

older worker is by no means overlooked. The more thoroughly studied substances, such as egg- and serum-proteids with their crystalline forms, are taken up at length; and the muscle proteids are presented in the light of v. Fürth's work. To the physiological chemist who has occasion to refer frequently to recent investigations on the nucleoproteids and their derivatives, the careful summary of research in this field of work will be found most helpful. Thirty pages are devoted to the chemistry of hæmoglobin, and the chapter on the albuminoids is fairly exhaustive.

The volume is appropriately dedicated to the memory of W. Kühne.

LAFAYETTE B. MENDEL.

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Treatise on Hygiene. By J. LANE NOTTER. Second edition. P. Blackiston's Sons & Co. 1900.

This is the second edition of the well-known book of Notter and Firth, which itself was founded on the still earlier treatise of Dr. A. E. Parkes.

It is a very comprehensive work, containing nearly eleven hundred pages, and treating of a very wide range of topics, such as, for instance, water, air, food, heating, ventilation, clothing, exercise, construction of houses, vital statistics, and military and naval hygiene.

The book as a whole is excellent, the material is well selected, and the views thoroughly modern. Treating such a wide range of subjects as the authors do, they must necessarily give frequently the opinions of others rather than their own, and this causes at times, where opinions differ, a lack of authority. In a few places remains of earlier editions crop out; thus under malarious soils no mention is made of the mosquito, but in another portion which is devoted to malaria the relation of the insect to the disease is fully stated.

In some places important omissions occur: thus in the preservation of milk cold is hardly alluded to, yet it is almost as important as cleanliness. The number of bacteria considered suitable in milk, 400,000 per cc., seems very high. Taking the book as a whole, it is one that can be thoroughly commended to those

who have either a general or a special interest in the study of hygiene.

W. H. PARK.

SCIENTIFIC JOURNALS AND ARTICLES.

THE *Journal of Comparative Neurology* for December contains the following articles: 'The Giant Ganglion Cells of *Catostomus* and *Coregonus*,' by J. B. Johnston, West Virginia University. The author figures and describes successful Golgi preparations of these transient nerve cells and compares them with the sensory cells in the spinal cord of *Amphioxus* and *Petromyzon*, whose fibers reach the periphery without effecting relations with cells of the spinal ganglion. It is suggested that they are belated neural crest cells which failed to migrate into the spinal ganglia. 'Arrangement and Terminations of Nerves in the Oesophagus of Mammalia,' by Lydia M. DeWitt, University of Michigan. Investigations on the cat and rabbit by the *intra vitam* methylene-blue method. The following types of nerve termination are described: typical motor and secretory fibers from sympathetic ganglia of Auerbach's and Meissner's plexuses, motor fibers from the ventral horns of the spinal cord for the striated muscle fibers of the oesophagus, sensory termini in the mucosa from cells of spinal ganglia, and other sensory fibers, apparently wholly confined to the sympathetic nervous system. 'The Vibrissæ of certain Mammals,' by J. Franklin Messenger, University of New Mexico. The innervation of the hair follicles is figured and a peculiar erectile vascular pulvinus is described. 'The Ophthalmic and Eye Muscle Nerves of the Cat Fish (*Ameiurus*),' by I. S. Workman, Denison University. The cat fish is shown to resemble other teleosts in the absence of a *r. ophthalmicus profundus*. The nerve so named by some anatomists is the *r. ophthalmicus superficialis V*, to which are added facialis fibers for terminal buds on the top of the head. The eye muscle nerves show a ganoidean arrangement. 'On the Homologies of the Chorda Tympani in Selachians,' by H. A. Green, Denison University. The selachian types examined exhibit a pre-spiracular nerve, in addition to the *r. palatinus* and the true pre-trematic ramus for the pseudobranch, which runs down between the