considered by any means dangerous for people in general. This hemorrhage first appeared in the Appleton family, who brought it with them from England. *None but males are bleeders, whose immediate children are not so, and whose daughters, only, have sons thus disposed.* As to the precise proportion of these, who may resemble their grandfathers, in bleeding of this kind, past observation furnishes no data.

The italics are mine.

GEORGE E. LADD

CHEVY CHASE, MD.

QUOTATIONS

THE MELLON INSTITUTE

THE formal dedication of the Mellon Institute's huge new building, a temple of science in outward appearance and inward spirit, is an event of national magnitude. And properly so when it is recalled that the institute has served some 4,000 firms, developed 650 processes and products and created ten new industries since Andrew W. Mellon and the late Richard B. Mellon founded it in 1911. The new structure is a monument not only to the generosity and far-sightedness of the two brothers who made it possible but of the late Professor Robert Kennedy Duncan, who conceived the industrial research fellowship system which has been such a brilliant success.

When the small manufacturer hears of the millions spent annually for research by great companies he wonders how long he will last—wonders how he, without even a testing laboratory, can compete with trained crews of Ph.D.'s hired to improve yarns, telephones, lamps, radio sets, tins for foods and foods themselves. The Mellon Institute is his salvation. Here for a few thousand dollars science doffs its coat, rolls up its sleeves, solves his problem, creates values for him, and what is more important, opens his eyes to the rich return that research pays.

Though this social aspect of the work done in accordance with Robert Kennedy Duncan's policy needs to be stressed, it would be wrong to regard the Mellon Institute merely as an industrial life preserver. As a non-profit-making enterprise it plows back for the public good the excess moneys that may not remain in its bank account. So we find it concerning itself with more than skinless frankfurters, soapless soaps, flaked coffee, shoes that can be polished merely by rubbing a cloth over them, razor blades, unbreakable dishes of new plastic compounds. It draws on its own scientific and financial resources to solve the problem of smoke and dust, to arrive at better ways of diagnosing tuberculosis, to study methods of treating pneumonia, to illuminate the dark subject of dental decay. Nor is it unmindful of its obligation to advance science as such. Its work in theoretical chemistry and biology, for which new facilities are provided, promises to be even more distinguished in the future. Under Drs. Robert Kennedy Duncan and Raymond Bacon, and latterly under Edward R. Weidlein, the institute has become not only the technical first-aid of big and little business, but a training school for future laboratory directors, an experiment station for the advancement of science, a clearing-house of information for the public. As such it deserves not only the good wishes and congratulations of the manufacturers whom it has served, but of a wider public that may not be fully aware of its high place in industry and science.—*The New York Times.*

SCIENTIFIC BOOKS

THEORY OF SOUND

Vibration and Sound. By PHILIP M. MORSE. New York: McGraw-Hill Book Co., 1936, pp. xv + 351, $4.00.

THE outstanding advances in acoustics during the last two decades have been made chiefly in physiology and in engineering rather than in the physics of sound. Most of the recently published books on the subject have reflected this trend, but this one by Professor Morse is written almost entirely from the point of view of the classical physicist. It emphasizes the physical principles underlying all engineering applications.

I have used the term "classical" advisedly, as from a casual reading of the announcement of the book one might get the quite erroneous impression that at least certain phases of the subject are treated by quantum mechanics. While it is true that some acoustical phenomena, such as the abnormal attenuation of sound in gases discovered by Knudsen, can not be satisfactorily explained without resort to quantum physics, these particular matters are not discussed.

A study of this book does, however, reveal that there is an interesting parallel in the relationship between electrical engineering and acoustics, on the one hand, and wave mechanics and acoustics, on the other hand. To the beginning student the general principles of electrical circuit phenomena are most easily explained by means of acoustical analogies, but in the electrical engineering art there have been developed theories and formulae covering many combinations of circuit elements with which the practicing engineer has become much more familiar than with the theories relating to