almost perfectly straight, the effect produced being about 30°.

I am indebted to my friend Dr. Maddox for his careful examination of the extent of strabismus before and after operation in these cases, and to my non-resident clinical clerk, Dr. Watson, for the other particulars. These were by no means the most satisfactory results obtained. In some of the other cases, of which I can find no exact notes, the strabismus was greater in degree and the effect of the operation more decided. In none was the operation ineffective or attended with subsequent annoyance, and I have confidence in commending it for adoption.

IRIDECTOMY OR NO IN CATARACT EXTRACTION.

Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association held in Bournemouth, July, 1891.

By F. R. CROSS, F.R.C.S., M.B.LOND.,

Ophthalmic Surgeon Bristol Royal Infirmary; Surgeon Bristol Eye Hospital.

FOR the thirteen years that I have had control of hospital beds, the operation that I have relied on for extraction of cataract has been the usual small flap lying in the cornea combined with an iridectomy, and I have been quite satisfied with the results.

Occasionally I have made the iridectomy as a preliminary step, especially where circumstances seemed unfavourable to the patient.

Meanwhile I have not been able to disregard the widespread revival that has been taking place abroad in favour of the method by simple extraction, one ophthalmic surgeon of the highest eminence after another having abandoned the iridectomy, some regarding it as an unnecessary detail, others as a positively harmful mutilation.

For rather more than two years I have practised simple extraction side by side with the modified Graefe operation. The cases under the latter method form a considerable majority; my notes are not complete, especially with regard to ultimate results, but some points of interest are shown in the records of the sixty-one simple extractions that I have done.

The problem is how to remove completely the cataractous lens with a minimum of damage to the eye structures, and with the ultimate result of good sight to the eye, which shall not have been predisposed to future trouble by the operation.

Complete removal of the lens is clearly facilitated by an iridectomy; the capsule can be lacerated with more precision the exit of the lens is not obstructed by the presence of the iris, fragments are readily seen in the pupil, and can be systematically manipulated time after time along the coloboma and through the corneal wound. Indeed, the thorough "toilette" of the eye which is thus indicated is, in my opinion, quite inadmissible under the simple operation. The fragments are lost sight of beneath the iris, attempts to extrude the *débris* drive them into the posterior aqueous chamber, and at the same time compress and bruise the delicate tissues of the iris and pupil in the corneal wound, by which means the natural tonicity is spoiled, and a tendency to after-prolapse encouraged.

The greatest care should be exercised to get all fragments to pass out along with the lens or directly after it; any remains should be left to absorb or to be dealt with by discission later on.

Twice I have done an iridectomy, as the lens did not easily escape. One was a case complicated with lime burn, the other had a result in vision of $\frac{1}{2}$; in a third case the lens had been imperceptibly loosened by a blow ten years previously. Under the capsulotome the lens shifted and vitreous escaped. Iridectomy was done at once, and extraction made by the scoop, with but slight loss of vitreous and a good ultimate result.

I have been surprised at the ease with which the protruding iris can be replaced by the spatula, aided by eserine, which I usually drop into the eye sac directly after the corneal section. Too early application of the myotic may pre-

vent the lens from readily passing through the pupil, and in one such case I cut off the bruised iris after the lens had escaped; in two other cases, not due to myosis, I preferred to cut off the iris after the extraction, rather than to return it in a bruised condition, and these obtained vision $\frac{1}{2}$ and $\frac{3}{8}$, which could have been improved by a needle operation.

In six cases, therefore, out of the sixty-one I resorted to iridectomy, either to facilitate the extraction, or because of bruising of the iris; not of necessity, but as a precautionary measure, which further experience would probably deem needless. Where a history of past injury suggests a possible dislocation of the lens, I think iridectomy should, as a rule, be done, to render the escape of the lens easy, or to facilitate the use of the scoop when required. In addition to the one already mentioned, I have lost vitreous once by the patient making a strong movement of the head during capsulotomy; the lens was extracted by Taylor's vectis without iridectomy. The iris was pushed away from the wound by the vitreous; healing was rather slow (in hospital 31 days), but resulted in a vision of $\frac{1}{2}$ without further interference. In another case the vitreous escaping, the lens was extracted by the vectis, with considerable loss of vitreous; here the iris prolapsed, and caused a cystoid scar which required a later iridectomy inwards. In two other cases a small bead of vitreous showed in the wound at the end of the operation, and was cut off. In one of these the corneal incision was rather small, causing extra pressure to force out the lens; this eye healed without any puckering of the iris, or the faintest anterior synechia. The other was in a traumatic cataract of some months' standing, and in which I feared a foreign body might be present. Healing was perfect; no anterior synechiæ; vision $\frac{3}{8}$, which a needle operation would certainly have improved. In only two out of these five cases would iridectomy probably have lessened the risks of loss of vitreous.

A priori one would expect this complication to be predisposed to by iridectomy and removal of the natural support given by the iris; on the other hand more force is required to expel the lens when the iris is complete.

The great objection to the simple method is the occurrence, after the operation, of prolapse of the iris, and the mere possibility of this complication is sufficiently alarming, more particularly one is, perhaps, tempted to think in private practice.

I always use eserine freely at the time of the operation, and formerly had it applied in the evening and for one or more days afterwards. I am also careful not to shift the patient for a time.

Prolapse has only occurred four times in this set of cases. A very silly old man of 71, after an excellent operation, became very irritable at night and shifted his bandages, prolapsing the iris, which was removed next day. A man of 81 had a bad chronic asthmatic cough; his eye seemed comfortable, and was not looked at for seven days, when the iris was found prolapsed, and was removed, leaving a part incarcerated. When last seen his vision was $\frac{1}{2}$; the eye quite healthy, with the exception of an anterior synechia. In another patient iridectomy was done on the sixth day; and in a fourth, a point of prolapse at the angle of the wound was removed on the tenth day, patient leaving hospital ten days afterwards with a narrow anterior synechia and a good pupil.

Thus far I have quoted fourteen cases more or less complicated, of which only the four prolapses, and three in which vitreous was lost, were at all serious. In one other a small piece of iris was sliced off in making the corneal section. On the other hand, there are thirty-five eyes in which the most conscientious examination failed to detect any malformation at the corneo-iritic angle; the corneal wounds are perfectly free from any synechiæ, and the fall of the iris is perfect in all. Many of these cases show some capsule at the pupil, and in some it is more or less adherent, but hardly any of them have been submitted to any secondary operation, and no one could doubt that a discission would make most of them practically perfect.

In the remaining eleven cases there was more or less anterior synechia. Five of these show a slight adhesion of the ciliary margin to a portion of the wound near its extremities, which is only seen by careful examination.

In the other six the synechia is more considerable, but the pupil is quite free in four of them, and I do not feel that these

eyes are in any more danger from a future glaucoma or iridocyclitis than many in which a fairly good iridectomy has been made.

I would not say this—I anticipate no ill result—of another of this group where the upper margin of the pupil is incarcerated in the corneal wound, though there was no absolute prolapse. The patient was a boy, 14 years of age, quite blind from cataract associated with advanced diabetes. I extracted his right lens easily under cocaine with no mishap; but I had great difficulty in keeping him under control for proper reduction of the iris. The eye healed well, with useful vision. I needled the opposite lens before he left hospital.

The last case is a man of 71, whom I recently saw a year after the operation, and whose iris became incarcerated in the corneal wound, just catching a point of the pupil. There remains a white line of sclerosis at the site of the wound; the eye looks healthy, and sees $\frac{1}{2}$ r, and has never given any discomfort.

No notes, unfortunately, have been made of the vision of eighteen of the cases; these include but few of the complicated ones, so that their results are at least as good as the average of the remaining forty-three, namely: in one, $\frac{1}{2}$; in five, $\frac{1}{2}$; in seven, $\frac{1}{2}$; in six, $\frac{1}{2}$; in six, $\frac{1}{2}$; in nine, $\frac{1}{2}$; in six, $\frac{1}{2}$; in one, $\frac{1}{2}$; in one, fingers, in one, p. l. The last was in a man suffering from well-marked diabetes, in a system broken down by drink, and whose other eye had been removed. His cataract was mature, the eye looked healthy, and he had fair projection of light, narrowed above and outside. His eye recovered rapidly and perfectly, with the exception of a slight film across the pupil.

Such a slight posterior synechia by a very thin membrane across the pupil has occurred in a great number of my cases. I attribute it partly to keeping the pupil so long under eserine, and partly to the slight *débris* that I nearly always leave in the capsule for fear of damage to the iris by excessive manipulation. Its trivial nature is indicated by the visions above quoted; and as the patients again come under observation I shall need a large percentage of them, no doubt with considerable improvement. By personal supervision during the first two weeks of healing, and a judicious occasional use of atropine, this slight defect could be largely remedied; but in the earlier days I think atropine may encourage prolapse, whereas eserine is a protection against it; and I consider a slight posterior synechia of no serious moment where the iris is otherwise perfect.

There was no case of suppuration of the cornea. Iritis no doubt occurred more or less where there was incarceration. I noted two cases of hypopyon, which recovered with anterior synechia and freely movable pupils. Two slight attacks of iritis alone were noted in eyes which recovered completely. Twice I have noticed on the fourth day after the operation a peculiar lymph deposit on part of the front of the iris, which cleared away in a few days.

From what I have seen, I am convinced that healing takes place more rapidly and better under the simple method than with iridectomy. The pupil retains its normal functions, and continues to act as a perfect diaphragm for the admission of light. The question of appearance is also not entirely a sentimental one. I have operated for a man of 40, whom his employers had threatened to discharge because of the evident defect in one eye caused by a cataract, the other being perfectly good; they were quite content when he returned from me with a clear black pupil—a coloboma might have lost him his place. Employers must be humoured, even when—as I have often known—they prefer work done by emmetropes to that under conditions of perfect sight with aid of spectacles.

Iridectomy has been of such value as a remedial and preventive measure in ophthalmic practice, that one might almost fancy it a safeguard *per se*. Yet there can be no doubt of the greater physiological perfection of the intact iris; it is the anterior free margin of the vascular secreting tunic of the eye; it helps to protect the ciliary body and the hyaloid after the lens is removed. I fancy the secondary membranous capsule so often seen after iridectomy is less likely to occur. Moreover, the presence of the iris lying in its normal position prevents the possibility of any incarceration or synechia of the lens capsule or of the hyaloid at the corneal wound—a source of danger more insidious, but not less real, than incarceration

of the iris for the future of the eye from glaucoma,¹ and septic infiltration.

There are advantages and disadvantages in each method of operation, and I would not venture on my present experience to decide between them. The simple method may be rather more difficult, but gives possibility of more perfect results; it is, perhaps, best adapted for cataracts that are barely mature, and for patients younger than the average. When the lens has been some time matured, and appears rigid and unpliant, especially if the patient is likely to be restless, iridectomy would probably be indicated.

OPHTHALMOLOGICAL SECTION.

N. C. MACNAMARA, F.R.C.S., President, in the Chair.

Modified Method for Advancement of Rectus.—Dr. ARGYLL ROBERTSON read the paper published at page 471.—Mr. JULER thought the operation described by Dr Argyll Robertson extremely ingenious, and likely to prove very helpful in the advancement of a muscle. Up to the stage of exposing the tendon it was similar to a method which he (Mr. Juler) had adopted; he also fixed the tendon with Prince's hook, but he at the same time advanced the capsule of Tenon with the muscle. With regard to cocaine, he differed from Dr. Argyll Robertson in preferring it to general anaesthesia for these cases, inasmuch as the exact effect of the operation could be ascertained as the operation proceeded, whilst under general anaesthesia the eyes were generally somewhat abnormal in their direction, and afforded none but misleading information as to the ultimate result of the operation.—After some remarks from Mr. BRAILEY, Dr. ADOLF BRONNER said he had used the method of Professor Schweigger, which was similar to that recommended. He preferred operating without an anaesthetic and with cocaine, as, apart from other advantages, the patient could move and keep the eye in any position convenient to the operator. He used catgut, and passed it not only through the conjunctiva, but also through the superficial layers of the sclera.

Case of Wound of the Sclerotic with Penetration of Eyelashes into the Anterior Chamber.—Dr. ARGYLL ROBERTSON said: Of late a number of cases of penetration of eyelashes into the anterior chamber through a wound of the cornea have been recorded, but the case I am about to relate differs from others in this important particular—that the wound which gave access to the eyelashes was confined to the sclerotic. On January 13th last, J. B., aged 30, was admitted to the ophthalmic wards of the Edinburgh Royal Infirmary. He stated that on the evening of the previous day he was engaged cutting floorcloth when the knife slipped and wounded his left eye. The knife had a straight cutting edge of about 5 inches in length, and was sharp to the point. The breadth of the blade was about an inch, and it tapered rapidly to a point at its extremity. There was a little bleeding from the eye at the time of the accident. On examination a wound of the sclerotic was observed about 9 mm. in length, a little to the inner side of the cornea. The wound was almost vertical, but slightly inclined to the nose at its lower extremity. At its nearest point it was distant 3 mm. from the margin of the cornea. A little vitreous humour projected between the lips of the wound. There was also a single loose eyelash lying in the wound which was removed with forceps. A blush of injection surrounded the cornea, and the iris presented a slight discoloration. In the anterior chamber were two bodies, evidently eyelashes, lying close together, their axes vertical, their thicker extremities situated below in the angle of the anterior chamber, from which they stretched across the pupil, terminating in front of the iris above. On close examination, the stumps of three cut eyelashes could be seen in the lower eyelid, about the junction of its inner and middle thirds. The patient's vision was reduced to mere perception of light. The cornea was entirely uninjured; there was no blood in the anterior chamber; the pupil was circular; the iris was in its natural plane and did not quiver with the movements of the eye, and examination by oblique illumination failed to reveal any opacity or displacement of lens. Atropine was applied, the eye washed freely with perchloride of mercury solution (1 in

¹Collins, *Trans. Oph. Soc.*, vol. x.

5,000), and a bandage with antiseptic dressing applied. The eye progressed favourably for three days, the injection diminishing and the wound cicatrising, but on the following day he complained of pain and there was increased circum-corneal injection. Three days later it was observed that the eyelashes had shifted their position somewhat towards the temporal side of the anterior chamber, while the patient complained of increased pain, especially at night. On the following day the inflammatory signs were increased, and it was observed that the lower extremities of the eyelashes were enveloped in lymph. Consequently, next day (January 21st) I made an incision at the lower margin of the cornea and succeeded in extracting the eyelashes with a pair of iris forceps, without injury to the iris. The fluid which escaped through the incision was quite liquid and not at all glutinous in character. After the operation the inflammatory symptoms rapidly subsided and vision improved. On ophthalmoscopic examination the fundus could only be very imperfectly seen owing to diffuse haziness of the vitreous humour and the presence of large floating blood clots. The position of the optic disc could be discerned, but nothing further. He could, a fortnight after the operation, when he was discharged, count fingers at 8 feet.—(For notes of the case I am indebted to my clinical clerk, Dr. D. H. Balfour.) The chief interest and peculiarity in this case lies in the difficulty in explaining the channel by which the eyelashes penetrated into the anterior chamber. That the knife was not pushed directly into the anterior chamber was abundantly proved by the absence of blood in the aqueous humour, the circular form of the pupil, and the intact condition of the lens, while the appearance of vitreous humour at the wound and the existence of large blood clots in the vitreous chamber indicated extensive penetration of that cavity. The only feasible explanation of the passage of the eyelashes into the anterior chamber, in my opinion, consists in the supposition that the wound implicated the extreme angle of the anterior chamber, effecting a minute channel of communication, that the eyelashes were at first driven into the vitreous humour, and thereafter passed through this narrow aperture into the chamber of the aqueous humour—possibly assisted by the natural current of fluid, from the vitreous into the aqueous chambers, that exists in the interior of the eye.—Dr. HILL GRIFFITH observed that if, as some observers considered, the suspensory ligament were composed of separate fibres, it might not be necessary even to presume any rupture at the angle of anterior chamber.

The Action and Uses of Prismatic Combinations.—Dr. ARCHIBALD PERCIVAL said that the symptoms which arose from slight defects in the muscular balance caused great distress to the patient, far greater indeed than when strabismus was well marked. Headache and giddiness were rarely absent, but they were generally associated with certain other symptoms of the neurasthenic type. The errors on which these symptoms depended were so slight that prisms naturally suggested themselves as the most rational method of treatment. Their indiscriminate use, however, had proved far from successful. This want of success was due to an imperfect recognition (1) of their precise action; (2) of the special conditions for which they might be appropriately prescribed. There were, however, deeper causes at work also; there was no uniformity of opinion as to the ideal condition which it was desirable to produce, and the methods of diagnosis were liable to all the sources of inaccuracy which inevitably attended purely subjective tests. The action of plane prisms was well known; if they caused a deviation in a ray of light of 10° , they also made the fixation line of the eye deviate to the same extent. When, however, a prismatic combination was used the effect was very different, as had been noticed by Dr. Maddox. A concave combination induced a smaller deviation than that of the prismatic component, whereas a convex combination induced a greater if the object was at a distance greater than the focal length of the lens. The special conditions for which they might be appropriately prescribed were:—1. *Hyperphoria*.—The whole error should be corrected, and it would rarely be found that prisms of more than 2D were required for this purpose, so that prismatic combinations were suitable for almost all these cases. 2. *Esophoria and Exophoria*.—It was important to distinguish between that class of cases in which the amplitude of convergence was impaired,

and that in which it was not impaired. If the amplitude of movement was less than 18° it might be taken for granted that the muscles were weak, and in such cases orthoptic exercises should be recommended, and prismatic glasses were essentially unsuitable. If, however, the amplitude of movement was more than 18° , prisms for constant use were admissible, provided that the error to be corrected did not exceed 2D. The question what prisms were to be given arose. There were three methods or principles of treatment which might be adopted: (a) The faulty tendency which revealed itself as a deviation by some device, such as Dr. Maddox's glass rod test, might be corrected. (b) A part only of this faulty tendency might be corrected; in fact, just so much as was necessary to avoid fatigue. (c) The far point of convergence might be placed in its normal position, just as in treatment of refractive errors the far point of accommodation was adjusted to its normal site by the correction of the manifest hypermetropia. It must be remembered that the relation between the functions of accommodation and convergence was not the same in the subjects of refractive or muscular anomalies as in normal persons. Should this abnormality of the relation of these functions be regarded as corrigible or not? The author expressed some leaning towards the method of treatment which had for its object avoidance of special exertion (A), as it seemed to restore the patient more closely to that condition which normally obtained.

Iridectomy or No in Cataract Extraction.—Mr. F. R. CROSS read the paper published at page 472.—The PRESIDENT stated that when first iridectomy was introduced for extraction he opposed its necessity, and from that time on he had in various editions of his work on the eye restated this opinion, and his practice had followed these views up to the present time. But as time had gone on he had learnt that the most successful surgeon was he who adapted his operation to the circumstances of the case at the time he was operating. If, in a fairly healthy eye, the surgeon had made a section through which he was satisfied the lens would pass easily, there could be no necessity for removing any portion of the iris. On the other hand, if in any doubt as to the section, or as to the healthiness of the iris, surely he would not hesitate to remove a limited portion of the iris, that was, to make a small iridectomy. Whether iritis followed either operation would depend to some extent upon the success with which the wound and anterior chamber were kept free of septic matter; too much importance could not be attached to the care to be taken, both at the time of the operation and in subsequent dressings, to keep the parts aseptic.—Dr. LOUIS H. TOSWILL said that in the large majority of cases he did a simple extraction. He believed his results had been decidedly better, and that there was actually less liability to iritis than when iridectomy was performed.—Dr. ARGYLL ROBERTSON stated that as a believer in the beneficial effects of iridectomy in cataract extraction he could not avoid expressing his opinion in its favour. He recalled the period before the introduction of von Graefe's method, when extraction was always done without iridectomy and the advantage which resulted from the removal of a portion of the iris. The security of an operation was, as a rule, proportionate to the extent of the incision necessary for its performance. The performance of iridectomy enabled a lens to be removed through a smaller incision. A further advantage was that loose particles of lens might be more readily removed, and if the suspensory ligament gave way, and the lens became dislocated in the course of the operation, instruments could be more readily introduced for the extraction of the lens. Further, the after-treatment was simplified, as any slight exertion on the part of the patient was not attended with so much risk of prolapse of iris, and thus the patient need not be kept so long or so thoroughly at rest. Further, he was of opinion that the disfigurement and other evils produced by iridectomy had been very much exaggerated, as when the iridectomy was made upwards the enlargement of the pupil was very generally so covered by the upper lid as scarcely to be visible except on careful examination, or on elevating the upper eyelid. He also took exception to the statistics that were often produced, as even those who advocated the operation without iridectomy very often subjected the most unfavourable cases to an iridectomy. Now, why did they do this? Simply because the operation with an iridectomy was the safer one. He was con-

fident that if all cases—complicated and uncomplicated alike—were subjected to the operation without iridectomy, the statistics would be found less favourable than when an iridectomy was conjoined with the operation. As the result of his own experience he felt that the iridectomy gave increased security to the operation.—Mr. M. McHARDY was glad to be able to coincide with all those views which Dr. Argyll Robertson had so beautifully expressed. From the paper and from some of the remarks thereon he had begun to wonder whether he was getting old-fashioned. Even if he were, he was doing so in excellent company. No one who had ample experience of cataract extraction with and without iridectomy, would feel warranted in dispensing with iridectomy in any awkward unpromising case. It would be running too great a risk. Why, then, he asked, should eyes, no matter how promising, be exposed to that additional risk which there was excellent reason for believing could be obviated by taking the pains to make a small iridectomy upwards where all trace of it would be hidden by the upper lid?—Mr. J. ELLIOT SQUARE said that though he had not had much experience, he was so satisfied with his results in the extraction of cataract with iridectomy that at present he did not feel justified in changing his method of operating. He had had no protrusion of iris through the wound, and remarkably good vision, which was the test of a good result as far as the patient was concerned.—Mr. J. GROSVENOR MACKINLAY said that he had not changed the opinions he had expressed two years ago at Leeds—namely, that he preferred iridectomy in cataract extraction, and, if possible, as a preliminary operation. He had done but few extractions himself without iridectomy, but had seen a very large number done by others, and in the majority of them he had noticed that anterior synechiæ existed. He agreed with the remarks of Dr. Argyll Robertson that an iridectomy done upwards was of but slight, if any, disfigurement to the patient; but he laid stress on the iridectomy being moderate in size, and shaped like an inverted keyhole.—Dr. HILL GRIFFITH advised all to try extraction without iridectomy; distinguished observers were to be found on both sides. Healing was slower after the simple extractions. The prevention of incarceration of hyaloid seemed a very important point.—Mr. CROSS, in reply, said that he was not surprised at the strong opinion expressed in favour of iridectomy. An equally strong opinion in the opposite direction would probably be given in any meeting of ophthalmic surgeons on the Continent. For himself, he should continue to operate by both methods, and, he thought, with increasing confidence in the simple method. With a perfect corneal section it was certainly wrong in many cases to do an iridectomy, especially if the lens was not fully matured, as it then more easily adapted itself to pressure, and escaped readily. He made a section of one length in all cases, whether he intended to do iridectomy or no, aiming at a perfect 3-millimetre flap, which he thought large enough for all cases. He had not found cyclitis from fragments left ever occur; it was not, he believed, admissible to prolong the toilette of the eye in simple extraction. The less the iris was manipulated and bruised the better. At the end of a day or two the tendency to prolapse was virtually over. In one case closure of the corneal wound had been very slow—more than a fortnight elapsed—but in this case there was no synechia. The cases alluded to in the paper were not selected cases, and in many a by no means perfect corneal incision had been made. The old arguments in favour of iridectomy had been strongly put by the speakers, but Mr. CROSS believed that the simple extraction was the more perfect operation, and, as its *technique* was improved, it would gain in popularity.

The Pathology of the Ophthalmoplegiæ.—Drs. W. J. COLLINS and L. WILDE read a paper on the pathology of the ophthalmoplegiæ. After reference to the complexity of the subject owing to possibility of small lesions producing large results, and the rarity of *post-mortem* examinations, the history of knowledge on the subject was briefly reviewed. It was pointed out that accumulating evidence made it impossible any longer to regard a group of symmetrical oculo-motor paralyses as isolable into a unique malady called ophthalmoplegia, but that these must be considered in relation to ocular monoplegia on the one hand, and bulbar paralysis, locomotor ataxy, and infantile spinal

paralysis on the other. The so-called ophthalmoplegia interna could no longer be classed as a peripheral palsy, or as due to disease of the lenticular ganglion. Anatomical, physiological, and clinical facts alike opposed this view, and pointed to central nuclear lesion, most probably in the anterior part of the floor of the aqueduct of Sylvius. The authors suggested the following classification of ophthalmoplegiæ:—

- I.—CEREBRAL: (a) Cortical.
- (b) Cortico-peduncular.
- (c) Nuclear.
- III. { 1. Cycloplegia } “Ophthalmoplegia Interna.”
- { 2. Iridoplegia }
- { 3. Palsy of extra-ocular muscles. Ptosis.
- IV. 4. Palsy of superior oblique.
- VI. 5. Palsy of external rectus.
- (d) Radicular (and Commissural).
- II.—BASAL: (a) Region of Pons.
- (b) ” ” Peduncles.
- (c) ” ” Cavernous Sinus.
- (d) ” ” Sphenoidal Fissure.
- III.—ORBITAL (including Peripheral).

The authors had collected 141 cases of ophthalmoplegiæ, and classified them according to sex, age, course, history, symptoms, seat of lesion, treatment, result, etc.; of 112 cases 73 were males, 39 females. With regard to age the decades from 20–30, 30–40, and 40–50 were the most liable. Syphilis was the cause in at least 33 per cent. The side affected when unilateral was a matter of indifference. When palsy of either iris or ciliary muscle coexisted with extra-ocular palsy it was more frequently the former—in 31 cases out of 34—which fact was a corollary to the accepted relation of the centres for them in the nucleus of the third nerve in accordance with Henson and Voelcker's researches. The greater fatality of the disease, when occurring in young persons, was emphasised.—Dr. HILL GRIFFITH and Mr. MACKEY thanked the authors for their contribution, the latter drawing especial attention to the work of Dr. Alexander Bruce, of Edinburgh, on the anatomical relations of the nuclei in the floor of the aqueduct of Sylvius, and pointing out that Dr. Bruce's description differed in some important particulars from those of either Kohler and Pick, or Henson and Voelcker, which had been referred to by Dr. Collins.—Dr. COLLINS briefly replied.

Resolution.—The following resolution, proposed by the PRESIDENT and seconded by Dr. HILL GRIFFITH, was adopted: “That a committee, with power to add to its number, be appointed to promote the efficient control of railway servants' eyesight in the United Kingdom and to report thereon from time to time to the British Medical Association; that such committee be designated the ‘Committee on the Control of Railway Servants' Eyesight,’ and that the following ten be appointed to serve thereon: Messrs. W. M. Beaumont, T. Bickerton, W. J. Collins, G. A. Critchett, C. E. Fitzgerald, D. Little, M. M. McHardy, N. C. Macnamara, George Mackay, and Argyll Robertson.”

PRESENTATION.—Dr. Maunton Davies, of Bridgend, was recently presented by the working men of Pencoeed with a handsomely-illuminated address and a cheque in testimony of their respect and esteem.

INTERNATIONAL METEOROLOGICAL CONGRESS.—An International Meteorological Congress was opened at Munich on August 26th. The chief officials of a number of State Meteorological Institutions were present, America, which may be called the fountain head of weather prophecy, being represented by Professors Abbe and Harrington, of Washington, and Mr. Rotsch, of Boston. It is devoutly to be wished that the meeting may result in some measures whereby Englishmen in particular may be able to protect themselves against the uncertainty of the national climate, if not by controlling the elements, at any rate by some fairly trustworthy method of forecasting its vicissitudes even a few hours beforehand.

THE VACCINATION ACTS.—The Hinckley Board of Guardians have rejected by fourteen votes to four a proposal to enforce compliance with the Vaccination Acts. Two members did not vote. By the same majority the Board decided to adjourn all action till the report of the Royal Commission on Vaccination had been received.