being necessary owing to its hygroscopic nature) is introduced into the hole for one or two seconds. The choroidal area thus treated is immediately counter-treated with 0.5 per cent. acetic acid applied by means of a moistened probe.

(3) The choroid is then perforated with a blunt probe, thus establishing contact with the subretinal space, the retina itself not being touched.

(4) If a large hole has to be sealed, one or two trephine areas at the margin of the hole must be thus fully treated, though some more trephine holes may have to be cauterized (without actual perforation of the choroid).

ARNOLD SORSBY.

BOOK NOTICES


The authors of this book are physicists engaged in the research laboratory of the General Electric Company of America, at Nela Park, Cleveland. Much of the most valuable research work on the problems of lighting have emanated from this laboratory in recent years. So far as the physical problems of lighting and vision are concerned the authors are thoroughly reliable. They have not neglected the more outstanding physiological and psychological problems, but on these they write with less authority. The book is a valuable compendium of miscellaneous information dealing with visual acuity, contrast, brightness, adaptation, glare, fatigue, and so on. Some parts are very elementary and others are platitudinous. The most valuable parts require a considerable knowledge of physics and can only be thoroughly grasped by those having facility in the reading of graphs.

Dr. Luckiesh is a prolific writer on these subjects—16 books published between 1915 and 1930 are advertised in this volume. The bibliography in this book consists of 48 items, all of which are American with the exception of two (König and Helmholtz).


This tribute to Professor Haab, "in his honour and in commemoration of his 80th birthday," is from the pen of a former pupil: it has been conceived in a spirit of sincere admiration for a greatly respected ophthalmologist and teacher, and will be read with appreciation by many in the world of ophthalmology who have no personal acquaintance with the Professor.
Streiff's brochure contains the record of a long professional career of unremitting activity in clinical and experimental investigation, carried on coincidently with practice and teaching. He recounts, in roughly chronological order, Haab's very large literary output, and notes that his books and shorter contributions are fairly representative of the history of ophthalmological progress during the last half-century.

Naturally, a prominent place is given to the introduction of the large electro-magnet for the removal of intra-ocular foreign bodies. This beneficient discovery (which, in Haab's words, he came upon by "ein glücklicher Zufall") will remain a permanent memorial to the Professor when much of his other work has been forgotten. Another enduring memorial is the fine "Universitäts Augenklinik" in Zürich, planned by Haab and erected under his personal super vision. When opened in 1896, it was one of the most complete institutions of its kind, and was at once the pride and delight of the Professor. Streiff mentions, as among the noteworthy features of Haab's professional work, his keen interest in systemic diseases such as tuberculosis, congenital syphilis, circulatory disorders, etc. which closely concern the ophthalmologist, his constant endeavour to perfect the treatment of wounds (in his special territory) and his ever present aim of widening the bounds of ophthalmological knowledge. As a teacher he gave no encouragement to the discussion of theories, but strove to incite habits of accurate observation and the acquirement of sound knowledge.

A pleasing portrait of Professor Haab, and a photo of a "magnet-operation" in which he is the manipulator, add interest to this attractive story.


If it be true of medical literature that its amount is in direct proportion to the obscurity of the subject with which it deals, it is not surprising to realize the output which has accumulated in reference to detachment of the retina, particularly when we reflect that the condition is one of which the pathology is variable and in most instances still remains obscure. The author, with painstaking care, has gathered all that is known and every theory which has been advanced in regard to detachment of the retina, and in this volume includes a bibliography which cannot fail to be of assistance to those who will in the future work on the pathological questions of which so few are as yet settled.
In discussing aetiology, Anderson regards all cases of retinal detachment as secondary, but states that in every case it is necessary to apprehend the condition to which it is secondary, and that no diagnosis is complete unless this can be ascertained: as far as the vitreous humour is concerned the slit-lamp promises to be of some assistance.

Chapter II is devoted to the structure and functions of the tissues involved, emphasizes many important developmental and anatomical facts upon which little stress is usually laid, and contains many shrewd and suggestive observations by the author. The bio-physical views of Duke-Elder are concisely stated, and the hope entertained that further work in this and in the biochemical direction will be useful.

Chapter III on pathogenesis is comprehensive; every theory is reviewed and in the last five pages of this chapter the author usefully summarizes the conclusions which he has drawn.

In the chapter on differential diagnosis the methods and value of transillumination are very fully explained.

In dealing with treatment the new and promising methods of ignipuncture necessarily receive full consideration, but the older therapeutic methods, operative and otherwise, are not neglected.

The book is produced in a style well worthy of the immense and valuable labour which the author has bestowed upon it, and should be read by every surgeon: it is an excellent monograph, produced at the opportune moment, and will add to the reputation of British ophthalmology.


So little is really known about the properties and action of ultra-violet light, that a book of this nature is very welcome. The authors have expended a great amount of time and trouble in contriving experiments to investigate this question. These experiments, and the various apparatus actually used in treatment, are illustrated by numerous excellent photographs.

It is made quite clear that the best results are obtained from an electrode composed of 98 per cent. tungsten, 1.5 to 2 per cent. titanium, with a trace of chromium, and that this superiority is in part due to the steady emission of the late red and infra-red rays, which increase the permeability of the body tissues, and help to improve vitality and resistance to infection.

With regard to the penetrative power of ultra-violet light, it used to be held that this was limited to 9.5 mm. at most, but, using the tungsten-titanium arc, the rays pass through 5/16 in. of recent
ox-pelt with its subcutaneous tissues, and even through the thickness of the terminal phalanx of the third finger. It is the addition of the small amount of titanium to the electrode which increases the penetrative power of the therapeutic ultra-violet light rays, and gives a spectrum of more even intensity than that obtained from either tungsten or titanium alone. Various materials have been examined in respect of their power of stopping the bactericidal rays of ultra-violet light, and it is shown that Chance’s glass offers least resistance, while quartz, ox-pelt, “windolite,” “vita glass,” cardboard, and ordinary glass present increasing obstruction.

Though, in moderation, the red and infra-red rays assist penetration, yet too much of this type of radiation causes heating in excess of the body temperature, and the penetration is diminished. There is an optimum temperature of the tissues at which penetration, bactericidal power, and cutaneous chemical changes are at their highest.

Analysis of an arc shows that the longer wave lengths give rise to molecular alteration and thermal changes, while the shorter produce molecular disintegration, photo-abiotic, chemical and electrical changes. The shorter waves of ultra-violet light are largely absorbed by the surface layers of the skin, while the longer ultra-violet rays reach the subepidermal tissues, and visible rays attain a greater depth.

A chapter of illustrative cases is included which shows the results obtained in various diseases.

This book, clearly and simply written, will appeal mainly to actinotherapeutists, who will find in it a useful and interesting store of information.

NOTES

We regret to have to record the recent death of Dr. Julian Augustus Lea, who practised for many years in Grahamstown, South Africa. Dr. Lea was one of our South African representatives on the General Editorial Committee of this Journal and contributed three papers to our fourth volume. He qualified at the “Colleges” as far back as 1874, from Charing Cross Hospital; took the M.B. Toronto in 1882, and the F.R.C.S.Edin. in 1893, and became a member of the Ophthalmological Society of the United Kingdom in 1895. He retired 10 years ago and resided in Natal. Mr. Seale, of Grahamstown, the author of a paper in our September number (p. 514) has been so good as to send us a cutting from The Farmer, of Maritzburg. It appears that Dr. Lea, after his retirement from active ophthalmic practice, took an interest in farming, and the