to meet the demands required for speed of pace in animals used for racing. It has been stated that certain gymnastic exercises of the arm in drilling soldiers lead to hypertrophy of the heart. Now, it would be interesting to inquire if in such cases as the above the capillaries become more muscular, and that in proportion to the size of the heart. If this question could be answered in the affirmative, it would at once settle the value of Sir W. Gull's theory of inert "fibro-hyalin" matter; though even now, I believe that Dr. George Johnson's explanation of it, as a microscopic illusion, will be found to be correct. The beauty of Dr. Johnson's preparations is deeply impressed on my memory, as I had two distinct opportunities of examining them, once assisted by himself, and I can vouch for the accuracy of the engravings given with a paper referred to by Dr. Johnson, April 16th, 1870, in the BRITISH MEDICAL JOURNAL.

ON THE TREATMENT OF SMALL-POX BY VACCINATION AND INJECTION OF LYMPH.

By ROBERT GRIEVE, M.D., Hampstead Hospital.

MR. FURLEY, in the JOURNAL of the 8th instant, while describing some instances of small-pox treated by vaccination and the injection of lymph, takes occasion to criticise the cases published in the JOURNAL, in which vaccination in small-pox was tried at the Hampstead Hospital. There are points in his paper upon which I wish to make a few remarks. He differs from the opinion of Mr. Marson, and also that held by me, that the influence of vaccinia over variola when concurrent is *nil*, unless the former have been induced within the first five days of the period of incubation of the latter. I may state that my belief on this point is formed after observation of a very considerable number of cases of these diseases when co-existent. I have a difficulty in reconciling Mr. Furley's language on this point with what he has stated in another journal, where he says that he has found vaccination in small-pox in adults *almost inoperative*. It is well known to all accustomed to the treatment of small-pox, that vaccinated children very rarely, almost never, have that disease severely. Will Mr. Furley inform us upon how many unvaccinated children he has tried the cure by vaccination, and with what results? Mr. Furley asks: "Is it Dr. Grieve's experience for one-third of his cases to abort?" In vaccinated subjects, it is my experience that three out of four abort—that is to say, run a highly modified course, and that this proportion is even much larger amongst those who have four or more good cicatrices of vaccination, as it is less in those imperfectly protected. In unvaccinated subjects, the disease very rarely indeed aborts; but of the six, here five were vaccinated, so that under ordinary circumstances three ought to have aborted. Although this has been my experience of small-pox, I do not agree with Mr. Furley that necessarily it is a peculiarly happy one, for I think it will be found to be the experience of many others. I may remind Mr. Furley that three out of the six died, our general mortality is not fifty per cent., and, as he says, there are no cases without a lesson; what lesson does he draw from this? He falls into an evident error as to the period of the disease at which vaccination was tried; he says they were not vaccinated until the fifth and sixth days, evidently thinking it was at that stage of the eruption; while it was the second and third days of the eruption, or the fifth and sixth days of the disease. I saw nothing in the progress of these cases to cause me to alter the opinion that vaccination after the appearance of the small-pox rash is utterly useless. In order to give a full trial to the treatment, seven more cases were operated upon by the latest of Mr. Furley's methods—namely, the hypodermic injection of lymph in quantity. I take the opportunity of expressing the belief formed upon the results in these cases, that not only is its curative action absolutely nothing, but that in a certain number of instances most serious consequences have resulted from its use. Two only of those cases are as yet completed, both by death. One was from *variola hæmorrhagica* uninfluenced by the operation; the other had severe small-pox with bronchitis in the earlier stages; afterwards, erysipelatos inflammation of the arm operated upon set in, resulting in suppuration and sloughing of the cellular tissue. Diarrhoea came on, and convulsions shortly before his death. Another man has also had severe inflammation and suppuration of the arm, with serious constitutional symptoms; and in three others, abscesses either have formed or are forming in various parts of the body. These results are not such as to encourage me to continue the practice, but rather have determined me to discourage it by all means in my power.

I refrain from criticising Mr. Furley's cases, but I ask him to publish, not as he has done, a selected cure or two, but the history of every patient treated by him, with full particulars of their ages and

condition as to primary vaccination. In the absence of such details it is impossible to form any reliable opinion as to the success or non-success of his plan of treatment. I am afraid this is but another instance in which a lucky succession of cases of variola curta has led to the belief that at last has been found the long looked for specific for small-pox.

CASE OF IMPALEMENT ON A BRUSH-HANDLE, WITH PERFORATION OF THE DIAPHRAGM.

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the London Hospital.

ON the afternoon of Saturday, May 13th, 1871, I saw, in consultation with Dr. Brereton, of Old Ford, the subject of the following narrative.

Mrs. W., aged 27, had on the morning of the same day received a severe injury from a fall backwards on her own stairs. It was believed that she had put her foot on a bobbin which one of her children had left on one of the steps, and which caused her to fall suddenly and with great force backwards in a sitting posture. In her fall she felt something enter her body near the anus, and on recovering herself she found the lower part of the handle of an ordinary parlour hearth brush projecting close to the bowel. With great courage and resolution she extracted the whole of this without assistance, although she had, as she said, to change her hand twice on account of its length. Having extracted it she felt faint, and sat on the stair until her servant came and helped her upstairs to bed. She did not faint away, and she told me afterwards that she had at the time no very severe pain, but only considerable difficulty of breathing. Dr. Brereton saw her within half-an-hour of the occurrence. He found that her clothes had not been anywhere perforated by the brush-handle; there was a punctured wound close to her rectum, and no evidence of hæmorrhage going on. He estimated the quantity of blood which had been lost at about half a pint, for her clothes were in part saturated. The shaft of the broom was smeared with feces almost up to the part where it had broken off close to the broom-head. Thus it appeared certain that a length of at least sixteen inches had entered her body.

When I saw Mrs. W. in the afternoon, about eight hours after the accident, she was in bed, looking very pale, but not complaining of any great pain. She allowed me to examine her abdomen pretty freely, and, although tender in parts, it was remarkably little so. I found her right chest quite tympanitic, and was obliged to infer that the diaphragm and lung had probably been wounded. Although perfectly conscious, and with a countenance but little expressive of anxiety, she had no pulse at the wrist. The laceration by which the broom had entered was on the left side of the bowel, and would admit two fingers. There was no bleeding whatever, and there did not appear to be much to be done in the way of treatment. Death took place in the following night, about twenty hours after the accident.

At the *post mortem* examination we found that the track taken had been first through the skin, and then into the rectum an inch or two above the anus, and thence through its anterior wall just behind the uterus, into the abdominal cavity, after traversing which the implement had passed through the gall-bladder and liver, through the diaphragm, and had entered the lung. The pleural cavity contained a considerable quantity of air with some blood and serous effusion. The peritoneum was everywhere greasy with recent lymph, and contained probably about a pint of clotted blood mixed with bile and small portions of fecal matter.

The appended woodcut shows the form of the implement with which this fearful injury was inflicted.

I was puzzled at first to explain how it could have gained access to the body without damaging in the least the clothes. Dr. Brereton suggested, and probably correctly, that the brush was lying on the stairs with its handle pointing upwards, and that the woman's petticoats caught its tip and tilted it under them just before she sat down on it. As an illustration of a very unusual kind of accident, the case is of some interest. Nor is it wholly without medico-legal value as an instance of what it is possible for a fearfully wounded person to accomplish. This poor lady actually drew out of her body a weapon eighteen inches long, the point of which was in her lung, and which had to be extracted through her diaphragm, liver, gall-bladder, and the whole

vertical length of the abdominal cavity. The amount of blood lost was much less than might have been expected, and the real cause of death appeared to be the shock of commencing peritonitis.

THE TREATMENT OF INERTIA OF THE UTERUS.

By LAWSON TAIT, F.R.C.S.Ed. & Eng.,

Surgeon to the Birmingham Lying-in Charity and to the Hospital for Women.

A SENTENCE in Dr. Playfair's introductory lecture leads me to believe that a note on a very simple method of assisting labours which are tedious in the second stage, that I have recently adopted, may not be unacceptable. The method is far too simple for any expectations of mine to be fulfilled that I have been the first to use it, though I am perfectly certain that it is original in my own practice. As it was, however, actually based on Dr. Braxton Hicks's method of external version, and suggested itself to me when I was performing that operation in a case of placental presentation, it may possibly prove to be, like Dr. Hicks's device, from its very simplicity, something new in obstetrics.

Dr. Playfair writes: "We have learnt, also, some valuable lessons from a careful examination of the abdomen externally, such as the possibility of aiding the force of feeble and ineffective pains by judiciously applied pressure to the uterus. In this plan, indeed, which is as yet little known in this country, I feel convinced we have a means of assisting the progress of a labour in which the delay is simply due to the want of sufficient uterine contraction, far safer both to the mother and the child, and far more effective than the administration of oxytocic drugs, such as the ergot of rye, in which many place much confidence."

The fact that this is the only reference I have yet seen to the employment of external pressure in cases of inertia of the uterus, must be my apology for describing the method in which I employ it, and, first of all, the case in which it was suggested to me.

In August last, I was summoned hurriedly one morning to see a woman in labour and attended by a midwife. I found her cold, pulseless, and the bed and floor swimming with blood. It scarce needed an examination to know that the placenta was presenting. The os readily admitting my hand, and the uterus being perfectly flaccid, I at once removed the placenta, and, by the combined version, easily brought down both feet. I could get no amount of manipulation to induce contraction of the uterus; and to wait for the action of ergot was to waste time. I therefore passed my left arm under the patient and my right arm over her, embraced the uterus between them in a direction parallel with the axis of the brim, interlocking my fingers and spreading them over as large a part of the fundus as possible. In this position, and by the external pressure, I imitated normal contractions, as one does with the forceps, and soon had the satisfaction of finding the child extruded as far as the shoulders; then, with the left hand on the fundus, and the right guiding the child, birth was soon completed. The child was almost dead, of course; but the mother made a good recovery.

Since this case, I have had on three occasions to adopt the method of external pressure in cases of inertia.

Mrs. K., confined on December 20th of her seventh child, had a large roomy pelvis; but though the passages were relaxed to the fullest and ergot administered twice, the uterus was absolutely passive. I placed her at once under chloroform, and commenced the intermittent pressure described above. In about ten minutes delivery was completed, and there was no *post partum* hæmorrhage.

In September, I was retained to attend Mrs. E., the mother of seven children. Her attendant informed me that nearly all her labours had to be assisted by the forceps on account of an inert state of the uterus, and that in the last two she had nearly lost her life from *post partum* hæmorrhage. A few days before her confinement, the house was entered during the night by burglars, and she awoke to see one of them removing her husband's watch from the toilet-table. She was, of course, much excited, and in the morning I was asked to see her. We feared very much that the fright would exercise an unfortunate influence, and so, indeed, it proved, for symptoms of labour came on immediately. We tried by opium and rest to delay it, and succeeded for a time. At last, however, it came on, and, as before, the second stage was characterised by inertia. The pains were sufficiently severe to require anæsthesia, but whether it was continued or not, they did nothing. Instead of resorting to the forceps, as I originally intended, I employed the external pressure, and very soon had the head on the perinæum. I then used the forceps to guide the head through the passages, still having the external pressure kept up. She recovered more rapidly and more completely than she had ever done, according

to her own account, though she attributed this to the chloroform. It is certain that she had no after-hæmorrhage.

The third case was in the person of a strongly built woman, in whose second labour the pains suddenly ceased without apparent cause. The head was nearly on the perinæum when I arrived to assist the midwife. I advised the external pressure instead of ergot, and we found it perfectly successful in re-establishing the pains, and by its help labour was completed.

I feel convinced from even this short experience, like Dr. Playfair, that the method of external pressure will soon and in most cases supersede all uterine stimulants, and that the use of these will now be confined to the *post partum* state. External pressure is of great help when, from accident or necessity, anæsthesia has been pushed so as to interfere with the intensity of uterine action. I have little doubt that this communication will bring many others from obstetricians who have practised the same or some similar method of external pressure. My plea is that, so far as I know, it is not used in this country as it ought to be, and that ergot is far too largely consumed by parturient women, especially when under the care of the so-called "trained midwives".

[Since correcting the proof of this note, I have seen a reference to a method of assisting the inert uterus by external pressure in Dr. Meadows' *Manual*, with allusions to the writings of Ritzen, Kristeller, and Playfair, but I have as yet had no opportunity of going further into the history of this method of treatment. It would seem to be not of older date than 1856.]

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

TREATMENT OF ULCERS.*

CHARING CROSS HOSPITAL.

Mr. BELLAMY says that the treatment of old standing ulcers of the leg in the out-patient department of a hospital is in general very unsatisfactory, from the fact that the essential adjuncts to therapeutical measures—rest, cleanliness, good food, abstinence from excesses in drink—are impossibilities with the class of patients afflicted. The most frequent form, that complicated with a varicose state of the veins, appears to be best relieved by a carefully applied bandage commencing at the web of the toes, or by a neatly adjusted method of strapping, maintaining equable pressure. If the patient can lay himself up for a while, the obliteration of the veins usually effects a cure. The internal administration of iron, and if the ulcers be chronic, of opium, is of great use. Lotions of nitrate of silver, sulphate of zinc or copper, on pieces of lint of the size of the ulcer, are useful dressings. In the irritable form, rest, elevation of the limb, at all such times as the patient is not absolutely obliged to use it, water-dressing and poultices, and the administration of iron, seem as good remedies as any. The chronic callous ulcer, which is frequently met with in old people associated with an œdematous condition of the feet or ankles, is greatly benefited by neatly applied strapping, blisters, and by the administration of opium. The local application of the aqueous solution of opium affords great relief. Opium is sometimes given night and morning. Of ointments or lotions, the ointment of nitric oxide of mercury, and zinc or copper lotions, are the best. A rather strong solution of carbolic acid has often been found of great service. Mr. Bellamy has, in many instances, transplanted cuticle, in old standing ulcers among out-patients, with considerable success. The great obstacle is, he thinks, the absolute necessity of the patients moving about to earn their bread, and their want of ordinary attention and of the means of existence in many instances. But the little pieces of transplanted cuticle can be pretty securely held on by being strapped down by the strong waterproof isinglass plaister, and the whole surface covered with lint, also securely strapped on. With the better class of patients, those who help the surgeon, in fact, the plan is often highly successful.

ST. MARY'S HOSPITAL.

Mr. ARTHUR TREHERN NORTON says that the majority of ulcers which occur in the out-patient department of a hospital are the result either of insufficient food, or of too long standing, or of varicose veins; and none of these are likely to be relieved by internal remedies. He

* Continued from page 642 of number for June 15th.