straightened, and the amount necessary for removal is seen at once, from the amount of riding and projection of the upper fragments with the hand and fingers in position. Section is then made where these fragments touch the lower portions, and the proper amount of bone removed is thus at once arrived at without resorting to a process of trial and error. Coaptation of bones, osseous suture, and suture of soft parts finish the operation. Movements are commenced in three weeks.

The author considers this latter to be the best treatment in severe cases, as the results are surprisingly excellent.—SPENCER MORT.

DISEASES OF THE EYE.

The Internal Pole Magnet. By Carl Mellinger, Basle (*Archives d'Ophtalmologie*, 1909, vol. xxix).

On the Ring Magnet: A Review. By T. Harrison Butler (*The Ophthalmoscope*, 1909, vol. vii).

As this new type of magnet departs very considerably from the usual form of electro-magnets employed for the extraction of foreign bodies from the interior of the eye, a rather more detailed notice than is usual in this page may be welcome to some of our readers.

Recognising the fact that in the ordinary form of magnet there is a great loss of power owing to the divergence of the lines of force at the extremity of the pole, Professor Mellinger, with the collaboration of M. Klingelfuss, an electrician in Basle, has designed this new form of magnet so that the electro-magnetic power is economised to the utmost.

The principle is that of the solenoid—a ring of many turns of copper wire through which an electric current is sent. In the axis of the solenoid a magnetic field is formed, of great saturation and almost homogeneous consistence. The lines of magnetic force lie practically parallel at right angles to the plane of the solenoid ring. This is the great feature of the new magnet: the lines do not diverge as in the old forms. If, then, an eye containing a particle of iron is brought into the axis of the solenoid, the iron is at once converted into a magnet of maximum saturation. It will, therefore, be attracted with maximum force towards the centre of the ring. If a bar of iron is held in the axis of the ring, it, too, will be converted into a magnet, and will attract the iron particle with maximum force.

The general form of the magnet is that of a ring (about 3 inches square section), wound with hundreds of turns of copper wire, 1 mm. in diameter, and insulated. The internal diameter of the ring is about 8 inches or so, in order that the face of the patient may be placed in it, and a rest is supplied for the chin. The ring is surrounded by a heavy band of iron, which has the effect of increasing the power, and the whole is fixed on a heavy iron pillar and pedestal. On the side of the ring opposite to the patient there is a socket, into which can be fixed either a rest for the hand of the surgeon, or a very large horn-shaped iron bar, which can act as a pole. Several other iron bars are supplied with the instrument, varying in size and shape, to act as poles for different purposes, and which are to be held in the hand and pushed to and fro as desired.

The larger the section of the iron bar the greater the power of the magnet, and, as the current passing through the solenoid can be varied by the use of a rheostat, the total variation of power of the apparatus is unusually great.

The special advantages of this form of magnet are—(1) economy of electro-magnetic force; (2) variability of power under easy control; (3) the working field is not taken up by a huge core, as in the giant magnets of other forms, and the surgeon can see what he is trying to do.

The chief disadvantage of the apparatus is that the patient must be seated

opposite it, which renders it practically impossible to use such an instrument in cases in which the eye has to be opened in order to remove a foreign body which has been long embedded.

Such an apparatus must, like every other magnet, be used with the greatest care, more especially where the foreign body is embedded in the interior of the eye. The use of too much force may injure structures—such as the lens—which have not been wounded by the penetration of the particle.

The apparatus is manufactured by M. Klingelfuss, of Basle, aud is sold in England by Weiss, of London, costing about £24.—LESLIE BUCHANAN.

On the Pathogenic Differences between Irritative and Simple Glaucoma. By Noe Scalinci, Naples (*Archives d'Ophtalmalogie*, 1909, vol. xxix).—Scalinci, of Naples, draws attention to the differences which exist in the pathogenesis of irritative and simple glaucoma. He points out that the method of escape of fluid from the anterior chamber is really a physiological absorption rather than a filtration. He then proceeds to show that in the irritative forms of glaucoma the aqueous fluid is secreted much as ordinarily, even though it be different in chemical constitution, and that, whatsoever the determining cause of the attack be, the tissues of the eye are only altered as a result of the presence of autotoxins or some other substance present in the eye. The precise cause of the attack is not dealt with in detail, but the writer inclines to the view that the vaso-motor apparatus is in some way interfered with. In the chronic forms of glaucoma, on the other hand, the tissue is altered by the occurrence of fine changes, induced probably by arterio-sclerosis, before the increase of tension begins. It is to the incidence of these fine changes in the tissues of the structures which compose the absorption apparatus that the delay in elimination of the fluids is due, and as the rate of increase of the changes is slow, so is that of the elimination fault. It is evident that in both acute and chronic glaucoma the changes in the tissues of the eye may, at a later stage, involve the secreting apparatus to such an extent that the amount of fluid falls short of the normal, and that then the tension will fall to normal and ultimately fall below it.

Scalinci has not fully developed his theory, and wishes that this preliminary notice of his views should have the consideration of those who are interested in the subject.—LESLIE BUCHANAN.

Sclerectomy and Iridectomy in Glaucoma By Ch. Abadie (*Archives d'Ophtalmologie*, 1909, vol. xxix).—Abadie, referring to a paper by Lagrange, of Bordeaux, in these *Archives* (November, 1908), holds that some of the cases recorded as cured by the new operation of Lagrange were cases of chronic glaucoma which would have been specially amenable to treatment by iridectomy. Abadie insists on the distinction between *chronic* and *chronic simple* glaucoma; and this is the principal cause of difference between the writers, since the former is and the latter is not curable by iridectomy.

—LESLIE BUCHANAN.

Fistulation of the Eye (de la Fistulisation de l'Oeil). By Felix Lagrange (*Archives d'Ophtalmologie*, 1909, vol. xxix).—This is, according to the sub-title, an anatomical and experimental demonstration of fistulation by sclerectomy in the region of the canal of Schlemm, and to it the writer has added a reply to Abadie, and explanatory notes regarding the definition of some of the scientific terms used in connection with his operation.

Taking the reply to Abadie first, we find that the writer does not accept the distinction drawn by Abadie between *chronic* and *chronic simple* glaucoma, and that he brings three authors (Fuchs, Morax, and Gama Pinto) to support him in the contention that the conditions are one and the same. He then shows that, even granting the correctness of Abadie's statement, his operation has been successful in the chronic simple variety.

The next point is the nomenclature of the operation. Lagrange says that as, in chronic glaucoma with hypertension, he performs sclerectomy first, and

then iridectomy, he prefers the name sclerecto-iridectomy for this operation, as it indicates exactly what is done. In chronic glaucoma, on the other hand, he performs simple sclerectomy, apparently a sclerecto-iridectomy, comprising the whole thickness of the sclera. He wishes to distinguish very clearly between his sclerectomy simple and that of Bettremieux, and points out the fact that he perforates the sclera in his operation, whilst Bettremieux does not. (Bettremieux only pares down the sclera, and so thins it that fluids can escape through it).

In the last part of the explanatory portion of the paper Lagrange shows why he prefers to use the word "fistulisation" in place of either "filtrating cicatrix" or "fistulous cicatrix." He is of opinion that a cicatrix can only be filtrating temporarily; he likes the term fistulous cicatrix fairly well, but thinks that fistulisation expresses the object of the operation better.

The main part of the paper is taken up with a description of the result of the histological examination of the eye of a dog on which he had, in August, 1907, performed sclerecto-iridectomy for experimental purposes. He shows that the wound of excision in the sclera has not closed, and that there is free communication between the anterior chamber and the subconjunctival spaces. The demonstration is aided by drawings of sections of the parts involved in the operation. There can be no doubt that the object of the operation has been successfully accomplished. He explains that a larger piece of sclera had been excised in the case than is usual, as it was done only for the purpose of this demonstration.—LESLIE BUCHANAN.

The Glaucomatous State: The Differential Diagnosis between it and True Glaucoma Treatment. By Ch. Abadie (*Archives d'Ophtalmologie*, 1909, vol. xxix).—In this paper Abadie emphasises the importance of examining the periphery of the fundus of the eye in cases which present the symptoms of simple glaucoma. He has seen a case in which he made the diagnosis of simple glaucoma in 1900, and operated on the eye in 1903 (iridectomy). In the beginning of the present year he found the other eye in the same condition as the first had been nine years before. Examination of the first eye now showed that it was practically blind, owing to chorio-retinitis, whilst the tension was normal. He thinks that had he examined the fundus nine years ago he might have found the true cause of the glaucomatous state in which the eye then was, and, by means of suitable treatment, stopped the primary disease.

Acting on this principle, he treated the second eye by injections of cyanide of mercury, and was rewarded by finding that the glaucomatous state disappeared, and that the vision improved in a satisfactory manner. He advises that the eye be thoroughly examined in such cases, and treatment appropriate to the primary disease ordered before the glaucoma is dealt with.

—LESLIE BUCHANAN.

DISEASES OF CHILDREN.

The Willingness and Ability of the Poorer Classes to Suckle their Infants. By Heinrich Keller (*Wien. klin. Wochen.*, vol. xxii, No. 18, 1909).—Keller's statistics refer to 1,300 cases, and are compiled from observations extending over a period of two years. Among the poorer classes of Vienna he found that only 78·6 per cent of mothers suckled their children at the beginning; but he considers that this number could be undoubtedly increased, as 6·3 per cent through want of intelligence, and 13·5 per cent through external influences, were hindered from so doing. Midwives were, perhaps, the most important external influence, as they advised no fewer than 110 (8·5 per cent) to desist from suckling. Ten mothers were dissuaded by physicians, through no satisfactory reason, from performing this most