tion for the Advancement of Science, feel that it is timely to issue the following appeal to the industrial research laboratories of the country.

In the course of work done in the numerous industrial laboratories of America, many physical and commercial constants and data of great scientific interest and value are doubtless arrived at, which may, for a certain period of time, constitute an asset of considerable commercial value to the particular corporations in question. During this period, every one recognizes the proprietary right of the industrial laboratories to the retention of this information.

A time frequently arrives, however, when such scientific information loses its commercial value (often by being duplicated in other laboratories), and just at this point we wish to impress upon the industries their obligation to enrich scientific literature with such facts and data, which might otherwise be lost or forgotten.

Some of our industries have been reproached with the suspicion of acting as sponges, in that they absorb an immense amount of useful information from scientific literature without giving any return in kind. This suspicion would be entirely removed if, from time to time, scientific information which has ceased to be of commercial value were contributed by them to its appropriate channel and thus became available to all scientific workers throughout the world.

If any doubt exists as to the appropriate channel for the publication of such scientific data and communications, the general secretary of the American Association for the Advancement of Science, Dr. J. McKeen Cattell, Garrison-on-Hudson, New York, will be glad to act as intermediary and to forward such communications to the proper scientific body.

A. E. Kennelly,
J. W. Richards,
A. Sauveur,
A. N. Talbot,
C. C. Thomas

Cambridge, Mass.,
January 18, 1917

SCIENTIFIC BOOKS

Lectures on Ten British Mathematicians of the Nineteenth Century. By Alexander Macfarlane. No. 17 of the Mathematical Monographs, edited by Mansfield Merriman and Robert S. Woodward. John Wiley and Sons, New York, 1916.

This posthumous publication contains most interesting biographies of ten of the leading mathematicians of the nineteenth century in Great Britain, namely, of George Peacock, Augustus De Morgan, Sir William Rowan Hamilton, George Boole, Arthur Cayley, William Kingdon Clifford, Henry John Stephen Smith, James Joseph Sylvester, Thomas Penyngton Kirkman, Isaac Todhunter.

These sketches are a part of the lectures given by Dr. Macfarlane at Lehigh University during the years 1901–04. "In a future volume it is hoped to issue lectures on ten mathematicians whose main work was in physics and astronomy." The author's personal acquaintance with some of these men, and with intimate friends of them, enabled him to add personal touches which will be relished by the reader. Particularly gratifying are the details about Boole and Kirkman, concerning whom little had previously appeared in print. The future historian of mathematics during the nineteenth century will find the booklet full of interesting material. The lecturer's aim was evidently to set forth the personalities whose scientific achievements were already known to the listener. Hence the scientific researches of these men are not described, but merely mentioned.

Illuminating information is given in several of the biographies relating to Great Britain as "an examination-ridden country," and relating to the effects of the theological tests formerly demanded of candidates for degrees and competitors for certain prizes. The opinions on the teaching of mathematics held by some of the English mathematicians are valuable at the present time when in the United States the mind-training-value of mathematical study is called into question.

The booklet is manufactured in attractive

form. Carelessness in the proof-reading is noticeable. Frequently letters are dropped out of words, their unceremonious departure being accentuated by the blank spaces left behind. The description of Newton's fluxional notation on page 9 is rendered unintelligible to one not already familiar with it by the omission in several instances of the necessary dots. The spelling on page 35 of Clairaut as "Clairault" is unusual, to say the least. The statement, page 120, that it was in 1872 that a deputy professor was appointed at Oxford to carry on the work relinquished by Sylvester is evidently wrong, since Sylvester was appointed to the Oxford position in 1883. It is too bad that the editors of this book allowed the repetition of the erroneous statement that the name of Sylvester's father was Abraham Joseph Sylvester. As recently stated by several writers, the name "Sylvester" did not belong to the father, but was assumed by an elder brother of the mathematician who had come to the United States, and later by the mathematician himself. The father's name was Abraham Joseph. The editors might also have corrected a mistake thus far almost universal, to the effect that Peaucellier was the first to devise an instrument for drawing a perfect straight line. It is a matter of great historical interest that a Frenchman by the name of Sarrut achieved this several years before Peaucellier, and in a manner quite different. An account of it will be found in the *Comptes Rendus,* Vol. 36, 1853, page 1036. Attention to Sarrut was called in 1905 by G. T. Bennett of Emmanuel College, Cambridge, in an article published in the *Philosophical Transactions,* 6th S., Vol. 9, page 803. Bennett gives interesting historical details, and also noteworthy developments of his own.

FLORIAN CAJORI

COLORADO COLLEGE,
COLORADO SPRINGS, COLO.

The Whalebone Whales of New England. By GLOVER M. ALLEN. Memoirs of the Boston Society of Natural History, Vol. 8, No. 2, pp. 107–322, pls. 8–15, text-figs. 1–12. September, 1916.

Dr. Glover M. Allen's "The Whalebone Whales of New England" treats of the three genera and six species of baleen whales "inhabiting the waters off the New England coast," with special reference to their habits, manner of occurrence, economic importance and technical history. Two "keys" are given for their identification, one for stranded specimens that can be approached and examined, the other for identification in life, based on their characteristic actions, the presence or absence of a fin on the back, and the size and form of the spout.

Following a few introductory pages of comment on the classification of whales in general and of the New England species in particular, the author deals at length with each of the living species, with a brief account of the single fossil species, long known from a few vertebræ and other fragmentary remains found at Gay Head, Marthas Vineyard. The North Atlantic right whale (*Eubalæna glacialis*) is of special interest historically on account of its having been the basis of the early New England whale fishery. This phase of the subject is presented in considerable detail (pp. 131–172), with many quaint extracts from early colonial records.

The species treated are: (1) North Atlantic right whale (*Eubalæna glacialis*), (2) common finback (*Balænoptera physalus*), (3) pollack whale (*B. borealis*), (4) blue whale (*B. musculus*), (5) little piked whale (*B. acuto-rostratus*), (6) Atlantic humpback (*Megaptera nodosa*). A methodical and concise account of each is given under appropriate subheadings, beginning with "history and nomenclature," followed by descriptions of their external and osteological characters, habits and food, seasons of occurrence, pursuit and economic products, enemies and parasites. Five of the species are illustrated by full-page plates of the external form, drawn to scale from careful measurements. Outline drawings of skulls are given in another plate, several photographic views of whales in another, and vertebræ and other fossil remains from the Miocene deposits of Gay Head in another. The monograph thus forms a valuable addi-