had turned out as fine a piece of work as has appeared in fifty years, so long will English physics remain preeminent.

The first chapter reviews briefly the older theories of X-rays and presents Laue's discovery and photographs. The second presents the Bragg theory of the diffraction of X-rays, the third describes in detail the Bragg X-ray spectrometer, the fourth is a brief account of the properties of X-rays. The fifth merely describes crystal structure, little known to most physicists, and the sixth presents our present knowledge of X-ray spectra, and includes an admirable report on Moseley's work. The remaining six chapters present the Bragg analysis of crystal structure made by means of their spectrometer.

Few books have ever appeared which represent in so high a degree the creative work of the authors themselves.

R. A. Millikan
Ryerson Physical Laboratory

An Elementary Manual of Radio-Telegraphy and Radio-Telephony for Students and Operators. By J. A. Fleming, M.A., D.Sc., F.R.S. Third edition. Longmans, Green & Co., 1916. Cloth, 360 pages, 194 illustrations.

This is an excellent elementary text-book on the principles of radio-communication, with enough history inserted parenthetically to add descriptive interest, without sensibly distracting attention from the main line of exposition.

Like all of Dr. Fleming's writings, it is particularly strong on the quantitative side. Nevertheless, the mathematics employed are not difficult.

The book is divided into nine chapters, relating to the following topics: Electric Oscillations, Damped Electric Oscillations, Undamped Electric Oscillations, Electromagnetic Waves, Radiating and Receiving Circuits, Oscillation Detectors, Radio-telegraphic Stations, Radio-telegraphic Measurements, Radio-telephony.

The chapter dealing with radio-telegraphic measurements is particularly good.

A blemish in the didactic method is the use of English units of measure in a few of the examples. The complexity involved in the arithmetic, by reference to such archaic and unscientific units, repels the student more than a transition from English to metric units before attacking the problem, and a final transfer from metric to English units in stating the results.

The book will be of great value to students of radio-telegraphy, and to operators seeking to improve their knowledge of their work on the scientific side.

A. E. Kennelly

The Institutional Care of the Insane in the United States and Canada. By Henry M. Hurd, W. F. Drewry, R. Dewey, C. W. Pilgrim, G. A. Blumer and T. J. W. Burgess. Baltimore, The Johns Hopkins Press, 1916. Pp. 497, 30 pl. Edited by Henry M. Hurd, M.D. $2.50.

This is one of the few works in the English language in which the history of a separate branch of medicine has been exhaustively treated. The editor, Dr. Hurd, prior to his election as superintendent of the Johns Hopkins Hospital in 1889 and after, has had a long practical experience in institutional psychiatry, and there is probably no other authority in this country so well fitted for the difficult task delegated to him and his associates. The four volumes of this work, when completed, will comprise no less than a full set of separate histories of all the insane hospitals in the United States and Canada. The present volume, although it professes to deal only with the general history of institutional care of the insane on this continent, is, in reality, an exhaustive history of American psychiatry in all its phases, and is therefore likely to remain the authoritative work on the subject for an indefinite period. In this history, there are no great outstanding names, like those of Pinel or Tuke or Griesinger, unless it be that of a woman, who was the prime mover of our improved institutional care of the insane. The record is one of collectivism, of the patient labors of societies, journals and individual propagandists for the good of a much-neglected class of human suffering. Matthew