'Solid Hydrocarbons of the Series C_nH_{2n+2} and Normal Liquid Hydrocarbons of the Series C_nH_{2n} , in the Less ver,

Volatile Portions of Pennsylvania Petroleum': C. F. MABERY.

'Specific Heats and Heats of Volatilization of Hydrocarbons of the Series C_nH_{2n+2} , C_nH_{2n} , and C_n H_{2n-4}, in Pennsylvania, Texas, California and Japanese Petroleums': C. F. MABERY.

'Composition of Commercial Paraffine, Vaseline, and Solid and Pasty Mixtures of Hydrocarbons Collected in Oil Wells': C. F. MABERY.

'Composition and Properties of Asphalts from Different Petroleums': C. F. MABERY.

'The Sulphohalides of Lead': VICTOR LENHER.

'The Theory of Factor Weight in Gravimetric Analysis': C. A. LITTLE.

'On Positive and Negative Halogen Ions': JULIUS STIEGLITZ.

'The Quantitative Separation and Determination of Uranium': EDWARD F. KERN.

'The Discovery of Nitro-Glycerine in an Exhumed Body ': G. G. Pond.

WILLIAM MCPHERSON,

Secretary.

MEMBERSHIP OF THE AMERICAN ASSOCIATION.

THE following have completed their membership in the American Association for the Advancement of Science during the month of August :

Frank L. Abbott, Professor of Physical Sciences, State Normal School, Greeley, Colo.

Geo. E. Alexander, Chemist and Mining Engineer, 1736 Champa St., Denver, Colo.

Dr. John E. Almy, Instructor in Physics, University of Nebraska, Lincoln, Nebr.

Miss Theodosia G. Ammons, Professor of Domestic Science, State Agricultural College, Ft. Collins, Colo.

John B. Annear, Chemist, Boulder, Colo. Geo. F. Archer, 31 Burling Slip, New York, N. Y.

Robert Armstrong, M.D., Boulder, Colo.

Barton O. Aylesworth, President State Agricultural College, Ft. Collins, Colo.

Francis N. Balch, Lawyer, 23 Court St., Boston, Mass.

George Bell, Mineralogist, 200 S. Washington Ave., Denver, Colo.

Edgar H. Berry, Draftsman, 72 E. 87th St., New York, N. Y.

Frank W. Blackmar, Professor of Sociology and Economics, University of Kansas, Lawrence, Kansas. Fred C. Blake, Boulder, Colo. Newton A. Bolles, Chemist, 1457 Ogden St., Denver, Colo.

Fred Bond, State Engineer, Cheyenne, Wyoming. Joseph H. Bowman, Electrical Engineer, Apartado 21, Cordoba, Mexico.

Frank P. Brackett, Professor of Mathematics, Pomona College, Claremont, Cal.

David W. Brunton, Mining Engineer, 865 Grant Ave., Denver, Colo.

Mrs. Emma F. J. Bullene, 1431 Court Place, Denver, Colo.

Virgil M. Came, 315 Quincy Bldg., Denver, Colo. James Carter, M.D., Carbon, Wyoming.

Rollin T. Chamberlin, Hyde Park Hotel, Chicago, 111.

Ellery C. Chilcott, Professor Geology and Agronomy, Agricultural College, Brookings, S. D.

Arthur Cobb, Architect, 600 Equitable Bldg., Louisville, Ky.

Thomas H. Conorroe, M.D., Lecturer on Biology, Hahnemann Medical College, 833 N. 26th St., Philadelphia, Pa.

Samuel R. Cook, Professor Physics and Chemistry, Washburn College, Topeka, Kansas.

Clifford E. Corwin, Teacher of Science, High School, 508 5th St., Marietta, Ohio.

Mattoon M. Curtis, Professor of Philosophy, Western Reserve University, 43 Adelbert Ave., Cleveland, Ohio.

Alvin S. Daggette, M.D., 400 S. Craig St., Pittsburg, Pa.

A. H. Danielson, Assistant Agriculturist, Agricultural College, Ft. Collins, Colo.

Edward E. Davis, 157 N. 20th St., Philadelphia, Pa.

Manning W. Doherty, Associate Professor of Biology, Ontario Agricultural College, Guelph, Canada.

Charles R. Dryer, Professor of Geography, State Normal School, Terre Haute, Ind.

Philip K. Dumaresq, Sears Building, Boston, Mass. George M. Duncan, Professor of Philosophy, Yale

University, 299 Edwards St., New Haven, Conn. Miss Alice Eastwood, Curator of Herbarium, Academy of Sciences, San Francisco, Cal.

David C. Eccles, Pharmacist and Chemist, 191 Dean St., Brooklyn, N. Y.

Isaac R. Edmands, Electrical Engineer, Union Carbide Co., 315 Buffalo Ave., Niagara Falls, N. Y.

E. Waite Elder, Instructor in Physics, High School No. 1, Denver, Colo.

Dr. Arthur H. Elftman, Mining Engineer, 706 Globe Building, Minneapolis, Minn.

Wilbur D. Engle, Professor of Chemistry, Univ. of Denver, University Park, Colo.

Philo J. Farnsworth, M.D., Clinton, Iowa.

Dexter M. Ferry, Jr., Seedsman, 1040 Woodward Ave., Detroit, Mich.

Francis A. J. FitzGerald, P. O. Box 118, Niagara Falls, N. Y.

Robert H. Forbes, Professor of Chemistry and Dir. Agr. Exper. Sta., Territorial Univ., Tucson, Arizona.

Floyd C. Furlow, Professor Experimental Engineering, Ga. School of Technology, Atlanta, Ga.

John B. Garvin, Instructor in Chemistry, Denver High School, 2536 W. 34th Ave., Denver, Colo.

H. Allan Gleason, Asst. in Botany, Univ. of Illinois, John St., Champaign, Ill.

Gustavus E. Gordon, Scientific Director, Walker-Gordon Laboratory Co., 1120 Conn. Ave. N. W., Washington, D. C.

Professor H. A. Gossard, Professor of Entomology, Agric. Coll., Lake City, Fla.

H. P. Grabill, Student of Chemistry, Drake University, 1004 Anas Ave., Des Moines, Iowa.

U. S. Grant, Northwestern University, Evanston, Ill.

Willis H. Grant, Teacher of Chemistry and Geology, Academic High School, Pittsburg, Pa.

Clarence S. Hammatt, Electrical and Mechanical Engineer, Jacksonville, Fla.

Everhart P. Harding, Asst. in Chemistry, Univ. of Minnesota, Minneapolis, Minn.

R. H. Harper, M.D., Practicing Physician, Afton, Indian Territory.

J. Campbell Harris, 119 S. 16th St., Philadelphia, Pa.

Samuel T. Hensel, Chemist, 801 East Colfax Ave., Denver, Colo.

John W. Heston, Pres. S. D. Agri. College, Brookings, S. D.

Charles N. Hewitt, M.D., Secy. State Board of Health, Red Wing, Minn.

Geo. M. Holferty, Instructor in Botany, Univ. of Ill., 931 W. Green St., Urbana, Ill.

A. M. Holmes, M.D., Jackson Block, Denver, Colo. Samuel J. Holsinger, Special Agt. Interior Dept., Tucson, Arizona.

Walter D. Hunter, Entomologist, Victoria, Texas. Elsworth B. Knerr, Midland College, Atchison, Kansas.

Andrew C. Lawson, Prof. of Geology and Mineralogy, Univ. of California, Berkeley, Cal.

Henry C. Lay, Mining Engineer and Geologist, Telluride, Colo.

William G. Lee, 7 Littles, Cambridge, Mass.

Mrs. Julia A. Lender, 2201 Lincoln Ave., Denver, Colo.

Percy A. Leonard, Editor and Manager Ores and Metals, P. O. Box 364, Denver, Colo.

Edwin H. Lockwood, Assistant Professor Mechanical Engineering, Yale University, New Haven, Conn.

Geo. D. Louderback, Professor of Geology, Nevada State University, Reno, Nevada.

J. R. Lovejoy, Electrician, 811 Union St., Schenectady, N. Y.

Otto J. J. Luebkert, Bureau of Forestry, Dept. Agriculture, Washington, D. C.

D. W. McGee, Farley, Iowa.

Howard L. McLaury, Professor of Mathematics and Physics, South Dakota School of Mines, Rapid City, S. D.

John W. Mahin, Teacher in Manual Training High School, 1411 16th Ave., Denver, Colo.

Fredrick Wm. Mally, Entomologist, Orchardist and Nurseryman, College Station, Texas.

Amos L. Mason, M.D., Physician to Boston City Hospital, York Harbor, Maine.

Dr. J. A. Mathews, Chemist and Metallurgist, 4 First Place, Brooklyn, N. Y.

Elmer D. Merrill, Assistant Agrostologist, U. S. Dept. Agriculture, Washington, D. C.

Ralph D. Mershon, Consulting Engineer, 621 Broadway, New York, N. Y.

Mrs. Cornelia Miles, Principal Broadway School, 1544 Franklin St., Denver, Colo.

Armand R. Miller, Professor of Chemistry, Manual Training High School, Kansas City, Mo.

E. J. Molera, Civil Engineer, 606 Clay St., San Francisco, California.

Hart Momsen, Chief Clerk, Division of Agriculture, Census Office, Washington, D. C.

Stanley H. Moore, Director Manual Training Dept., Manual Training High School, Kansas City, Mo.

Horatio N. Parker, Biologist to Metropolitan Water Board, 24 Wendell St., Cambridge, Mass.

Arthur L. Patton, Instructor in Physics and Chemistry, State Preparatory School, Boulder, Colo.

Jesse Pawling, Jr., Instructor in Physics, Central High School, Philadelphia, Pa.

Mrs. Lucy E. Peabody, 1430 Corona St., Denver, Colo.

Harold Priestman, Electrician, care of Westinghouse Elec. Co., Pittsburg, Pa.

Mrs. Mary L. D. Putnam, President Davenport Academy of Sciences, 2013 Brady St., Davenport, Ia.

T. A. Rickard, Mining Engineer and Geologist, University Club, Denver, Colo.

John M. Roberts, Principal High School, Marshall, Mo.

E. Dwight Sanderson, Entomologist, Agr. Exp. Sta., Newark, Del.

W. M. Scott, State Entomologist, Atlanta, Ga.

James F. Sellers, Professor of Chemistry, Mercer University, Macon, Ga.

Gustavus Sessinghaus, Mining Engineer, Alma, Colo.

Homer LeRoy Shantz, Instructor in Biology, Colorado College, Colorado Springs, Colo.

John C. Shedd, Professor of Physics, Colorado College, Colorado Springs, Colo.

James D. Skinner, 823 E. 14th Ave., Denver, Colo. H. Clyde Snook, Professor of Physics and Chem-

istry, Allegheny College, Meadville, Pa. Nathaniel M. Snyder, Electrical Engineer, Gering, Neb.

Zachariah X. Snyder, President State Normal School, Greeley, Colo.

Elmer G. Starr, M.D., Clinical Professor Ophthalmology, University of Buffalo, 523 Delaware Ave., Buffalo, N. Y.

Thomas B. Stearns, Mining and Mechanical Engineer, Denver, Colo.

Robert Stevenson, Consulting, Civil and Mining Engineer, P. O. Box 2214, San Francisco, Cal.

James H. Stewart, Director W. Va. Agr. Exp. Sta., Morgantown, W. Va.

George A. Still, Student, Drake University, 1428 Locust St., Des Moines, Iowa.

Miss Lela Lorena Stingley, Astronomical Student, University Park, Colo.

Goodwin D. Swezey, Professor of Astronomy and Meteorology, University of]Nebraska, Lincoln, Nebr.

Harry Stanley Thayer, Chemist, Greeley, Colo.

Miss Mary Clark Trayler, Astronomical Student, 653 S. Grant Aye., Denver, Colo.

George B. Upton, Milton, Mass.

Rudolph J. Walter, Mining Engineer and Metallurgist, 1452 Blake St., Denver, Colo.

C. E. Wantland, Land Agent, Union Pacific R. R. Co., 1025 17th St., Denver, Colo.

Milan L. Ward, Professor Mathematics and Astronomy, Ottawa University, Ottawa, Kan.

David Wesson, Mgr. and Treas. of Wesson Process Co., 204 Bay St., Savannah, Ga.

Rev. Henry White Warren, Bishop M. E. Church, University Park, Colo.

Thomas B. Whitted, Electrical Engineer, General Elec. Co., Denver, Colo.

Merle J. Wightman, Electrical Engineer, 150 Nassau St., New York, N. Y.

Edwin M. Wilcox, Botanist and Entomologist, A. and M. College, Stillwater, Oklahoma.

Arthur Williams, with N. Y. Edison Co., 261 Linden Boulevard, Brooklyn, N. Y. Wm. H. Wilson, Professor of Mathematics, University of Wooster, 141 Beall Ave., Wooster, Ohio.

- Alexander N. Winchell, Professor of Geology, Montana School of Mines, Butte, Montana.
- Byron C. Wolverton, Engineer, New York and Pennsylvania Telephone and Telegraph Company,

P. O. Box 43, Elmira, N. Y.

William S. Yeates, State Geologist, Atlanta, Ga.

SCIENTIFIC BOOKS.

- A Laboratory Course in Plant Physiology, especially as a basis for ecology. By WILLIAM F. GANONG, Ph.D., Professor of Botany in Smith College. New York, Henry Holt and Company. 1901. Octavo, cloth. Pp. vi + 147.
- Practical Text-book of Plant Physiology. By DANIEL TREMBLY MACDOUGAL, Ph.D., Director of the Laboratories of the New York Botanical Garden. With one hundred and fifty illustrations. New York, Longmans, Green and Co. 1901. Octavo, cloth. Pp. xiv + 352.

Professor Ganong's little book is a product of his laboratory, and therefore has the merit of practicality. The illustrations of apparatus (about thirty) are from photographs of the appliances actually used, and the text consists of descriptions of experiments which the author has repeatedly made. The book is in two parts, in the first of which the author discusses methods of study and the necessary equipment, while in the second is given an outline of a course of experiments in the laboratory on protoplasm, nutrition, growth, reproduction and irritability. The author says (p. 23), 'It goes without saying that a greenhouse and a laboratory are indispensable for a course in physiology,' and naturally gives a good deal of attention to the plans and equipment of both. These sections of the book will prove very helpful to those who are building up their facilities for physiological work. The experiments, of which nearly one hundred are specifically indicated, are selected with reference to their availability and practicability in an elementary course. The treatment here is such as to make investigators. The author does not ask numberless leading questions of the 'kindergarten order,' nor does he leave the student without any guide, but wisely follows a middle