proportion. But this is the room not fit to inhabit by reason of the presence of chlorine. The minuteness of the dose of chlorine which the inhabited room receives may be left to your imaginations. To me it seems that the wisdom of the physician who places his little saucer with bleaching powder and muriatic acid in the chamber of his patient, is comparable with that of the cattle-plague commissioners who tied the carbolic cloths to the horns of the cattle.

Experience confirms that which an appeal to first principles suggests; and we are informed that, during the Franco-German war, although the hospitals stank of carbolic acid, yet wounds were not healthy. Although I believe that the purification of air which has once been defiled is a hopeless task, yet it by no means follows that disinfectants have nothing to do with purity of atmosphere. It is open to us to abstain, in a very large degree, from rendering the air impure.

By the efficient application of disinfectants to foul surfaces, we may hinder defilement of the atmosphere of our dwellings. One of the main functions of a serviceable disinfectant is that it shall be antiseptic; that it shall postpone decomposition and putrefaction until a convenient season. A good disinfectant should not itself defile air, neither should it be dangerously poisonous or corrosive. There is a very common substance which has long been used to hinder putrefaction. It does so only in a concentrated form. It has no smell; it is not poisonous. It can hardly be said to be corrosive. Its name is common salt. I hold that this substance and its analogues—the chloride of calcium and the chloride of magnesium—are the most available general disinfectants.

A SAFE METHOD OF INDUCING PREMATURE LABOUR.*

By BEVERLEY R. MORRIS, M.D., Nottingham.

It is not my intention to enter upon the general subject of the induction of premature labour, or of abortion, as the case may be; nor of the rules, as to the amount of deformity, or of other causes, which may justify any operative interference. I will suppose that it has been decided to operate; and the question which then naturally arises is, What is the safest method of producing the expulsion of the foetus? The ordinary means have usually been either the rupturing of the membranes, thereby causing the death of the child, and its ultimate expulsion as a foreign body; or the separation of the membranes from the uterus to a greater or less extent; or galvanism, but how applied I am not aware, except that is external.

The rupture of the membranes or their separation is, without doubt, attended with considerable risk to the mother. The fatal cases are, I believe, over 6 per cent.; while the mortality of the children is 40 per cent. in the later months, and, of course, 100 per cent. at the earlier dates. This serious mortality, even in the most skilful hands, must make us anxious to lessen the danger to both mother and child, if it be possible. I fully believe that this may be done. The indication seems to be to imitate the natural process of parturition as closely as possible; while, at the same time, the means used must be available, with certainty, whenever it may be thought desirable. I think that all this may be effected by the means which I am about to submit to the section.

The process that I have to describe is an adaptation of the third method of inducing labour—that is, by galvanism; but, as far as I am aware, by an entirely different application of the principle from any before attempted. The principle involved was introduced by Mr. Dancer of Manchester many years ago, for the purpose of arresting *post partum* hæmorrhage, and this it undoubtedly effected satisfactorily; but the apparatus was so cumbersome, that few practitioners could carry it about with them, and, probably from this cause, I do not think it was ever generally used. The instrument invented by Mr. Dancer was so arranged that one pole of the galvanic current could be introduced into the uterus, while the other was applied over the abdomen; it was so constructed that either a continuous or an interrupted current could be applied. The instant effect was a powerful contraction of the uterus, and a consequent cessation of hæmorrhage.

The application of this principle to the induction of premature labour was made by Mr. John Varley, surgeon, of Nottingham, through whose kindness I am enabled to exhibit the instrument as modified by him. The mode of using this instrument is to insert the metallic point within the os uteri, and then, placing the other pole to the abdomen, pass a slight continuous current through the uterus for ten minutes or

a quarter of an hour. This induces a dilatation of the os, which is further increased by substituting a larger conical point, and again continuing a gentle current for a few minutes. In each case in which this method has been used so far, labour has followed in two or three days; but, should this not be the case, it will only be requisite to apply the current daily until it does. The safest way is to expose the os uteri by a speculum, and then insert the point of the instrument through the speculum, which may then be withdrawn over the instrument. The great portability of the instrument and battery will allow it to be readily carried in the pocket, and it is always ready for use at a moment's notice; and the induced current seems to me amply sufficient for the purpose. The arrangement for giving a continuous or broken current is very simple, and entirely and instantly within the operator's power.

The instrument consists of a metallic sound, covered, except at the point, with a non-conducting material, and having a metallic connection at the handle, and so arranged as to be either broken or continuous by a touch of the finger. This intermediate part is connected with one pole of the battery; while the other pole is attached to a metallic tube or conductor for external application, either direct, or through the hand of the operator. The extreme portability of Gaiffe's battery led Mr. Varley to this adaptation, which, I trust, will soon be widely used, and lead to a safer and more efficient method of inducing uterine contraction than any at present in use. It is manifest that there are other cases in which it may be most usefully applied, as, for instance, in sluggish or atonic labour, and other similar states.

CASE OF TWIN PREGNANCY COMPLICATED WITH HYDROCEPHALUS.

By ARTHUR S. UNDERHILL, M.B., M.Ch.T.C.D., M.R.C.S.

On the morning of June 1st, I was summoned to attend, in her second pregnancy, Mrs. B., aged 28, a handsome, well-developed woman. It was stated that she had been in labour all night, the pains recurring at intervals of every five minutes. On examination, I found the os uteri to be fully dilated, and a hand, funis, and foot, presenting. I ruptured the membranes, brought down the foot, and delivered, the placenta coming away in about ten minutes. The child was well formed, rather above than under the usual size of a single birth. I was some time in restoring vitality, as the funis had been necessarily compressed during delivery. On placing my hand externally, the abdominal tumour seemed to be very little lessened, the uterus feeling hard and resisting. There being little hæmorrhage, I examined for a second child, but could detect no definite presentation. As the parts were exquisitely tender, and the perineum very deep, I determined to employ friction externally to the uterus, and to wait. In about an hour's time I gave tincture of ergot in tea, with a little brandy, which brought on some feeble contraction. This I repeated in about another hour, after which, feeling no presentation, I introduced my left hand, and found a globular mass blocking up the upper outlet of the pelvis. I could feel no bone and no suture; and, not being quite certain whether I had to deal with an abnormally sized vertex, or a buttock, I considered it advisable to wait another hour, at the end of which time, as the woman was very faint, and uterine action had entirely ceased, I attempted version; but, finding it exceedingly difficult to pass my hand round the mass, I applied the long forceps. On employing gentle traction, I felt that the blades of the instrument were slipping off, so I applied them again, with a similar result. I then tried them in the oblique diameter, again unsuccessfully. By this means I had brought the mass down a little lower, so that I could feel the edge of a parietal bone. With a long pair of tailor's scissors I now punctured the head by the side of the parietal bone, when a large quantity of fluid and brain-matter escaped. The head collapsed, and was shortly afterwards expelled. On examining the child, I found that, complicating the hydrocephalus, were a large spina bifida, double talipes equino-varus, general flexion of all the muscles, and the lower extremities very much shrivelled.

The case is an interesting one, particularly as it was a twin pregnancy. The talipes was evidently due to reflex action from the spinal lesion, and not from position. The concurrence of hydrocephalus with hydro-rachis is not uncommon, since the anatomical relations of the brain and spinal cord allow the cerebro-spinal fluid to communicate. In searching through many records of obstetric cases, I have not been able to discover any similar to this one. It is interesting also, from the fact that no hæmorrhage followed the birth of the first child. This has an important bearing on the plan of treating some cases of placenta prævia, by removing the placenta first, as recommended by the late Sir J. Simpson.

* Presented to the Obstetric Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.