among those of which the institute is privileged to speak. The Portland cement fellowship has carried on a cooperative study of bricklaying in the course of which 350 experimental walls and two small experimental houses have been built; the project is being conducted along broad but thoroughly practical lines with the advisory help of a group of brick manufacturers, construction engineers, architects and brickmasons. A second new breakfast food has been developed by the food varieties fellowship, and the work on carbonated beverages has resulted in valuable contributions to the technology of extract manufacture in this industry. The studies on cooking utensils have shown that corrosion during cooking operations is insignificant in degree and does not contribute in any way to food poisoning or other diseases. The investigation of sleep has been one of the outstandingly productive projects of the institute. A new high-temperature insulating material has been worked out by the fellowship on heat insulation, and the contributions of the vitrified sewer-pipe fellowship have led to important economies in fuel consumption in this industry. The laundry and petroleum production fellowships have been partly transferred to the donors' organizations, certain of the fundamental problems remaining in the institute. Comprehensive studies on iodine are now in progress.[2] The process for the chrome-plating of aluminum worked out in the institute is now being applied commercially on a large scale. The organic synthesis fellowship has been remarkably successful in developing new, commercially valuable compounds for a wide variety of industrial uses. The plastic vinylite resin is one of the latest additions to this large list of products from hydrocarbon gases.

Ten fellowships—those on surgical supplies, felt hat manufacture, aluminum plating of chromium, licorice, beds, gum, industrial alcohol and stearic acid, and two fellowships on cast iron—completed their investigational programs during the fiscal year. Nine new fellowships became active: rosin oil, garment, hemp paper, steel treatment, can, nicotine, wood by-products, fatty acid uses and oxygen. The institution has been obliged, because of lack of space, to postpone the acceptance of several important problems.

The 143 men composing the industrial fellowship personnel at the end of the fiscal year hold degrees from seventy-eight universities and colleges.[3] Of the 109 men with the rank of senior industrial fellow or industrial fellow, 46 have the Ph.D. or Sc.D. degree, and 22 others have a master's or advanced engineering degree.

Since 1925 the institute has sponsored each year a series of radio talks on late progress in science and technology, broadcast from the University of Pittsburgh Studio of Station KDKA. In a similar manner the importance of science to the nation's welfare is kept before the public by means of public addresses and newspaper and magazine articles prepared by members of the institute.[4]

During the nineteen years since the establishment of Mellon Institute at Pittsburgh, the amount of money appropriated to it by companies and associations was $6,749,273. The total contributions to scientific literature comprise 15 books; 96 bulletins; 528 research reports; 849 other articles, and 407 United States patents.

LAWRENCE W. BASS,
Executive Assistant

MELLON INSTITUTE OF
INDUSTRIAL RESEARCH

[2] On the institute's researches on iodine, see L. W. Bass, SCIENCE, 71: 37, January 10, 1930.

[3] On the institutional sources of industrial research men, see W. A. Hamor, SCIENCE, 51: 625, 1920; 64: 380, 1926.

[4] For a full account of the educational activities of Mellon Institute, see W. A. Hamor and L. W. Bass, *J. Chem. Education*, 7: 81, 1930.

QUOTATIONS

A NEW HEALTH INSTITUTE

BLANKETED by the debates over the tariff, the treaty and the Supreme Court, a bill has slipped through Congress, almost unnoticed, which will have a place in governmental history. It sets up a National Institute of Health. This has long been the dream of Senator Ransdell, of Louisiana. In realizing it he has had the support of the American Medical Association, the American Public Health Association and various scientific bodies. His bill has the endorsement of Secretary Mellon and will doubtless be signed by President Hoover, who has always taken a special interest in scientific research and in government agencies to further it.

Under the Ransdell bill the Hygienic Laboratory is made the nucleus of the new establishment, which will be devoted to the purpose of inquiring into the cause, prevention and cure of diseases. The Treasury Department is specifically authorized to accept gifts from private sources for the furtherance of these investigations, much as the Library of Congress was authorized some years ago to accept donations in its field. A system of fellowships in scientific research has been devised in order to secure the proper per-

sonnel and to encourage men and women of exceptional proficiency to devote their efforts to the war on disease. While a great deal has been accomplished by the universities, medical schools and endowed institutions, these efforts heretofore have often lacked coordination. The idea is to make the institute "a great cooperative scientific organization in which leading experts in every branch of science will be brought together and given an opportunity to work in unison for the purpose of discovering the natural laws governing human life."

The country's annual "human repair bill" runs to about $1,000,000,000. That takes no account of loss of time or loss of life from preventable disease. Congress has appropriated vast sums for research in crops and live stock, in mines and minerals, and in the problems and processes of industry, but it has done comparatively little to further the cause of human health. The workers in the Hygienic Laboratory have shown what could be done even with meager funds. With the far larger resources that the National Health Institute will ultimately command, it should be capable of doing great things.—*The New York Times.*

SCIENTIFIC APPARATUS AND LABORATORY METHODS

AN IMPROVED DESIGN FOR A SIMPLE LABORATORY PLANT-DRIER

THOUGH heated air, with the aid of a variety of devices, is commonly utilized by botanists for drying their specimens rapidly while in the field, the older and much slower process of curing under pressure, by the changing of absorbent pads or blotters, is still very widely used in the college and high-school laboratories of the country. That teaching botanists have not more generally taken advantage, both for themselves and for their students, of the time-saving and trouble-eliminating method of heat-curing is undoubtedly due quite as much to the fact that no entirely satisfactory apparatus has been made available as to any prejudice against the method.

The writer, during the past nine years, has been constantly under the necessity of accomplishing quickly in his laboratory the curing of botanical specimens collected under field conditions that prohibit the use there of either blotters or heaters. To overcome this difficulty, various types of driers have been made and tested in the laboratory, where the specimens are sent as soon as possible after being collected, and finally a satisfactory drier has been obtained. It was built according to the plan shown in the accompanying drawing, as a permanent piece of laboratory equipment.

This drier, though developed independently, is similar in many ways to an apparatus described by Dr. H. S. Jackson in the "Report of the New York State Botanist for 1924,"[1] but it embodies several improvements and advantageous modifications not found in Dr. Jackson's drier.

This newly designed plant-drier consists essentially of a four-sided wooden box set on legs at a convenient height and provided with two electric lamps to furnish the needed heat. It is open at the top, but the bottom is closed by a galvanized iron pan which, while being perforated with a number of holes to admit cold air, retains and stores heated air beneath the pack of specimens.

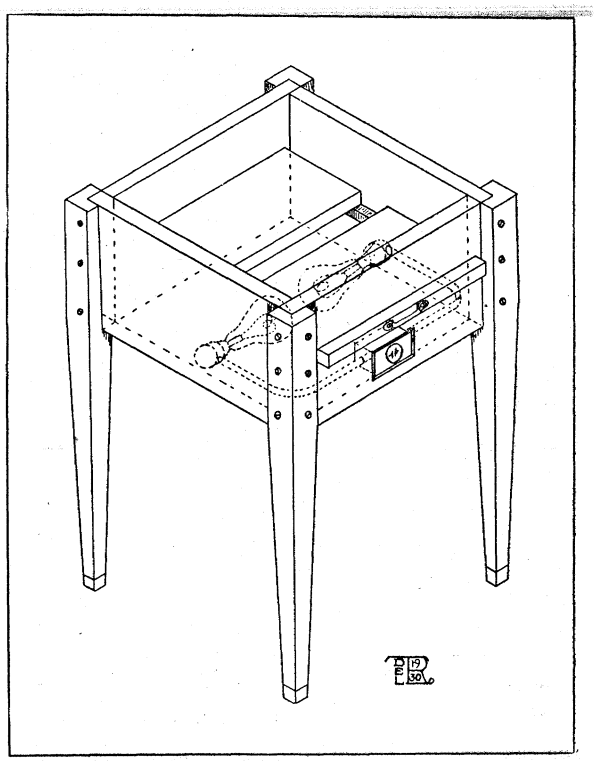

FIG. 1

A narrow ledge fastened around the inner walls of the box, halfway between top and bottom, serves as a support for the pack of specimens; and two sliding shelves, which rest on this ledge and are adjustable to the size of the pack, prevent the escape of heated air along its sides.

Except the legs, which are of oak, all wooden parts are made of yellow poplar, in order to reduce warping to a minimum. When the usual black laboratory stain is applied to the box, inside and out, and to the shelves, and when the legs are finished with orange

[1] New York State Museum Bul. 266, pp. 99–101, 1925.