Based upon these measurements of the intra-ocular, venous and arterial pressures, after the manner of Bailliart, Lauber comes to the conclusion that the determining factor in the development of swelling of the optic discs and the accompanying phenomena is the raised diastolic retinal venous pressure and its increase in relationship to the diastolic retinal arterial pressure.

In all cases of increased intra-cranial pressure where the relationship between the minimal retinal venous and arterial pressures was as 1 : 1·7 and 1 : 1·26, there was no swelling of the discs. In those cases where the relation of these two pressures lay between 1 : 1·7 and 1 : 1·5 there was always hyperaemia of the discs and blurring of the edges. In those cases where the relationship was lower than 1 : 1·5 papilloedema invariably occurred.

Paton and Holmes have called attention to the fact that papilloedema is more marked in the eye with the lower intra-ocular pressure where a difference in this respect exists between the two eyes. In this connection the author quotes a case where papilloedema occurred in an eye as the result of low intra-ocular pressure alone. A patient with bilateral glaucoma had a cycloidalysis done on both eyes. In one eye tension became normal and the disc remained unaltered. The other eye had its tension much lowered and swelling of the disc of about 2·5 D. developed together with fine haemorrhages. Gradually the tension increased and the disc became normal. A second glaucoma attack occurred for which an iridectomy was done and immediately the swelling of the disc recurred.

A. H. LEVY.

BOOK NOTICES

The Relation between Illumination and Industrial Efficiency.
By Mr. H. C. Weston. H.M. Stationery Office. 1935. Price, 4d. This is the title of a publication by the Department of Scientific and Industrial Research, a Joint Report of its Illumination Research Committee, and the Industrial Health Research Board.

The research was undertaken at the National Physical Laboratory, where 18 members of the Photometric department have sat in relays in whitewashed cubicles of measured size, marking off on 6 cards, which contained a series of 256 broken rings of Landolt, those rings in which the break was at a particular point on the circumference. The size of the rings varied on each of the six cards and the cubicles had different degrees of illumination which ranged from 0·16 ft. candle to 500 ft. candles. The speed and accuracy at which the task could be done were measured.
The object of this research is to try and discover if a method can be worked out for determining the illumination necessary for any particular task. The details of the task are separated into such factors as size, contrast, movement, and perhaps colour, and the amount of illumination required for its efficient performance is determined. After the work has been analysed in this way it is hoped that it may be possible to bring the results together and express them in terms of the total illumination necessary for its most efficient performance. The present report deals only with the relationship between size of object and illumination and will be followed by others in which the other factors involved will be discussed.

The report shows that a definite relationship exists for each size between performance and illumination. The results obtained show that it is possible to find the relationship between size of work and illumination which will give a performance equal to a definite percentage of the maximum performance for the size under consideration.

An illuminating engineer is now in a position to state with regard to work of any given fulness of detail that a rate of performance equal to, e.g., 98 per cent. of the maximum rate which could be obtained under unlimited illumination will be possible with an illumination of a certain definite number of foot candles. The relative cost of the various degrees of lighting can be estimated and then related to the total cost of performing the job under consideration. So instead of the empirical methods which have been employed to date the most effective and at the same time economical value of illumination can be reached on a scientific foundation.

The research is due to the suggestion of Mr. A. W. Beuttell of the Society of Illuminating Engineers; when the other components named have been analysed and the results recorded, a notable advance will have been made in the science of illumination.


The author has endeavoured to produce a comprehensive work on the embryology, anatomy, physiology and chemistry of the lens and to describe certain recent conceptions of the pathogenesis of cataract and its treatment. He states that a compilation of the vast amount of literature that has accumulated about the lens would be too voluminous for a single book. Instead he has selected for discussion works that are most generally accepted. Well established facts and some conceptions that are at present still mainly theoretical he has martialled and presented in as concise a manner as possible.
Chapters I and II on the development of the human lens and the comparative anatomy of the lens have been contributed by Miss Ida Mann. A chapter is devoted to congenital anomalies of the lens other than cataract.

The pathogenesis of cataract is discussed under a variety of headings such as toxic, radiant energy, vitamin-deficiency, kidney dysfunction, endocrine disturbance, cytotoxins and others. The reviewer is of opinion that the author could have with advantage amplified the clinical account of the pathogenesis of cataract and have made some fuller criticisms of this aspect of his subject. The same applies to the almost bewildering variety of operative procedures which he has described in the chapters dealing with the surgical treatment of cataract. The complexity of some of these manoeuvres and their doubtful value merits sterner criticism than he has meted out. In a book that will be widely read by students and ophthalmic practitioners one feels that much emphasis should be laid upon the type of cataract operation that affords the minimum of danger to the patient with the maximum of technical simplicity and effectiveness for the average ophthalmic surgeon.

It is unfortunate that the dangers of retro-ocular injection of a local anaesthetic and of Lacarrère's diathermy coagulation technique for intra-capsular extraction are not stressed. In the case of the former severe orbital haemorrhage may necessitate abandonment of the operation and the complications that may attend the latter in the way of damage to the cornea and iris are not inconsiderable.

Pantocain is recommended as a local anaesthetic for cataract operations. The reviewer understands that although this excellent local anaesthetic has been retained for minor surgery it has been abandoned by many continental clinics for intra-ocular operations on account of its ineffectiveness in preventing capillary oozing.

The book is well written and presents a balanced up-to-date review of the lens, its diseases and their treatment. The illustrations are fair; there is a liberal bibliography at the end of every chapter and the book has been well produced.


Professor Peters is Director of the Universitäts-Augenklinik in Rostock, Northern Germany, and has had adequate opportunity of becoming familiar with the clinical aspects of trachoma. His book is a serious study of the disease; it contains no illustrations, so the reader is not seduced by expensive pictures into an ill-founded estimate of the value of the publication. The author reasonably supposes that his book, written for trachomatologists, and not for opthalmic surgeons who have little experience of
trachoma, does not require the usual pictures of trachomatous histology, or the illustration of well-known bacterial organisms or of H. P. K. (Halberstaedter-Prowazek Körperchen).

The book is extremely well documented and should act as a guide to all who require to study trachoma intensively.

The chapter on the search for the cause of trachoma has been very carefully studied by the reviewer. While the names of a very large number of authors, and of the few who have undertaken serious experimental research are mentioned, it is disappointing to find no masterly survey of the present position of instructed opinion as to the cause of the disease.


This report follows the usual lines of progress. There are now in Egypt 43 permanent hospitals and 14 travelling hospitals. The number of new patients seen was nearly a million and the operations numbered more than a quarter of a million. The incidence of blindness among patients seen has diminished from 15·6 per cent. in 1909, to 6·4 per cent. in 1933. The high incidence of primary glaucoma is noteworthy, 6,613 cases having been seen, or 0·79 per cent. of all new patients. Ophthalmic inspection and treatment are carried out at 32 Primary Government Schools where 98 per cent. of the pupils exhibited evidence of trachoma in its various stages. As the result of treatment the more serious stages of the disease were reduced by one half.


The admirable work done in Palestine by the Grand Priory in the British Realm of the Venerable Order of the Hospital of St. John of Jerusalem for the relief of ophthalmias is well known, and has been referred to annually in this journal.

The Warden of the Hospital, Lieut.-Colonel Strathearn, C.B.E., is not only its Chief Ophthalmic Surgeon but includes among his duties the professional inspection of ten ophthalmic clinics maintained by the Department of Health of Palestine, each of which has a number of subsidiary ophthalmic centres in charge of a trained medical orderly.

Among the twenty thousand new patients at the Ophthalmic Hospital approximately eleven per cent. were blind in one eye and four per cent. were blind in both eyes. The greater proportion of these lost their sight as the result of acute conjunctivitis with
resulting corneal ulceration. It is probable that an overwhelming number of these were affected by trachoma.

The remarkably high percentage of primary glaucoma among the blind is noteworthy, being more than 6 per cent.

There has been a rise in blindness since the year 1928, which is correlated with a cycle of years with a rainfall much below the average. In Palestine, as elsewhere, dry years are associated with increased severity in the seasonal epidemics of acute conjunctivitis, by far the commonest cause of blindness.

A praiseworthy effort is being made to teach Arab girls some elementary ocular hygiene. However, when one has to remember that in many distant villages water is rationed with eye-dropper economy it is difficult to envisage any rapid advance.

It is of importance to note that approximately 74 per cent. of the patients were of the Moslem faith.

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OBITUARY

JULES GONIN

Professor Jules Gonin, whose death on June 11 was briefly noted in our last number, was born at Lausanne on August 10, 1870. On his father's side he was descended from a Protestant family of refugees from the valleys of Piedmont who had settled in the canton of Vaud. On his mother's side he was connected with Berne.

His early years of study were passed at the College Galliard and later in the Cantonal Gymnasium. He next entered the faculty of Science of the old Academy, then the faculty of Medicine at Lausanne, and later that at Berne.

His first introduction to ophthalmology occurred while still an undergraduate when he served as locum tenens to the resident officer at the Hôpital de l'Asile des Aveugles, where, in 1896, he became the resident officer. In 1899, after a tour of study in foreign countries, he became chief assistant, and in 1901 second Associate-Surgeon.

In 1918 he became Surgeon in Charge of the Asile des Aveugles, and in 1920, on the death of Professor Eperon, Professor of Ophthalmology in the University.

Although ophthalmology was his life's work, Professor Gonin had many other interests. He was an active member of the Alpine Club and made many ascents, preferring glaciers to rocks. He had a profound knowledge of every corner of Switzerland. He was a great traveller and had explored the whole of Europe as well as