LETTER TO THE EDITOR OF SCIENCE FROM THE PRINCIPAL SCIENTIFIC AUTHORITY OF THE FUNDAMENTALISTS

ON returning from Switzerland to my headquarters in England, I find your brief letter of January 6.

You say that you do not "have clearly in mind the circumstances" to which I have referred in my previous letter. I suppose that if you had thought the matter of sufficient importance you could have consulted your letter files of last year and the year before and those of some two years before that.

After the shameful way in which you have treated me, it is certainly very appropriate for you to say now that the "tone" of my letter "apparently makes inadvisable further consideration of the subject."

May I repeat that Professor Schuchert's letter is a clear libel, and that both he and you are due for some legal demands whenever I return to America from the rather extended trip around the world on which I have entered. An apology and retraction now would do no good; I am through with this sort of foolery. I will see what the law can do for me. Apparently there is only one kind of argument that such men as you and Schuchert can understand; and I intend that you shall have it.

GEORGE MCCREADY PRICE

SCIENTIFIC BOOKS

The Natural History of Crystals. By A. E. HUTTON. E. P. Dutton & Co., 1924. 274 pp.

The Structure of Crystals. By R. W. G. WYCKOFF. The Chemical Catalogue Co., 1924. 454 pp.

X-rays and Crystal Structure. By W. H. and W. L. BRAGG. Harcourt, Brace & Co., 1924. 4th edition, 313 pp.

THESE three books on crystal structure may well be used to illustrate the truism that no two writers can handle the same subject in the same way; each one sees the facts from his own viewpoint. A comparison of all three might also serve as a starting point for a sermon on the topic "not better, nor worse, but different."

Dr. Hutton became a crystallographer long before the days of X-ray crystal analysis. To him the exterior of a crystal is a wonderful example of the beauties of nature, and a constant stimulus to the crystallographer's curiosity, for from these external forms can be gained a whole theory of the inner architecture of crystals. To one of Dr. Hutton's early training, the results of X-ray crystal analysis are highly important because they offer clear evidence that the old ideas underlying the theory of space groups were sound. His chapter on "The Revelation of Crystal Structure by X-rays" is an excellent short résumé of the Laue, Bragg and Powder methods. Only in a few scattered instances has he placed a little too much faith in statements which he has found in the literature, so that he has at times unwittingly taken pure assumption for fact.

The whole book is written from the historical viewpoint and loses nothing in interest by being a little discursive—for instance, when the author ends a discussion of ice crystals by an account of his ascent on Mount Blanc in a snowstorm, or when he ends the chapter on "Experiments in Parallel Light" by a description of ancient and modern carvings in quartz. The book has twenty-one chapters, which cover the measurement of crystals by the goniometer and by X-rays, the types of crystal structure, isomorphism, polymorphism, morphotropy, optical properties, liquid crystals, etc. Appendices give an excellent glossary of technical terms, and a list of the thirty-two classes of crystals and their distribution among the seven systems of crystallization. The book contains many beautiful illustrations.

Dr. Wyckoff studied crystallography shortly after Professor Laue's discovery of the diffraction of X-rays by crystals. Like Dr. Hutton, he saw in the X-ray method a means of distinguishing, in some cases at least, between the various alternative structures which were compatible with the external symmetry of the crystal. The idea of crystal symmetry is so dominant in Dr. Wyckoff's mind that it was perhaps inevitable that his first chapter should be on "The Symmetry Characteristics of Crystals." It is characteristic of the author that his discussion of this topic is exact, and quite complete. The subject is difficult, but he has handled it well. From the standpoint of a salesman, "selling" his subject to the reader, it is unfortunate that this chapter comes first. The average reader will never finish it. If he substitutes pages 94–97 from Dr. Hutton's book, he can start in with Dr. Wyckoff's chapter two, and finish the rest of the book with pleasure and profit.

Contrary to the habit of some, Dr. Wyckoff takes quite literally the proverb, "If it's in the literature, it isn't so." For this reason, his discussion of the structures of the various crystals contains the cautious statements "seems to prove," "it is said," "is supposed," "it has been stated." The book has fifteen chapters. The first eight deal with crystal symmetry, X-rays, and the application of X-rays to crystal structure studies. The remaining seven deal with the structures of specific crystals. A bibliography, a group of tables for use with the gnomic projection, and a table giving sin θ in terms of tan θ are given in two appendices.

Sir W. H. Bragg had a world-wide reputation as