child's drawing of a man is rated only as A or B, although Dr. Goodenough has recently demonstrated[1] that by the use of a refined scoring technique this test, used with unselected children of four or five years, can be made to yield a correlation of .70 with Stanford Binet mental ages. Something like this may be true of many of the other tests.

Probably the greatest technological weakness of medical diagnosis is the play it gives to the subjectivity of judgment. Dr. Gesell's methods will be, or at least should be, widely used by physicians; it is unfortunate that his treatment of the subject does not set the medical practitioner a better example of objectivity. Detailed standardization and statistical evaluation will of course be carried out by others, and the danger is that it will be done by investigators who lack the extraordinarily rich clinical experience which Dr. Gesell has had.

But the reviewer has already devoted too much space to what he regards as a defect. If defect it be—and one may admit that the question is debatable—it is heavily overshadowed by the merits of the work as a whole. The author has staked out new territory of great promise in one of the richest of the border-line fields between psychology and medicine. His treatment is original and suggestive in highest degree. The clinical comparisons between typical subjects of adjacent age groups are little short of dramatic. The fifteen or more brief chapters devoted to the larger aspects of early mental diagnosis are admirable in substance and form. The reviewer predicts that the book will bring about a renaissance of interest in observational and experimental work with young children. It ought to have a wide distribution not only among physicians and psychologists, but also among parents and teachers. Its delightful literary style, its freedom from technical jargon and its wealth of illustrations (there are 227 figures) make it a book for every intelligent person who is not too stupid or too unimaginative to take an interest in this most dramatic and fascinating of all the "ages of man."

LEWIS M. TERMAN
STANFORD UNIVERSITY

Antics of the Ants and *Ingenious Insects.* Two volumes bound in one. By ALFRED MARK SALYER, Glendale, California. New York, Laplante and Dunklin.

THIS superbly printed volume may be described as a rollicking book of science. Following quotations from leading entomologists, it is adorned by humorous cartoons, and conclusions of students of insects are expanded into verse, often reminiscent of Mother Goose and at other times rising almost to seriousness.

While the wisdom of the ants and their genius for cooperation is highly extolled, our author quizzically warns us against other insects, with whom "a desperate war" must be waged, in which "man's civilization, his very life, are at stake," and the victorious insect "hosts will be swarming throughout the smouldering ruins of his last handiwork."

DAVID STARR JORDAN
STANFORD UNIVERSITY

The Romance of the Holes in Bread. A Plea for Recognition of the Scientific Laboratory as the Testing Place for Truth. By I. K. RUSSELL, member American Chemical Society; Author of "Hidden Heroes of the Rockies," and "Frontier Tales of the Townsend House." Easton, Pennsylvania, The Chemical Publishing Company.

A MODEST but thoroughly wholesome bit of popular science is Isaac Russell's "Romance of the Holes in Bread." Beginning with the common and apparently commonplace process of bread-baking, Mr. Russell takes up the nature and functions of the yeast-plant, and from it the general qualities of bacteria, incidentally at the same time describing the obstacles encountered by men who in earlier ages realized that we know nothing whatever of the universe, save that which through the ages we have found out, not thought out, to be true.

All this leads to a record of the life and work of Louis Pasteur, greatest of Frenchmen and one of the noblest figures of all time. Phases of the work of Pasteur and of his disciples are indicated graphically in chapter headings: "Finding the source of plagues"; "From ferments to sanitation"; "Bake oven to bandages"; "From poultry to vaccination"; "The conquest of hydrophobia"; "Back to the bakery."

DAVID STARR JORDAN

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A FIELD TRIP AID

DURING the writer's observation of birds and nests he has found the contrivance described and sketched below to be an invaluable addition to the equipment (see Fig. 1).

This small bit of apparatus consists of an ordinary circular pocket mirror two and one half inches in diameter, around which is twisted about twenty inches of eighteen gauge copper wire. The wire is put on in such a manner that by bending it at a right angle to the plane of the mirror and by bending the lower loop backward parallel to the mirror, an ordinary

[1] In a doctor's dissertation not yet published.