found to be small; and the anterior lobe of the cerebrum on the side in which the carotid had been tied was considerably smaller than that on the other side. This condition, however, the author thought could hardly be attributed to the ligature of the vessel, for which he gave his reasons. On the side of the sella Turcica, just as the ophthalmic artery was given off from the carotid, was found a circumscribed aneurism, filled with a solid coagulum, which pressed upon the ophthalmic vein, and thus occasioned the protrusion of the eyeball.

The author thought these seven cases and the three *post mortem* examinations satisfactorily showed the true cause of the ocular protrusion to be pressure upon the post-ocular veins, which interfered with the free return of blood from the eye and orbit. He contended that usually there was no disease whatever in the orbit itself, the condition of the parts in it being merely passive, as a swollen limb is below a large popliteal or axillary aneurism; and that though a circumscribed aneurism, as in most sudden cases of spontaneous origin, or a diffused aneurism from rupture of a bloodvessel in traumatic cases, was the most common cause of the development of the affection, this was by no means a necessary condition for the existence of it. He believed that it might be induced by anything which causes pressure upon the ophthalmic veins or difficulty in the return of blood from them. Though in the most acute form the disease had been rarely seen, and its nature had been misunderstood, the author was inclined to think that in more chronic and much subdued degrees it was not so very uncommon. He considered that in many cases of protruded eyeballs in weak and delicate persons, in those with bronchocele or cervical tumours, and where there is impeded circulation from disease of the heart (particularly of the right cavities) or of the lungs, the disease is essentially of the same character as the more acute affection, though at first sight they may appear to be very different, and certainly do require such different management.

Correspondence.

MR. CRITCHETT'S OPERATION FOR EXTREME DIVERGENT STRABISMUS.

LETTER FROM GEORGE CRITCHETT, ESQ.

SIR,—In the last number of your JOURNAL (December 17th) there is a paper by Mr. Vose Solomon upon the Radical Cure of Extreme Divergent Strabismus. In that paper allusion is made to my method of operating for this deformity in the following terms. 3. "A *third* plan had been to excise the belly of the inner rectus, and then bring its cut ends together with sutures, the operation being concluded by a tenotomy of the external rectus. Of this method, invented and practised by Mr. Critchett, it may be sufficient to note, that in the hands of that able surgeon, the globe sometimes suppurated. Moreover, it is not a physiological proceeding, as normal convergence is not restored by it."

In this short paragraph three serious errors occur. 1. The method of operating is wrongly described. 2. Suppuration of the globe has *never* followed the operation in my hands, or, as far as I know, in the hands of others. 3. The power of the inner rectus is considerably restored. As the method I originally proposed has been extensively and successfully practised during the last nine years, not only by myself but by several of my colleagues, and by ophthalmic surgeons on the Continent, I think it may be interesting and useful to reprint the account that I originally published in the year 1855.

"Cases of eversion following the operation of dividing the internal rectus muscle, sometimes come before our notice. As this is a very distressing deformity,—far worse, in fact, than that for which the operation was originally performed, patients are very anxious to have something done for its removal. I have now operated on five of these cases with so satisfactory a result that I think it may be interesting to the profession if I describe the mode of proceeding that I adopt.

"I may premise that the operation I am about to describe is somewhat difficult and tedious, and should be performed under chloroform, and much of its success depends upon careful attention to minute details. Having freely exposed the globe by means of the wire speculum, the parts covering the inner parts of the globe, including conjunctiva, subconjunctival fascia, old cicatrix and muscle, with condensed tissue around it, must be all carefully dissected off the sclerotic, commencing about two lines from the inner margin of the cornea, and extending upwards and downwards, so as to expose the inner third of the surface of the globe. This dissection must be carefully made so as to preserve the flap entire; it can most readily be done with a pair of scissors. When this stage of the operation is completed, the external rectus muscle must be divided. It is better to defer this part of the operation until now, because the action of the external rectus is useful in keeping the globe well fixed outwards during the first stage of the operation. The next part of the operation is the most difficult and the most important. It consists in passing the sutures. For this purpose small semicircular needles must be used, armed with a piece of fine silk: the flap that has been raised from the eyeball must be firmly held with a pair of forceps, and drawn forward so as to make it tense; the needle must then be passed through it, as low down—that is, as near the inner corner—as possible. Two or three sutures may be passed in this way, at intervals of about two lines. The corresponding part of each suture must then be passed through that portion of conjunctiva which has been left attached to the sclerotic near the cornea. This constitutes another difficulty, because the membrane is here so thin that the fine silk is apt to cut through; this I found a serious difficulty in my first operation, and one that materially interfered with success. In order to obviate this, I adopt now the following expedients:—I first separate this portion a little upwards towards the cornea; the needle must then be passed through it, and then back again, so as to include a portion which must be tied tightly, so as to prevent it from tearing out. The next point is to cut away all that portion of the lower flap that can be spared beyond the part where the suture has entered, merely leaving a sufficient margin to hold it. The silks may be now drawn tightly, and tied to the end that is already fixed near the cornea. The immediate effect of this proceeding ought to be to procure some inversion, if the various steps of the operation have been properly performed. The hope and intention are, to get the parts to unite to the globe in their new position, and thus retain the eye. This, however, is only partially the case; there is always some tendency to relapse, and in two cases I had to repeat the operation, but with ultimate success. The sutures may be allowed to remain until they ulcerate through; the subsequent inflammation is usually slight. The amount of mobility in the eye is very limited, but so long as it occupies a central position this circumstance is not found practically to occasion much deformity, and is

an immense improvement upon the facial discord resulting from extreme eversion.

"My friend and colleague Mr. Bowman has performed this operation at the Ophthalmic Hospital, with his usual neatness and dexterity, and the effect was very perfect. My own experience would lead me now to undertake such a case with confidence in the result, if the patient would persevere; if sufficient effect is not obtained by the first operation, a second is almost sure to succeed. I may mention that one favourable effect of the operation is the drawing forward and restoring the inner caruncle to its natural place, the deformity being much increased by the sinking of this part.

During the nine years that have elapsed since this paper was published, I have operated upon a considerable number of cases, including various degrees of this deformity, both in public and in private practice, and the result has been most satisfactory. Further experience has enabled me to infuse much greater certainty into the operation than during my earlier efforts. I find that by regulating the position where the needles are passed through the flap that has been dissected up, I can restore the eye with great nicety and precision to the exact degree of inversion that I wish. Although I am strongly convinced that this is a safe and efficient operation, I am willing to substitute another proceeding, if it recommend itself to my judgment as preferable to my own, but until such an operation is devised, I am anxious that my method of operating should be fairly stated and fully understood.

I am, etc., GEORGE CRITCHETT.

75, Harley Street, December 19th, 1864.

DR. KINGSLEY'S ARTIFICIAL VELUM.

LETTER FROM EDWIN SERCOMBE, ESQ.

SIR,—Dr. Kingsley dismisses the question of the durability of his artificial velum very satisfactorily to his own mind, no doubt; but I, for one, am not so easily satisfied. Dr. Kingsley stated in his paper that the rubber of which it is made is specially prepared for the purpose. Now, this cannot be kept in stock at "any rubber factory". But, supposing this difficulty overcome, is it likely that the ordinary workmen of any rubber factory would be able to attach the gold tubing through which the fastening of the artificial velum to the teeth is effected? Those who know the nicety necessary in all dental work will not believe this could be done satisfactorily by other hands than those of a dental workman. I think, therefore, the durability of each velum is an important question which has not been satisfactorily disposed of by Dr. Kingsley.

Another important practical point occurs to me. The success of Dr. Kingsley's apparatus depends, on his own statement, upon an accurate adaptation to the fauces. Nothing is more common than an alteration in the size of the tonsils. I have just seen one of my own cases of cleft palate in which these glands have recently grown very much. Such a change would necessitate a reconstruction of every part.

I have never doubted the talents of the body of English dentists, although we are generally less loud in our own praise than our friends across the water are of theirs; but I still say—and, if it were not that I should unduly extend this letter, I would quote some of the remarks made at the different meetings at which this apparatus has been exhibited in America to show that the Americans themselves think that the apparatus can be only successfully made by the few—I still say that it is so elaborate in its construction, that I believe few only would be able to construct it. But, sir, it will be enough for me to explain to your readers that the very first step is to take an impression of the posterior nares and the fauces in plaster of Paris. Supposing the patient to have the greatest self-control, and the manipulator to be very expert, I think your readers will agree with me that the risk to life is by no means trifling from the possible falling of a portion of plaster into the trachea; while all manipulators are not so expert as to render such a proceeding safe in their hands. Thus at the very threshold we are met by a necessary condition, extremely difficult, and even, I believe, riskful to life, to comply with.

I will not say a word now about my apparatus, as I quite intend shortly to bring it before a competent jury to decide on its merits.

The last sentence of Dr. Kingsley's letter quite refreshes me; it is so unlike the opinion entertained by Northerners generally of their English *confrères*. I may perhaps just quote the language of one at a recent meeting of the American Dental Convention, who, speaking of this very apparatus now under discussion, said "he believed these great triumphs legitimately belonged to American dentistry, and hoped that it would continue as heretofore, ahead."

I am, etc., EDWIN SERCOMBE.

49, Brook Street.

TREATMENT OF PURULENT OPHTHALMIA.

SIR,—With a very limited experience in the treatment of purulent ophthalmia, it becomes me to speak with diffidence of the formulæ prescribed by others; but I really cannot avoid hazarding the opinion that a lotion of the strength indicated in the JOURNAL at page 659 would be much more likely to accelerate destructive inflammation than to arrest it. Possibly there may be some error in the formula, hereafter to be corrected.

After having, perhaps, inflicted my share of mischief in the treatment of infantile ophthalmia, I became long ago convinced that frequent ablution with warm water, and the application to the eyes of a very weak solution of nitrate of silver in distilled water—in the proportion at first of one quarter of a grain to the ounce—twice or thrice in twenty-four hours, affords the best chance for the preservation of the sight, and constitutes almost all that is required in the way of external treatment.

The internal treatment must depend upon the peculiarity of each patient; but may be summed up in "occasional doses of calomel, with jalapine, when required." Beyond slightly increasing the strength of the solution as the disease declines, there is little need of any addition to the above.

With the most ordinary cleanliness, I fancy that any danger to the patient's eyes from the presence of matter may be regarded as imaginary and unworthy of serious consideration.

Trusting that there is nothing herein contained at which an old acquaintance can take offence.

I am, etc., C. DE C.

W. Cambridgeshire, Dec. 1864.

AMMONIA IN FIRES. An apothecary at Nantes has discovered by accident that ammonia will put out fires. Seventy litres of benzine in his cellar caught fire. Water was being poured into the cellar without producing any effect, when the apothecary himself took up a pail which was standing neglected in a corner, and emptied the contents into the cellar. To his astonishment the flames were quenched as if by magic, and upon examination he found that the pail which belonged to his laboratory had contained a quantity of liquid ammonia.