and the collection of cases reported by others. As a result of the histological examination of his material the writer states his opinion that the increase of growth occurring in fibroids during pregnancy is not due to increase of their muscular elements, but to a proliferation of their connective tissue elements and a tendency to colloid or mucous degeneration, which latter condition is most marked in pediculated and cervical tumours, and least marked in those of an interstitial character. The bloodvessels are characteristically differently altered in the two classes of tumours; the lymphatics, which are extremely difficult to be recognised during the unimpregnated condition, are distinct and consist of a branched network with numerous spaces. The diminution in the size of uterine fibroids after delivery is accounted for by the writer as being partly due to absorption, partly to the formation of cicatricial tissue from the young connective-tissue cells. Two personal cases are reported where puerperal septicæmia supervened, and the tables of Lefour are cited, from which it is seen that of 286 cases of fibroids complicating pregnancy 141 died, and of these 64 from sepsis; and from these facts the writer concludes that the occurrence of septic poisoning is of much greater probability in such cases than in others, a circumstance which he finds explained by the great dilatation of the lymphatics, which he describes.

**UTERINE FIBROID AS AN OBSTRUCTION TO LABOUR (Netzel, *Centb. f. Gynäk.*, 1883, No. 52).**

**DYSTOCIA OCCASIONED BY A FIBROID IN THE CERVIX UTERI; PORRO’S OPERATION; RECOVERY.** (Denarié-Fochier, *Archives de Tocologie*, June 1883).

**STUDY OF THE PHYSIOLOGICAL AND PATHOLOGICAL ELECTRIZATION AND CONTRACTILITY OF THE UTERUS (Onimus, *Archives Gén. de Médecine*, 1883, Bd. 1, p. 641).—This paper is founded on experiments on animals: trials on the human gravid uterus are but little referred to. The fact is pointed out that unstriped muscle differs from striped in responding most readily to constant currents. For use during labour the writer recommends that the poles be placed over the lumbar vertebra. For the induction of premature labour the negative pole is to be placed on or in the cervix. For ovarian neuralgia, dysmenorrhœa, and membranous dysmenorrhœa.
he has found the use of strong constant currents during the periods of service, as also for diminishing the hemorrhage from fibroid tumours. He does not believe that electricity benefits such tumours in any permanent way.

**Duration of the Menstrual Hemorrhage in Relation to the Development of the Fetus at Term, and to Multiple Pregnancy** (Cuzzi, *Rivista Clinica* and *Annali Univ. di Med.*, July 1883).—In this paper the author seeks to establish his conclusions on the basis of much statistical material collected in the clinics of Modena, Milan, and Turin. He was led to this research by the idea that by the amenorrhoea of pregnancy a so much greater quantity of maternal nourishment was retained for the benefit of the fetus, as the sanguineous loss was greater in menstruation. Not being able to determine exactly the quantity lost at each period, he took its duration as a guide, which, considering the number of his observations, may be regarded as more or less equivalent. As to a longer duration of the menstrual hemorrhage, a corresponding ovarian activity can be supposed; so also the hypothesis may be justified of a more easy rupture of more ovisacs, and a greater probability of multiple pregnancy. From the analysis of very numerous observations, Professor Cuzzi thinks himself justified in formulating the following conclusions:—1. The weight and length of the fetus at term are in direct relation with the number of days menstruation occupied. The longer the usual period of menstruation, the heavier and longer the fetus. 2. There is a direct relation between multiple pregnancy and the duration of the menstrual period. That is, multiple pregnancy is most frequent in women in whom the period is long and the loss free.

*London Med. Record.*

**Contribution to the Physiology of Labour, illustrated by the History of a Case of Labour during Paralysis** (by A. C. Bernays, M.D., Reprint from *St Louis Med. and Surg. Jour.*)—The patient, a multipara, suffered from paralysis of the lower limbs and a part of the trunk, the result probably of a syphilitic lesion of the cord about the level of the seventh cervical vertebra. When she became thus affected she was three months pregnant. The pregnancy went to full term, and at the confinement, in place of the usual interrupted labour pains, there was but one continued contraction of the uterus, which resulted in the expulsion of a large, well-formed, healthy child. The delivery was accompanied by a very small loss of blood, as was also that of the placenta, which followed spontaneously about five minutes after the birth. The whole process lasted about thirty minutes. Towards the end of the second week there was a severe haemorrhage; otherwise recovery was uninterrupted. In speaking of this case the writer says: "The lesion involved both anterior and posterior columns of the cord, as evidenced by the complete loss both of motion
and sensation. In other words, we may suppose that all possible connexion between the lower portion of the body and the brain was nearly severed by the gummy tumour. So far as is known, the only nerve fibres which reach the womb are derived from the ganglia and plexus of the grand sympathetic. The researches of Frankenhäuser, published as a monograph at Jena in 1867, show that the nerves of the womb are derived from the aortic plexus and from the lumbar and sacral ganglia. Any connexion with the spinal marrow must pass through these plexuses. Schlesingar, by his experiments on rabbits and dogs (published in the Vienna Annals of Medicine, 1872), claims to have found that the centre for motions of the womb is in the medulla oblongata. We have strong ground for thinking that, if any such centre exists, it was not in connexion with the womb in our case, on account of the disease in the spinal cord which caused paralysis. On the other hand, we have during the past years, based on numerous researches, arrived at a point where an independent action of the sympathetic ganglia is placed in doubt. The natural conclusion, therefore, is that the contraction of the womb is solely produced by the direct irritation occasioned by the fatty degeneration of the decidua, which we positively know takes place during the last month of pregnancy.” To account for the easiness of the labour, the writer mentions that the pelvic muscles were paralyzed and the perineum and adjoining structures flaccid and flabby, thus reducing resistance to a minimum.

A New Operation for the Reduction of Chronic Inversion of the Uterus (by B. B. Browne, M.D., New York Med. Jour., 24th Nov. 1883).—The writer adopted the following method of treatment in a case that had resisted several attempts at replacement:—The bowels and bladder having been evacuated, the patient was placed under ether, the inverted fundus was drawn outside the vulva with a strong vulsella forceps, the openings of both Fallopian tubes were brought plainly into view, and an incision one inch and a half in length was made through the posterior portion of the uterus (avoiding the Fallopian tubes and larger vessels at the sides of the uterus). Through this incision Sims’s large dilator was passed up into the cervix and expanded to the fullest extent; the rigid tissues of the cervix were felt to relax; then, upon withdrawing this dilator, Nos. 2 and 3 of Hanks’s hard-rubber dilators (three-fourths and one inch in diameter) were passed through the cervix. The finger was also passed to feel that there were no adhesions. The incision in the uterus was then sewed up with carbolized silk-worm gut, and, with slight manipulation the fundus was easily replaced through the now passable constriction. The whole operation was performed in less than thirty minutes. There was considerable hæmorrhage from the uterine cavity when the uterus was first replaced. On the next day the
temperature was 102° Fahr., but gradually returned to the normal condition, which it reached on the fourth day. During the first week she complained of severe pain in the uterus, but this was controlled by full doses of opium. She was placed upon the table and examined twelve days after the operation. The cervix was somewhat patulous, but, with this exception, the parts were all in a normal condition. The following conclusions are then drawn:—1. This operation is not proposed to supersede ordinary taxis in the reduction of chronic inversion of the uterus. 2. It is not more dangerous, but much more certain, than prolonged or rapid taxis. 3. We avoid the danger of bruising the tissues and rupturing the vagina. 4. As an operation for inversion, it is less dangerous than laparotomy. 5. Unless there be adhesions (which rarely exist), we can always feel certain of reducing the inversion at one operation.

A SOMewhat Unusual Case of Twin Pregnancy.—In the Australian Medical Journal Dr Walsh reports a case where, twenty-nine days after the birth of a child, a second one was born. The woman had been attended by a midwife. She had made a good recovery, had nursed the first child, and was perfectly unaware meanwhile that she carried a second in utero.

On a "Nest" for Infants ("De la couveuse pour enfants," by A. Auvard, Interne à la Maternité de Paris, Reprint from Archives de Tocologie, 1883).—The writer begins his paper by describing the nest devised by Professor Tarnier, and used for two years in the Paris Maternity. This consists in a chamber for containing the child, which is fixed over a reservoir of water kept always at a suitable temperature. A full description of this apparatus is given; but as the author considers it too cumbersome for private practice, he has devised a simpler form, a description of which we append. Budin, in La Charité Hospital, uses a nest heated by gas, and to which is attached a Regnard's regulator similar to that used in an incubator, as also an electric bell alarm, to draw the attendant's attention to any undue change of temperature. Winckel has employed for a similar purpose permanent warm baths, and these Auvard admits are somewhat more effectual than is the nest or incubator for cases where there is a decided diminution of the body temperature. Full directions for the feeding, clothing, and attending to infants treated in the incubator are given in the paper, and to the original we would refer those desirous of giving the method a trial.

As to the results obtained, Dr Auvard divides the cases, numbering 151, that have been so treated into two classes—1st, all children with an initial weight of less than gr. 2000 (roughly, 4½ pounds); and 2nd, children born in a weakly condition from such causes as syphilis, cyanosis, oedema, etc. Cases of the first class alone are capable of comparison with children brought up in the
ordinary way, and of these we give a few examples. Child of six months and six days' intra-uterine life, weighing 1720 grammes, kept for 46 days in the incubator, at the end of which time it was taken out alive and healthy. Child of 6½ months, 1820 grammes, kept 5 days in, taken out well. Child 1630 grammes, 11 days in the nest. Child of 1530 grammes, 9 days. Seven months' child, weighing 1400 grammes, taken out in good condition after 12 days in the nest, and so on.

In reply to the objection that children of even 1100 grammes have been reared by ordinary means, Dr Auvard says that such cases are extremely rare, and have resulted satisfactorily chiefly from the immense amount of care and trouble that have been bestowed upon them, trouble which is reduced to a minimum by the use of the incubator. The following statistics he gives to prove the value of this method:

**Infants weighing less than 2000 grammes at Birth.**

| Incubated. | Without incubator. |
|------------|--------------------|
| Lived, 49  | Living, 10         |
| Died, 30   | Dead, 20           |
| Total, 79  | Total, 30          |

Mortality, 38% Mortality, 66% Mortality, 65%

This table speaks for itself, and shows strikingly the value of the incubator for premature children.

The writer then goes very fully into the subject of the variations in the respiration, pulse, and temperature of children reared in the incubator, and appends a table of all the cases treated in the Paris Maternity Hospital by means of it.

The improved form which he recommends will readily be understood by a reference to the accompanying figures. It consists of a wooden box, divided into two spaces by an incomplete horizontal shelf (Fig. 2, P). The lower portion, in which are placed hot-water bottles, has two openings, the one (Fig. 1, O) occupying the whole length of the side, and closed by a sliding door, the other (Figs. 1 and 2, T) covered by an incomplete panel, so as to permit of the entrance of a current of fresh air. On the shelf is arranged a small bed for the child, and on the top of the box over it there is a small window (V), which can be opened at will by means of the handles (b, b). At H there is an exit opening, which may be filled with an indicator to show the amount of current present. At the point of communication between the upper and lower chambers is placed a wet sponge to moisten the air, as also a thermometer. To prepare the apparatus for the reception of an infant, three bottles (Fig. 3) full of boiling water are placed in the lower compartment, and in half an hour the temperature of the nest will be found to be about 32° C. In two hours a fresh bottle is added, and thereafter every hour and a half or two hours one of
the cooled ones is replaced by a hot one. By attending to the glass cover the temperature is easily kept from rising too high. A current of air is kept continually entering at T, which passes over the hot-water bottles, past the sponge (which must be kept wet), through the compartment in which the child lies, and out at A (Fig. 2).

The author adds to his paper a very full bibliographical index.

SURGICAL PERISCOPE.

By A. G. Miller, F.R.C.S.E.

The Lancet of the 26th January publishes a paper by Professor Ogston of Aberdeen on "Flat-Foot and its Cure by Operation," which was read at the Medical Society of London (by invitation) on 14th January. The paper is so important that we would gladly reproduce it entire. For the benefit of our readers we will give as much as we can, and as nearly as possible in the exact words of the able writer. In describing the exact character of the deformity in flat-foot, he says, "The arch of the foot suffers, and the bones, tendons, and ligaments that maintain the shape of the instep are so modified that the arch unfolds, its two extremities recede from one another, and its curve finally becomes a straight line, touching the ground along its whole length. Examination of such a foot may reveal a slight laxity of all its articulations, but there are always great changes at the joint between the scaphoid and the head of the astragalus, forming the inner half of the medio-tarsal, or Chopart’s, articulation. . . . When the arch is flattened, the ligaments beneath become elongated, and on the under surface of the joint the bones tend to become separated from one another, while on the upper side the pressure between them is increased." Hence the pain at that particular spot. "Hence growth is checked, or absorption even takes place, at the upper halves of the articulations of the scaphoid and astragalus; while the lower halves, where the mutual pressure is lessened, show a tendency to separation and increased growth of the separated surfaces. The increased growth takes place mainly in the astragalus, so that the joint is not found gaping below, but the caput tali is changed in shape, becomes somewhat square in form, and presents an abnormal ridge or projecting angle, dividing its articular facet into two portions, one articulating with the scaphoid, the other with the inferior calcaneo-scaphoid ligament. When this disposition of bone becomes very prominent, the flat-foot enters on its permanent stage, and the more marked the projecting angle becomes the greater is the resistance offered to the reduction of the deformity. The angle ultimately projects so much that it locks on the scaphoid, and no reduction is possible until it be removed. The relaxation and subsequent alteration of shape in the bones of Chopart’s joints are the