on "general technique," are chapters on "transfusion," "end-to-end suture," "lateral anastomosis," "arterio-venous anastomosis," "varicose veins," "surgery of the heart," and two chapters on "aneurysm."

As the author clearly states, the book is of use only to the surgeon who is interested in this kind of work, though it is surely of some importance that every operating surgeon should be familiar with the technique necessary to close an opening in a main vessel, or even to unite a main vessel torn across in the course of some massive trauma. Definite principles are fully laid down, and are those of Carrel, the greatest worker in vascular surgery.

The author's own operation for blood transfusion by means of a two-pieced tube is an excellent one, but for the admitted fact that clotting occurs in the tubes; his method of performing lateral anastomosis (introduced in collaboration with H. H. B. Stone) is as perfect as possible.

It is undoubtedly a book which should be mastered by every surgeon doing regular operative work, and is a fine addition to the literature of the subject.

Surgical Operations with Local Anæsthesia. By ARTHUR E. HERTZLER, M.D. Pp. 210. 104 illustrations. New York: Surgery Publishing Co. 1912. Price 12s. post paid.

THIS booklet of 200 pages gives by far the best account of the technique to be mastered in order to become proficient as an operator under local anæsthesia.

The first forty-six pages deal with the drugs used and the methods of administration. The author very properly lays stress on the endermic infiltration as being at once the most difficult and the most perfect of all forms.

We are not convinced that the syringe illustrated is the best instrument on the market to-day; the needles are not fine enough, and the syringe is not nearly strong enough.

There is no adequate account of the principles of "Ancci-association," as practised by Crile in America and Moynihan in this country. There is, however, a very excellent account of the "neural anatomy of the abdomen," and the methods of securing local anæsthesia therein.

The author discusses the effect of quinine on the tissues, based on his own experiments. He states that a solution of quinine causes an exudate, at first amorphous, which soon coagulates, forming a granular fibrin. This exudate begins in a few minutes, and is complete in twelve to twenty-four hours; it lies between the connective-tissue fibrils, and is not absorbed under one to two weeks. It is the granular fibrin which causes the anæsthesia by compressing the nerve fibres; but they themselves show no sign of injury. It is of great interest to note that quinine injections allowed to remain in situ for a few moments, result in only a small amount of fibrin formation, the anæsthesia is very short, and healing is not impaired. The result of more quinine left a long time in situ is a much longer anæsthesia (up to two weeks), and some delay in union, with the formation of a less satisfactory scar. It follows that where a cosmetic result is required it is better to use a 5 per cent solution of cocaine without adrenalin.

It is of some interest that Rogers, in 1908, suggested injection of quinine to relieve after-pain.

All operations are fully described, and the book is very well written. The illustrations are excellent, and the work as a whole must appeal to all surgeons who desire to perfect their knowledge in this most desirable method of operating.

Disturbances of the Visual Functions. By PROF. W. LOHMANN, translated by ANGUS MACNAB. F.R.C.S. 1913. London: John Bale, Sons & Danielsson, Ltd. Pp. 184, with 39 illustrations, some in colours. Price 15s. net.

THIS book covers a very wide and varied field, and is full of interesting observations, the result of the author's work at the University Eye Clinic, Munich. After an epitome of the physiology and psychology of vision, he discusses the effects of blind-

ness, and the education of vision both for form and colour. The chapter devoted to abnormalities of central and peripheral vision is one of the best. Various theories regarding congenital amblyopia are considered. The author's view is that the retinal cones are not so closely packed at the macula as usual, or else that the nerve connections are less isolated and more grouped than normal; i.e. that the conditions at the macula of the amblyopic eye resemble those found in the periphery of the retina.

Full information is given on disturbances of adaptation to light and of "light-sense." There are two chapters on defective colour-vision. We are surprised that no mention is made of the work of Edridge-Green on this subject. Ten pages are devoted to "colour-hearing" and other optical co-sensations. He says, "the ordinary man cannot grasp colour-hearing," but some of those gifted with *audition colorée* associate the vowel sounds with green, black, red, and so forth; whilst to others the notes of the flute are blue, the violin red, etc. Reference is made to practically all visual defects, but some of them (nystagmus for example) might have been dealt with more fully.

The book is admirably got up, has an excellent index, and abounds in references to the literature of the subject.