SCIENCE

FRIDAY, APRIL 10, 1896.

CONTENTS:

MSS. intended for publication and books etc., intended for review should be sent to the responsible editor, Prof. J. McKeen Cattell, Garrison-on-Hudson, N. Y.

THE NATIONAL ACADEMY OF SCIENCES AND THE COLLEGES OF THE UNITED STATES.

THE National Academy of Sciences was incorporated by an Act of Congress in the year 1863. It consists of 88 members at present, and adds to its numbers annually seldom more than five members, and often none.

The following interesting table shows how its members are distributed among the faculties of the various Colleges in the United States, according to the data available in the Lick Observatory. As our set of college catalogues is not complete a few errors may remain in this list. Professor Hilgard has been kind enough to revise the table before printing. Names in square brackets belong, officially, in another category also.

Albany: Museum of the State of New York, (1): J. Hall.

Albany: Union College (The Dudley Observatory), (1): L. Boss.

Baltimore: Johns Hopkins University, (4): W. K. Brooks, I. Remsen, H. A. Rowland, [S. Newcomb] W. H. Welch.

Berkeley: The University of California, (4): G. Davidson, E. W. Hilgard, E. S. Holden, Joseph Le Conte.

Boston: The Society of Natural History, (1): Alphæus Hyatt.

Boston: The Mass. Inst. Technology, (2): J. M. Crafts, F. A. Walker.

Cambridge: Harvard University, (11): A. Agassiz, H. P. Bowditch, W. G. Farlow,

W. Gibbs, G. L. Goodale, H. B. Hill, C. L. Jackson, E. C. Pickering, F. W. Putnam, C. S. Sargent, J. Trowbridge.

Chicago: The University of Chicago, (1): A. A. Michelson, C. O. Whitman.

College Hill: Tufts College, (1): A. Michael.

Hoboken: Stevens Technological Institute, (2): A. M. Mayer; H. Morton.

New Haven: Yale University, (13): W. H. Brewer, G. J. Brush, R. H. Chittenden, E. S. Dana, W. L. Elkin, J. W. Gibbs, C. S. Hastings, S. W. Johnson, O. C. Marsh, H. A. Newton, S. I. Smith, A. E. Verrill, A. W. Wright.

New York: American Museum, (1): J. A. Allen.

New York: Columbia College, (3): C. F. Chandler [G. W. Hill], R. Mayo-Smith, O. N. Rood.

New York: The Public Library (—): [J. S. Billings].

Philadelphia: University of Pennsylvania, (4): G. F. Barker [J. S. Billings], E. D. Cope, J. P. Lesley, H. C. Wood.

Princeton: College of New Jersey (1): C. A. Young.

Providence: Brown University (2): C. Barus, A. S. Packard.

Washington: U. S. Army, (5): H. L. Abbot, J. S. Billings, C. B. Comstock, E. Coues, C. E. Dutton.

Washington: American Ephemeris, (—): [G. W. Hill], [S. Newcomb].

Washington: U. S. Navy, (2): A. Hall, S. Newcomb.

Washington: U. S. Coast and Geodetic Survey, (1): C. A. Schott [H. Mitchell].

Washington: U. S. Geological Survey (5): G. F. Emmons, G. K. Gilbert, A. Hague, R. Pumpelly, C. A. White.

Washington: U. S. Weather Bureau, (1): C. Abbe.

Washington: Smithsonian Institution and National Museum and Fish Commission, (4): T. N. Gill, G. B. Goode, J. P. Langley, J. W. Powell.

Waterville: Colby University, (1): W. A. Rogers.

Worcester: Polytechnic Institute, (1): T. C. Mendenhall.

In Private Life: (15): A. G. Bell, S. C. Chandler, B. A. Gould, G. W. Hill, C. King, M. C. Lea, T. Lyman, H. Mitchell, S. W. Mitchell, E. S. Morse, C. S. Pierce, F. Rogers, S. H. Scudder, W. Sellers, J. H. Trumbull.

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*DIFFUSIVE REFLECTION OF RÖNTGEN RAYS.**

THE following communication contains a brief description of a series of experiments with Röntgen radiance which were conducted during the last six weeks. The results of these experiments seem to possess a sufficient scientific and practical importance to merit notice. The most important refer to diffuse reflection or scattering of Röntgen radiance. It seems desirable to state first, briefly, the disposition of the apparatus and the method of experimentation by means of which the Röntgen effects can be rendered sufficiently intense for the purpose described below.

Induction Coil and Interrupter. A powerful coil was found indispensable for strong effects and satisfactory work. The vibrating interrupter is too slow and otherwise unsatisfactory, and it was replaced by a rotary interrupter, consisting of a brass pulley, 6 inches in diameter and $1\frac{1}{4}$ inches in thickness. A slab of slate $\frac{3}{4}$ inch thick was inserted and the circumference was kept carefully polished. This pulley was mounted on the shaft of a Crocker-Wheeler $\frac{1}{8}$ HP motor giving 30 revolutions, and, therefore, 60 breaks per second. Two adjustable Marshall condensers of three microfarads each were connected in shunt with the break,

* Presented before the New York Academy of Sciences, April 6, 1896.