one which has some years since been distended by pregnancy? Of course, it will be answered that in that case the obstruction will be its own evidence; yet it may not be so very apparent as to be indisputable. It will appear from the examination of one of the tables now presented that the arching of the fundus is greatest in the uterus of a woman who was *said* not to have borne children; even greater than in one, which is the largest, had borne children, and had small fibroids inclosed in the walls.

I hope that some of the Fellows present may be able to add to our knowledge on the matters alluded to; but I venture to suggest that a Committee be appointed, to carry out investigations and collect information, and finally to form a report which may enhance the value of the *Transactions* by the record of facts. With regard to the uterus now under consideration, I think that, as there was some difference of opinion among the gentlemen engaged in the trial, the same committee should examine it and report in due time.

THE TREATMENT OF SICKNESS FROM UTERINE IRRITATION.

By EDWARD COPEMAN, M.D., F.R.C.P.,
Senior Physician to the Norfolk and Norwich Hospital.

It would seem from recent correspondence that the "novel treatment" of sickness during pregnancy is not unlikely to be of service in other cases of sickness from uterine irritation, and to have a more extended application than I had previously contemplated.

In a letter received on January 15th, a brief account was given me of a case which occurred to my friend Dr. Image of Bury St. Edmund's, which is as follows:—"I send you a short note of this case, as it is one in which you were highly interested in the beginning of the year, and which you came over to Bury to see. Mrs. — recovered perfectly from her attack of puerperal fever, and, after some six weeks' attendance, I ceased my visits, and saw no more of her. But, about six weeks ago, she sent for me, as she had been suffering for about a fortnight before each catamenial period with most distressing sickness, which lasted up to the period. The period was preceded by very great pain, then something burst, the menses began, and pain and sickness abated. I made an examination a week before the period. She was then beginning to have pain, and there was considerable sickness and bowels confined. I found the uterus retroflexed, plugging the rectum like a ball-valve; its cavity was four inches in length. I, with the uterine sound, replaced it in its natural position, and introduced Hodge's pessary. The next day, sickness and pain had vanished. The period came on without pain. She has menstruated again since then, and has had no pain and no sickness. Remarks on this case are superfluous."

Dr. Image considers this case to be fully confirmatory of Dr. Graily Hewitt's explanation of my "novel mode of treatment", lately published in the JOURNAL; and so it is as far as displacements of the uterus are concerned; but this does not seem to me to explain the whole matter; for such a state of things does undoubtedly occur sometimes without any displacement, and other causes must in such instances be sought for. Is there any one essential cause of this peculiar form of obstinate vomiting? My present belief is, that there is such a cause, and that it consists in some kind of tension about the cervix uteri, causing a want to expel something from the uterus which cannot easily be accomplished. Displacements may undoubtedly occasion this peculiar kind of irritation, and obstruct expulsion of anything of which the uterus may require to rid itself; but many other things may do the same through an influence upon the nerves which supply the genital organs, both ganglionic and spinal. I can even imagine that pressure from an impacted rectum on the sacral and coccygeal ganglia may occasion it, just as we know that when, during labour, we want to excite uterine contraction, we can often accomplish our object by pressure with the fingers upon the hollow of the sacrum.

The instructive case referred to possesses other matters of interest than those I have already stated, and I will give a few particulars of what happened previously. On January 28th, 1874, this lady consulted me on account of pelvic pain and an uneasy bearing-down feeling, causing frequent desire to urinate. She had been married some time, and was very anxious for a family, but had never been pregnant. She was stout and apparently in a good state of general health; but, on examination, I found she had anteversion of the uterus, but there was no account of menstrual sickness at that time. I treated her for a while, and she appeared to get quite well, and soon afterwards left Norfolk to reside in the neighbourhood of Bury St. Edmund's. After

some time, she communicated to me, to her, pleasing intelligence that her wishes regarding a family were likely to be realised. She was confined in January 1875, and was soon afterwards attacked with puerperal fever of a very serious character, for which illness I was summoned on February 4th in consultation. Owing to the most unremitting attention and care of her medical attendant Dr. Image, who spared neither pains nor trouble to save her life, she recovered. On passing through Norwich afterwards, she called upon me to report herself well, and to express her thankfulness at having escaped the great danger of her illness after childbirth. From that time, I heard nothing of her until the letter now referred to, informing me of the new phase of malady therein described.

On reviewing the subject, as it were, at a glance, I cannot help thinking that the retroversion described by Dr. Image, in a person disposed, as this patient was, to displacement in more than one direction, might have been produced in the first instance by a constipated state of the bowels, and afterwards aggravated by the efforts and pain in expelling the menstrual flow, so as to become a very prominent cause of the troublesome sickness which ensued; but, at the same time, I believe that the introduction of the sound into the uterus, so as to dilate to some degree the cervix, was an element in the cure which materially aided in producing the good effects of rectification of the position of the uterus.

N.B.—For eight days after my visit, she had twenty minims of spirit of turpentine in egg and milk every three hours, and the vagina (and uterus if the injection reached so far) was washed out three times a day with strong mixture of Condy's fluid and water for the same length of time.

NOTES ON THE WOUNDED OF THE ROYAL SPANISH ARMY MADE DURING A SHORT VISIT TO THE NORTH OF SPAIN.

By J. FLEMING, M.D., F.R.C.S. Edin.; Surgeon, Army Medical Department.

THERE are two large military hospitals and one civil in San Sebastian. The permanent military one, that of St. Elmo, is a very old building, and was used for the treatment of our wounded in 1836, under the medical charge of Sir A. Taylor, M.D., now of Pau. It contained about two hundred sick, all medical cases and cases of venereal disease, and they all appeared well cared for. In one ward, in a row, lying on the floor on mattresses, and amongst the other patients, I was amused at seeing nine young soldiers; and, on inquiry as to the reason, I found they wished exemption from military service, and were under observation for epilepsy. The Kursäl, a fine large modern structure close to the sea, and, in times of peace, used as a theatre, casino, and general place of amusement, is now converted into a temporary hospital for wounded soldiers only. It is capable of accommodating about 250; but, at the time of my visit, there were only 117 cases of gunshot and shell wounds, including three officers. They all appeared to be as comfortable as circumstances would allow; but, as might be expected, some were in great agony, and many were suffering from suppurative or irritative fever, either from lodged bullets or gunshot-wounds of the various joints, or from other causes. There were cases illustrating gunshot-wounds of nearly every region of the body, excepting the abdomen, penetrating wounds of the latter being usually attended with fatal results in a short time.

There were only three or four cases of chest-wounds penetrating the lungs with bullets lodged, and which were accompanied by considerable emphysema and spitting of blood; nevertheless, they appeared in a fair way of recovery. There was one doubtful case of chest-penetration: a bullet entered to the inner side of the insertion of the right deltoid, and made its exit between the two heads of origin of the left sterno-mastoid. The medical officer in charge was of opinion that the chest was penetrated; but it appeared to me that the ball glanced off the humerus, thence to an adjacent rib, around the external surface of which it coursed, and then, passing across the upper part of the sternum, made its exit at the spot already mentioned, without injuring in its passage any important structures. Wounds of the extremities, especially the lower, were most numerous, and it was a matter of wonder in many cases how it was that the bones and important vessels escaped injury in the passage of the bullets.

It is very probably a provision of Nature that our blood-vessels, nerves, and nearly all our bones, are of a rounded form, a form which permits bullets or other missiles to glide off rather than penetrate. This partial immunity may also have been owing in some degree to the peculiar form and construction of the projectiles, which were, I under-

stood, almost invariably those used for the Berdan and Remington rifles, with which the Carlists are principally armed. The bullets of the latter weapons are small, solid, and conical, and resemble in outward appearance the bullet of the Chassepôt rifle. I can say with some degree of certainty that I saw no wounds caused by hollow bullets, otherwise the wounds of entrance and exit, as well as the destruction of parts, would have been very much greater. I was quite unable in one case to distinguish the aperture of entrance and exit until told by the patient, and in many cases the characters of such wounds as given in text-books were not present, though only a few days had elapsed since the receipt of the injuries. Had the form of the bullet, the charge of powder, the number of grooves and their depth in the barrel of the rifle, as well as the number of turns or degree of rifling, anything to do with this? The exit and entrance of the bullet-wounds were extremely small, and looked as if the tissues had been neatly and skilfully punched out; and there was remarkably little suppuration, on account, I think, of the peculiar form of the bullet causing very little destruction of parts as contrasted with the effects of hollow bullets, or even spherical ones, on animals and large game. There were a few cases of wounds from fragments of shells, and they presented the usual character of great laceration and contusion, and were accompanied by profuse suppuration. The wounds were all washed with water containing a little vanilla and dressed with simple water-dressing, lint, or charpie, or with a little resinous plaster. No antiseptic or other dressing was used, with the occasional exception of a little chloride of zinc solution to unhealthy sloughing sores; and it appeared to me singular that there was scarcely any smell in the wards, though there was a large number of open suppurating wounds. There was one case of gangrene, and, up to the date of my visit, erysipelas was quite unknown.

The patients were supplied with good strong iron bedsteads and very good bedding; but there were no special surgical cots, and, as might be expected in a temporary hospital, there were no appliances to assist the patients to raise themselves in bed, or to enable them to sit up or change their position. The wards were kept clean and well ventilated, and there was no overcrowding. Amongst other things, I was shown what appeared to me a very portable, light, and durable field-stretcher, which the authorities of the hospital very kindly explained to me, at the same time taking it to pieces and showing its construction and working practically. They had no other means, excepting this stretcher, for the conveyance of the wounded from the field or the mountains, and they appeared quite satisfied with its working.

Fig. A is a rough sketch of its appearance when ready for use. The canvas slipped on over the poles in the usual way, and near one end it was double, the upper layer being raised a little on a strong curved iron rod, thus serving as a pillow; and light iron traverses with short iron feet completed the arrangement. The superintendent of the hospital very kindly wished me to prolong my stay, in order to see more of actual warfare and its results; but my short leave would not permit of my doing so. I was treated most politely by, and received every attention and information from, Señor Ramon Masferrer y Arquimbau, medico-cirujano, a young military surgeon who was in immediate attendance on the wounded, and, in fact, without whose assistance my visit to San Sebastian would have been without interest.

UNUSUAL DISTRIBUTION OF RETINAL BLOOD-VESSELS: THREE CASES.

By EDWARD NETTLESHIP, F.R.C.S.,
Surgeon to the South London Ophthalmic Hospital.

DEVIATIONS from the usual course taken by the retinal blood-vessels at their entrance into, or egress from, the eyeball derive a special interest from the possible effects of such irregularities on the sequel to embolism of the *arteria centralis*, or on other sudden obliterations of the central retinal vessels. The vessels forming the circle of Haller, the only constant branches of communication between the retinal and ciliary blood-systems, would be, as is well known, too small to be seen by means of the ophthalmoscope, even if they were not for the most part too deeply seated in the substance of the optic disc to come clearly

into view; it seems, therefore, worth while to put on record cases in which any retinal vessels large enough to be seen with the ophthalmoscope show evidence of communicating with the vascular system of the choroid, instead of joining the central retinal artery or vein. Such a case has been described and figured by Loring ("Anomalous Circulation in the Eye", Knapp's *Archives of Ophthalmology and Otolaryngology*, vol. ii, part ii, page 9, 1872), from a myopic patient; a retinal vein of the second or third magnitude runs as usual to the border of the optic disc, then, bending suddenly at a right angle, the vessel pursues its course in the choroid, where, owing to the atrophied condition of that tunic, it can be traced for a considerable distance; the vessel finally disappears at the junction of the atrophic and healthy choroid, never having again approached the optic disc. Loring states that this was the only instance of the kind that he had then met with. It has chanced to me to notice, within the last few months, three cases nearly resembling the one given by Loring, and without any attention being directed to the subject otherwise than by the interest awakened by the first of them; it would, therefore, seem not unlikely that such variations are less rare than has been supposed.

Fig. 1 is a diagram of the optic disc (seen in the erect image) of a young woman aged 20. An artery of about the third or fourth magnitude is seen passing from the lower-outer part of the fundus on to the disc, where, instead of entering the substance of the nerve, it curves sharply round and disappears exactly at, or just external to, the edge of the disc. Its course is such that, unless it make a second sudden bend directly downwards, it cannot fail to pass into the choroid or sclerotic. A very small vessel, only just clearly visible, appears to form a communication between the anomalous artery and another small branch which takes the usual course. As, however, I saw the patient only once, and the examination was made without atropine, this anastomosis on the disc cannot be taken as quite proved. The eye was hypermetropic, but in other respects quite healthy. The sketch was made on the spot.

Fig. 2 is from the eye of a young woman aged 25. Mr. Hutchinson, whose patient she was, kindly allows me to use the case. The diagram was taken from the erect image; but the eye was myopic to the extent of a seventh, and there was a wide crescentic staphyloma on the yellow spot side of the disc; the choroid on this staphylomatous area was highly atrophied. A retinal vein of about the fourth size passes from the neighbourhood of the yellow spot inwards across the staphyloma, and, just before reaching the nerve, makes a short sharp curve upwards; it then disappears partly upon, partly external to, the boundary of the optic disc. It seems to dip directly into the atrophied choroid or into the sclerotic, and is slightly enlarged at its point of disappearance.

Fig. 3 shows the optic disc of a highly myopic boy aged 12 (from a drawing by Burgess in the inverted image). A moderately abrupt and rather narrow staphylomatous crescent surrounds nearly three-fourths of the circumference of the disc. A vein of about the third magnitude passes from the (apparent) lower-inner part of the fundus to the border of the disc; here, instead of pursuing a straight course, it curves sharply round, forming two-thirds of a small circle, passes outwards again over the crescent, and disappears at the junction between the atrophied and healthy choroid. Just as the vessel is about to dip into the choroid, it is joined by a much smaller venous twig, coming, like itself, from the yellow spot region. This case is very similar to the one described by Loring.

Although the majority of the vessels forming the circle of Haller are situated deeply, and pass into the substance of the optic disc about at the level of the lamina cribrosa, there are some branches which enter the nerve on a level with the choroidal rim of the disc, and a few of these turn abruptly round and run directly into the retina; and, while all these communicating twigs are, as a rule, very minute, some of them are occasionally met with of larger size. Thus, I have a section from an artificially injected human eye, showing a small artery from the choroid turning round the edge of the disc, and running uninter-