Suburban Housing Association, Hutchinson, Kansas	$ 40,000
Triborough Bridge Authority, New York... (Loan, $37,000,000; grant, $7,200,000)	44,200,000
Total	$1,196,721,389

DOCTORATES CONFERRED IN THE SCIENCES BY AMERICAN UNIVERSITIES, 1932–1933[1]

IN assembling the data for the doctorates in the sciences conferred by American universities from year to year, a steady increase has been observed in the number granted, especially since 1919. The following figures for the past ten years summarize this trend: 1924, 611; 1925, 640; 1926, 748; 1927, 796; 1928, 842; 1929, 1,025; 1930, 1,074; 1931, 1,147; 1932, 1,241; 1933, 1,343.

From these totals it is seen that the so-called years of depression have had a stimulating effect upon higher education. The same fact is emphasized by the survey of graduate research students in chemistry, as shown by the statistics collected from about 130 American universities:[2] 1924, 1,700; 1925, 1,763; 1926, 1,882; 1927, 1,934; 1928, 2,081; 1929, 2,498; 1930, 2,795; 1931, 3,261; 1932, 3,348.

Each year it has seemed that the curve had reached a maximum and that the number of doctorates granted in the sciences must decrease. Apparently it is impossible at this time to predict whether this will happen, and if so, when.

This distribution of the doctorates by subjects shows no significant change last year, as compared with earlier years. The 1,343 doctorates granted in 1933 were distributed as follows: Chemistry, 417; physics, 123; zoology, 115; psychology, 101; botany, 79; mathematics, 78; engineering, 75; geology, 66; physiology, 39; agriculture and forestry, 36; bacteriology, 36; pathology, 23; anatomy, 17; entomology, 17; genetics, 15; horticulture, 15; anthropology, 13; pharmacy and pharmacology, 13; archeology, 10; astronomy, 10; geography, 10; public health, 10; medicine and surgery, 10; metallurgy, 9; paleontology, 6.

Each year there is a certain fluctuation in the number of doctorates granted by the various universities. Thus, this year Cornell showed an increase of 30 over last year, while Chicago showed a decrease of 43; Michigan showed an increase of 26, Harvard, 18, Illinois, 17, California Institute of Technology, 15, Columbia, 13, etc. These differences from year to year are really of little importance, for next year the order may be entirely different; however, a survey of the data for the past ten years shows that those universities which grant 20 or more doctorates maintain about the same relative positions from one year to another.

The following figures show the number of doctorates granted by the various universities for the academic year 1932–1933: Cornell, 110; Wisconsin, 87; Michigan, 81; Chicago, 73; Columbia, 71; Johns Hopkins, 68; Harvard, 63; Illinois, 63; California, 62; Minnesota, 62; Ohio State, 53; Yale, 50; Iowa, 48; California Institute of Technology, 36; Princeton, 32; Iowa State University, 31; Massachusetts Institute of Technology, 30; Pennsylvania, 24; New York, 21; Pittsburgh, 20; Stanford, 18; Northwestern, 17; Texas, 16; Washington University (St. Louis), 12; Duke, 11; Indiana, 11; Brown, 10; Cincinnati, 10; Maryland, 10; Pennsylvania State College, 10; Kansas, 8; Missouri, 8; Notre Dame, 7; Purdue, 7; Radcliffe, 7; Washington, 7; Catholic, 6; George Washington, 6; Nebraska, 6; North Carolina, 6; Colorado, 5; Michigan State College, 5; Rensselaer, 5; Rochester, 5; Virginia, 5; Western Reserve, 5; Clark, 4; Lawrence, 4; Rice, 3; Rutgers, 3; Vanderbilt, 3; American, 2; Boston, 2; Fordham, 2; George Peabody, 2; Oregon, 2; St. Louis, 2; Arizona, 1; Georgetown, 1; New York State College of Forestry, 1; State College of Washington, 1; Syracuse, 1; Tulane, 1.

Detailed data regarding the 1,343 doctorates granted in 1932–1933, giving the names of the recipients of the degrees and the titles of the theses, together with comparative statistics for the past ten years, will be found in *Reprint and Circular Series* of the National Research Council, No. 105. Earlier numbers of this series, containing such data for previous years, are: 26, 42, 75, 80, 86, 91, 95, 101 and 104.

CLARENCE J. WEST
CALLIE HULL

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A DEVICE FOR MEASURING INTENSITY OF ILLUMINATION

A TIMELY article by Nicholas,[1] calling attention to the economies that may be effected without loss of efficiency for animal work, prompts the writers to call attention to a home-made equipment for measuring intensity of illumination, in connection with plant work, which costs less than one third the amount asked by professional supply houses for a similar equipment.

The materials consist essentially of one Weston

[1] See SCIENCE, 72: 357 (1930), 74: 659 (1931), 76: 296 (1932) for a survey of the data on doctorates from 1898 to 1932.

[2] See *Jour. Chem. Education*, 10: 499 (1933) for further details of this study.

[1] SCIENCE, 78: 38–39, 1933.