will take the chair. Applications for tickets should be made to one of the honorary secretaries, Dr. A. G. Phear, 47, Weymouth-street, W., or Mr. T. P. Legg, F.R.C.S. Eng., 141, Harley-street, W., not later than Wednesday, Dec. 6th.

Sir Frederick Treves, who opposed Mr. C. T. Ritchie, M.P., on academic and non-political grounds for the Lord Rectorship of the University of Aberdeen, has been elected by a majority of 237 votes. The total number of votes recorded was 543 and nearly 300 students refrained from voting.

WE are requested to announce that in consequence of unforeseen contingencies Mr. Cockerton, the Local Government Board auditor, has postponed the adjourned hearing of the case before him in which the British Medical Association challenges certain payments made by the London County Council, from Nov. 21st to Nov. 28th, at 11 A.M.

A MEETING of the council of the Invalid Children's Aid Association will be held on Thursday, Nov. 30th, at 4 P.M., at Denison House, Vauxhall Bridge-road, when Sir William H. Broadbent will give an address on the Tuberculous Children of the Metropolis, and a report will be given of the work of the association and its possible development.

THE annual dinner of the Harveian Society of London will take place at the Wharnccliffe Rooms, Hotel Great Central, on Thursday, Nov. 23rd, at 7 for 7.30 P.M., the President, Mr. C. B. Lockwood, in the chair.

THE ACTION OF THE EXTERNAL MUSCLES OF THE EYE, AND THE DIAGNOSIS OF OCULAR PARALYSIS: PROFESSOR ELSCHNIG'S DIAGRAM.

BY DUNCAN MATHESON MACKAY, M.D. EDIN.,
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THE action of the individual orbital muscles and the effect of paralysis of one or more of them are admittedly not easy to keep in mind, especially by those who do not have to diagnose cases of strabismus every day. Even oculists find

grasped as that of Professor Elschinig of Vienna. I have therefore ventured to epitomise the article in which he introduced it to his German-speaking *confrères* and which is published in the *Wiener klinische Wochenschrift* of August 28th, 1902. The same subject is dealt with by Professor Elschinig in the "Encyklopädie der Augenheilkunde," published by O. Schwarz. The diagram is a modification of one by Professor Schnabel, which has been much in vogue in Austria up to now.

In the diagram each of the arrows representing the action of the individual elevators and depressors (rectus superior, obliquus inferior, obliquus superior, rectus inferior) indicates (a) the direction in which the summit of the cornea would be moved by isolated contraction of the muscle concerned, and (b) by the inclination of the arrows towards the vertical, the position imparted to the vertical meridian of the cornea, by the same contraction. For example, isolated contraction of the right superior rectus would: (a) move the summit of the cornea upwards and inwards, and (b) incline the vertical meridian of the cornea to the left (that is, "wheel-motion" to the left). ("In speaking of the inclination of the vertical meridian of the cornea it is the upper extremity of this meridian which is meant."—Swanzy.) Similarly, isolated contraction of the right inferior rectus would: (a) move the summit of the cornea downwards and inwards, and (b) incline the vertical meridian of the cornea to the right. The arrows on the horizontal line indicate the direction in which the summit of the cornea moves with isolated contraction of the external or internal rectus.

Further, the starting-point of each inclined arrow on this horizontal line indicates the position in which the cornea must be in order that isolated contraction of an elevator or depressor may have the greatest elevating or depressing effect. That is to say, the rectus superior and the rectus inferior (for example) exert the greatest effect as to elevation and depression of the cornea when the eye is in the abducted position; and the obliquus inferior and the obliquus superior exert their greatest effect as to elevation and depression when the eye is in the adducted position.

Also, since the "wheel-motion" action of the elevators and depressors in each case is in the inverse ratio to the elevating or depressing action—the greater the elevating or depressing action the slighter the "wheel-motion" action and *vice versa*—there is evident from the diagram the position of the eye in which each elevator and depressor is able to exert the greatest "wheel-motion" action; that is, the rectus superior and rectus inferior exert the greatest "wheel-motion" action when the eye is in the adducted position and the obliquus superior and obliquus inferior exert their greatest "wheel-motion" action when the eye is in the abducted position.

The opposite of these two statements is true also—namely, that when the eye is adducted the elevating and depressing

it convenient to employ a diagram, either real or mental, by which they may recognise from the character of the diplopia the particular muscle or muscles which are affected. So far as I am acquainted with the diagrams appearing in the text-books usually available to students and practitioners there is not one which is, in my opinion, so concise and so easily

action of the elevators and depressors is least and when the eye is abducted the "wheel-motion" action of these muscles is least.

As a matter of fact, however, no regard needs to be paid to the "wheel-motion" in the diagnosis, by means of the diplopia, of paralysis, except in the case of the examination

of the obliquus superior, the action of which muscle is best tested when the eye is adducted.

A glance at the diagram therefore at once reveals, in the case of paralysis of one rectus (superior or inferior), that the defect of movement of the eye is most distinctly seen,—or, in other words, that the difference in height between the two images (false and true) is the greatest,—if the eye under examination be elevated or depressed while in the position of abduction; that is, for example, in the case of the right eye when it is turned to the right and upwards, or to the right and downwards.

In the case of paralysis of one oblique the defect of movement is most distinctly seen,—or, in other words, the difference in height between the two images is the greatest,—if the eye under examination be elevated or depressed while in the position of adduction—that is, for example, in the case of the right eye when it is turned to the left and upwards or to the left and downwards.

This may be translated into practice thus: if in any case of paralysis of an elevator or depressor the defect of movement of the eye (or the difference in height between the two images) is greater in the abducted position of the eye than in the adducted position one knows it is a rectus which is paralysed. In the opposite condition, where the defect of movement (or the difference in height between the two images) is greater in the adducted position of the eye than in the abducted, one knows that it is an obliquus which is paralysed.

A single example may still further elucidate the diagnosing of the paralysis from the examination of the double images by the use of this diagram. If the flame of the candle placed in the middle line reveals double images separated by distance in height, and if this distance in height increases the more the candle is lifted up one knows it is an elevator that is paralysed,—and an elevator of that eye, the image of which stands the higher (the image belonging to each eye is recognised, of course, by the aid of a coloured disc held before one of the eyes). Suppose, now, that this is the right eye. If, then, the elevated candle, always at the same height, be moved to the right and left, and if the distance in height between the two images increases as the candle is moved to the right (so that the eye tends to the abducted position) and diminishes as the candle is moved to the left (so that the eye tends to the adducted position), then we know that it is that elevator, the elevating action of which is the strongest in the abducted position, which is paralysed—that is, in this case the rectus superior of the right eye.

It is important in practice, when the elevators and depressors are being examined, to allow the patient to pay attention only to the distance in height between the images; the lateral interval, whether the diplopia be homonymous or crossed, is not only irrelevant but often perplexing and deceptive.

Further details of the diagnosis of the paralysis of the muscles of the eye by the use of this diagram are to be found in the article in the "Encyklopädie" already referred to.

FILTHY ADVERTISEMENTS.

WHEN on Oct. 19th the Bishop of London delivered his charge at St. Paul's Cathedral he touched upon a subject of vast importance to the national health, both moral and material, in drawing attention to the birth-rate and to the causes to which its recent marked diminution is to be attributed. "When I turn," he said, "from marriage to what ought to follow the marriage, the purity and happiness of home life, it is impossible for me to describe with what dismay I view the diminishing of the birth-rate not only in England but in the colonies and the proved cause to have been, and still to be, the limitation of the birth-rate by artificial means." Without quoting further the Bishop's address we would express the hope that those who sympathise with his views and who desire to see more healthy conditions prevail may be willing to consider, when they are put plainly before them, some of the causes responsible for that which he condemns. We do not refer to questions of industrial depression or to those individual conditions which may cause married men and women to desire to escape from the responsibility of rearing children, we refer rather to the agencies which lay temptation in the way of thousands whom it would not otherwise assail and which suggest to

innocent minds the possibility of freely gratifying sexual passion without ulterior consequences being involved. In some instances these agencies incite to the commission of what is at law a crime, in others the fear of punishment deters them from this. We have before in THE LANCET dwelt upon the freedom with which newspapers of the lower class open their columns to advertisements which if placarded in public urinals would render those responsible amenable to the criminal law, and about the same time certain criminal prosecutions threw so much light upon the methods of advertisers of supposed abortifacients that their advertisements were to a large extent discontinued. They have not, however, wholly disappeared and we have before us examples which will serve to illustrate our meaning.

The November number of *Myra's Journal* contains fully a dozen advertisements which, we should have thought, no newspaper proprietor anxious to keep the columns of his journal clean could regard without suspicion. If in this instance those responsible have not considered the import of what they have been paid to insert we express the hope that having had their attention called to the scandal they will take steps to prevent its recurrence and that others will be warned at the same time and will desist from giving publicity to such noxious matter. *Myra's Journal* otherwise appears to be a monthly publication almost entirely filled with matters relating to dressmaking. It distributes paper patterns of garments for women and children and, speaking generally, appeals to the class of women and girls who make their own clothes rather than to those who have recourse to expensive dressmakers.

Whether it is fit to circulate in any decent family while such advertisements appear in it is for parents to say. We can only observe that any young girl tempted by curiosity who ventured after reading them to write for a "new book containing over 80 pages of information of priceless value to all married ladies, or those contemplating marriage" (a book sent post free), or for the catalogues of "rubber goods" (offered with similar liberality), would soon acquire a second-hand knowledge which would place her on an equal footing with an experienced prostitute.

We have answered some of these advertisements and we propose to quote one or two of them as examples, with sufficient extracts from the advertisers' replies to show the nature of their traffic. Our letters to some were couched in such plain terms as to leave no doubt as to what the supposed inquirers desired. Two of them, simply asking for the books mentioned, were addressed to firms which advertised as follows:—

BOOK FOR WIVES.

The management of a Husband, Hints to a Husband, etc., upwards of 80 pages of valuable information, Sealed packet, One Stamp. List of Accouchement Outfits, Belts, etc., One Stamp.—M. J. CHARLES & Co., 20, Bishopsgate Street Without, London.

LADIES! LADIES!

Send for our New Book containing over 80 pages of information of priceless value to all married ladies, or those contemplating marriage. All will profit by reading it, as the knowledge it contains cannot fail to do good. For a short time only we will send a copy in sealed envelope (free).—M. DORSAN & Co., Publishers, West Norwood, London.

Both these firms answered promptly and both sent copies of the same book, a pamphlet of over 70 pages, adorned on the outside with a sketch of a young woman meditating with a large volume on her knees and with a medicine bottle on a table by her side. The pamphlet is further described on its cover as "Printed and published by T. A. J. Waddington, York. Copyright. Entered at Stationers Hall." Its title is "Advice to a Young Married Woman" and it contains a large amount of twaddle on such subjects as "the management of a husband," with a great deal of semi-medical advice as to pregnancy, confinement, and the treatment of infants. Its ninth chapter, however, makes clear its *raison d'être*, leading up to the private advertisements of the firm, who will supply the apparatus recommended and who consequently are, no doubt, glad to hear from anyone who desires to receive the "Book of Advice" free. This chapter is headed, "How Conception in Woman may be Prevented," and after some speciously worded introductory paragraphs it broaches the subject thus: "There are a dozen methods of checking conception, all being based upon the principle of keeping the man's seed from remaining in the woman's womb or of preventing it from passing into it at all. Perhaps the easiest and safest method is with the —." We do not propose to quote this portion further. From a subsequent page, however, we cite the following: "Without precautions she may be 'caught' at any time and may bear any