

THE FOLLOWING LIST of research scholarships and fellowships supported by industrial concerns and associations is the third revision of the one printed in **INDUSTRIAL AND ENGINEERING CHEMISTRY, NEWS EDITION, in 1929.**¹ It has been compiled from data supplied by the organizations supporting the scholarships or fellowships, or by institutions, such as the Bureau of Standards, under whose direction they are maintained.

Corrections of, and additions to, this list are welcome, and should be sent to the Research Information Service, National Research Council, Washington, D. C.

ABBOTT LABORATORIES, North Chicago, Ill. Fellowships maintained at:
University of Chicago, for nutritional research.

University of Wisconsin, for pharmacologic studies.

ACETOL PRODUCTS, INC. See **NEWPORT CHEMICAL CORP.**

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, care of L. A. Olney, Chairman, Research Committee, Lowell Textile Institute, Lowell, Mass. Two research associates at the Bureau of Standards; one at the Lowell Textile Institute. Projects: Study of the methods of determining fastness of dyed fabrics to light, washing, laundering, perspiration, and other color-destroying agencies; the isoelectric point of wool and its application in the processing of textiles manufactured from wool; action of light on pure dyed silk; the effect of pH on the photochemical decomposition of silk; effect of alkalinity and acidity on the deterioration of cotton cloth on exposure to light; effect of the presence in cloth of iron, manganese, and copper salts on the deterioration on exposure to light; effect of carbonization on the dyeing properties of woolen cloth.

AMERICAN BOTTLES OF CARBONATED BEVERAGES, 726-29 Bond Bldg., Washington, D. C. Three fellowships at Iowa State College, for research in problems relating to the beverage industry. Two at \$500; one at \$800.

AMERICAN CAN CO., 230 Park Ave., New York, N. Y. Three fellowships at Johns Hopkins University, for the study of chemistry. \$1000 each.

AMERICAN CAST IRON PIPE CO., Birmingham, Ala. Fellowship at Vanderbilt University, for research in metallurgy of cast iron. \$800.

AMERICAN CRANBERRY EXCHANGE, 90 West Broadway, New York, N. Y. Fellowship at Massachusetts State College, for research on vitamins of cranberries. \$2000.

AMERICAN CYANAMID CO., 335 Fifth Ave., New York, N. Y.

Fellowships are maintained at:

Cornell University, for research on nitrogen-fertilized early-cut timothy as a substitute for clover or alfalfa in the ration of dairy cows. \$4000, two years.

Florida State University, for research on cyanamid as a source of lime, as well as nitrogen, to supplement the use of acid-fertilizer mixtures. \$3000, two years.

Louisiana State University, for research on the quantity of nitrogen in relation to yield and sugar content of sugar cane. \$4500, three years.

Ohio State University, for research on cyanamid as a partial sterilizing agent in market-garden soils and as a source of nitrogen and lime for apple trees. \$3000, two years.

Ontario Agricultural College, for research on time of application of nitrogen in relation to effect on yield of tree fruits and grapes. \$2500, one year.

Purdue University, for research on cyanamid as a source of both nitrogen and lime for crops in Corn Belt rotations. \$4500, three years.

Rutgers University, for research on characteristics of cyanamid in relation to its use as a fertilizer. \$4500, three years.

Texas Agricultural College, for research on use of fertilizers in increasing yield and controlling root rot of cotton in Texas Black Belt. \$3000, two years.

University of Wisconsin, for research on the use of large amounts of nitrogen in intensive systems of pasture management. \$1800, one year.

NOTE. Amounts shown are totals for years indicated, and not per year. Average fellowship investment runs \$1500 per man per year.

AMERICAN DENTAL ASSOCIATION, 212 East Superior St., Chicago, Ill. Research Associate at Bureau of Standards. Project: Study of dental materials; tests.

AMERICAN DRY MILK INSTITUTE, 221 North LaSalle St., Chicago, Ill.

Fellowships are maintained at:

Alabama Polytechnic Institute University of Idaho

Pennsylvania State College University of Minnesota

University of Georgia University of Missouri

AMERICAN ELECTRO-PLATERS' SOCIETY, Ashtabula, Ohio. Research associate at the Bureau of Standards. Project: Methods for protecting and evaluating the porosity of chromium deposits and the factors that influence the porosity thereof.

AMERICAN FACE BRICK ASSOCIATION, 305 West Wacker Drive, Chicago, Ill. Cooperates with National Lime Association and manufacturers of

AMERICAN FACE BRICK ASSOCIATION, Continued

masonry cements in maintaining research associates at Bureau of Standards under the Masonry Mortar Research Fellowship. Project: Properties of masonry mortars and of mortar and brick assemblages.

AMERICAN GAS ASSOCIATION, 420 Lexington Ave., New York, N. Y.

Fellowships are maintained at:

American Gas Association Testing Laboratory, Cleveland, Ohio (five), for pipe-joint research; study in burning gas with preheated air; characteristics of burner noises; mixed gases; fundamentals of combustion space requirements in industrial gas furnaces.

American Gas Furnace Co., Elizabeth, N. J., for research in the application of heat to brass melting.

Rutgers University, for study in the application of heat in ceramic firing.

Silica Gel Corp., Baltimore, Md., for development of gas-operated house-cooling and air-conditioning devices.

Surface Combustion Corp., Toledo, Ohio (two), for research in bright annealing brass and other metals, and the application of gas heat to forging.

University of Michigan (two), for study of the application of heat to short-cycle malleableising; scaling of steel at heat-treating temperatures.

University of Oklahoma, for research in natural gas.

West Virginia University, for research in natural gas.

Scholarships are maintained at:

Johns Hopkins University, for research in manufactured gas.

Purdue University, for research in manufactured gas.

Research associates at Bureau of Standards. Project: Pipe-line protection—field and laboratory tests of samples of protective coatings; utilization of gas.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 285 Madison Ave., New York, N. Y.

Fellowship at Ohio State University, for research in wind stresses in tall building frames.

Research associate at Bureau of Standards. Project: Fire tests of floors.

AMERICAN MANUFACTURERS OF TOILET ARTICLES, 10 East 40th St., New York, N. Y. Scholarship at Columbia University, for research in the field of perfume. \$2000.

AMERICAN PETROLEUM INSTITUTE, 350 Park Ave., New York, N. Y. Research projects at the following institutions:

California Institute of Technology, Pasadena, Calif., for study of the fundamentals of the retention of oil by sand.

Bureau of Standards, Washington, D. C., for study of the separation, identification, and determination of the chemical constituents of commercial petroleum fractions.

Research associate. Project: Corrosion of pipe lines.

U. S. Geological Survey, Washington, D. C., for study of the origin and environment of source sediments present in petroleum.

AMERICAN PHARMACEUTICAL ASSOCIATION, 10 West Chase St., Baltimore, Md. Glass Container Research Fellowship, at Columbia University.

AMERICAN ROLLING MILL CO., Middletown, Ohio. Fellowship at Iowa State College, for research in chemistry. \$1000.

AMERICAN SOCIETY FOR TESTING MATERIALS, 1315 Spruce St., Philadelphia, Pa.

Sponsors research at:

Battelle Memorial Institute, Columbus, Ohio. Research on embrittlement of galvanized structural steel. Funds contributed by five groups of industries.

Battelle Memorial Institute and the University of Illinois. Researches on the effect of temperature on the properties of metals (with American Society of Mechanical Engineers). Funds contributed by industries, with grants from National Research Council and Engineering Foundation.

Bureau of Standards. Research associate. Project: Research in cement; testing.

University of Illinois, Iowa State College, Cornell University, Massachusetts Institute of Technology, and Ohio State University. Researches on cast iron pipe. Funds contributed by manufacturers of cast iron pipe. Sponsored in cooperation with American Gas Association, American Water Works Association, and the New England Water Works Association.

Princeton University. Research on grouping of North American coals into sizes. Funds contributed by several industries.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, 29 West 39th St., New York, N. Y.

Research associates maintained at:

Bureau of Mines. Project: Removal of ash as molten slag from powdered coal furnaces.

Bureau of Standards. Projects: Elevator safeties; lubrication; wire rope.

Bureau of Standards (three) and Massachusetts Institute of Technology (one). Project: Thermal properties of steam.

Bureau of Standards and Union College. Project: Mechanical springs.

¹ NEWS EDITION, V, 2 (July 30, 1929).

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, Continued

- Bureau of Standards, Ceramic Station, Columbus, Ohio. Project: Boiler furnace refractories.
- Carnegie Institute of Technology. Project: Heavy-duty anti-friction bearings.
- Massachusetts Institute of Technology. Project: Strength of gear teeth.
- Ohio State University and University of Michigan. Project: Boiler feedwater studies.
- Ohio State University and University of Oklahoma. Project: Fluid meters.
- University of Illinois and Battelle Memorial Institute. Project: Effect of temperature on the properties of metals.
- University of Michigan. Project: Cutting fluids.
- University of Minnesota. Project: Velocity measurement of fluid flow.
- AMERICAN STANDARDS ASSOCIATION, 29 West 39th St., New York, N. Y. Two research associates at Bureau of Standards. Project: Development and testing of elevator safeties and buffers.
- ARCHER-DANTERS-MIDLAND Co., Minneapolis, Minn., and WILLIAM O. GOODRICK Co., Milwaukee, Wis. Seven fellowships at Lehigh University, for work on drying oils. \$1200 each.
- ASPHALT SHINGLE AND ROOFING INSTITUTE, 2 West 45th St., New York, N. Y. Research associate at Bureau of Standards. Project: Durability of felt shingles.
- ASPHALT TILLS AND MASTIC ASSOCIATION, Johns-Manville Co., 292 Madison Ave., New York, N. Y. Research associate at Bureau of Standards. Project: Investigation of plastic material for floor covering and writing specifications therefor.
- ASSOCIATION OF OPERATIVE MILLERS, 516 Board of Trade Bldg., Kansas City, Mo. Fellowship at Kansas State College, for research in the milling industry. \$540.

- BARCOCK AND WILCOX Co., 85 Liberty St., New York, N. Y. Fellowships at Massachusetts Institute of Technology, for research on refractories, heat transmission, and creep of steel.
- BAKELITE CORP., 247 Park Ave., New York, N. Y. Two graduate fellowships at Columbia University for 1931-32, and one graduate fellowship for 1932-33.
- BAKER CHEMICAL CO., J. T., Phillipsburg, N. J. Analytical Chemistry Research Fellowship, at Princeton University, for estimation of sucrose. \$1000.
- Analytical Chemistry Research Fellowship, at University of Michigan, for work on the precipitation of basic salts by means of urea. \$1000.
- Chemical Education Fellowship, at Johns Hopkins University. \$1000.
- BARNETT Co., 40 Rector St., New York, N. Y. Fellowship at Rutgers University, for study of nitrogen assimilation by horticultural crops. \$3400.
- BON MARCHE, Seattle, Wash. Industrial fellowship at the University of Washington, for research in textiles. \$600.
- BORDEN Co., 350 Madison Ave., New York, N. Y. Research grants maintained at: Columbia University. Mellon Institute of Industrial Research. Rutgers University.
- BROWN Co., Berlin, N. H. Research associate at Bureau of Standards. Project: Permanency of paper. Two fellowships at Johns Hopkins University. \$1000 each.

- CARBIDE AND CARBON CHEMICALS CORP., 30 East 42nd St., New York, N. Y. Fellowship at Johns Hopkins University, for the study of chemistry. \$1000.
- CAST IRON PIPE RESEARCH ASSOCIATION, 122 South Michigan Ave., Chicago, Ill. Research associate at Bureau of Standards. Project: Investigation of causes of soil corrosion.
- CENTRAL SCIENTIFIC CO., 486 East Ohio St., Chicago, Ill. Fellowship at Johns Hopkins University, for the study of chemistry. \$1000.
- CLOCK MANUFACTURERS ASSOCIATION, 644 Drexel Bldg., Philadelphia, Pa. Research associate at Bureau of Standards. Project: Investigation of lubricants for fine mechanisms.
- CLOQUET LUMBER Co. See NORTHWEST PAPER Co.
- COCA COLA Co., Atlanta, Ga. Fellowship at Johns Hopkins University, for the study of chemistry. \$1000.
- COLUMBIAN CARBON Co., 45 East 42nd St., New York, N. Y. Fellowship at Mellon Institute for research in the technology of carbon obtained from gaseous flames. \$8000.
- Fellowship at West Virginia University, for research on the manufacture of carbon black. \$600 for ten months.
- COOPER AND CO., INC., HUGH L., 101 Park Ave., New York, N. Y. Research associate at Bureau of Standards. Project: Use of clays in concrete mixtures.
- CORPACH INSTITUTE, 60 East 42nd St., New York, N. Y. Research associate at Bureau of Standards. Project: Measurement of manila rope.
- CROP PROTECTION INSTITUTE. See DOW CHEMICAL Co.; IODINE EDUCATION BUREAU; JOHNSON AND JOHNSON; KOPPERS PRODUCTION Co.; LIQUID CARBONIC CORP.; MAKEPEACE AND Co.; NICHOLS COPPER Co.; SHARPLES SOLVENTS CORP.; STANDARD OIL Co. OF INDIANA; STANDARD OIL Co. OF NEW JERSEY.

CUDARY PACKING Co., 111 West Monroe St., Chicago, Ill. Fellowship at Johns Hopkins University, for the study of chemistry. \$1000.

DOW CHEMICAL Co., Midland, Mich. Fellowship maintained under the direction of the Crop Protection Institute at the Agricultural Experiment Station, Ames, Iowa, for study of synthetic organic compounds as insecticides and fungicides.

DU PONT DE NEMOURS AND Co., E. I., Wilmington, Del. Fellowships and scholarships are awarded to universities without recommendation as to subject of the research to be pursued. The department in which the work is to be done is usually, though not always, specified. The average value of the fellowship is approximately \$750 and the scholarship \$430. They cover research in the fields of agronomy, chemistry, chemical engineering, marketing, and physics.

Fellowships are maintained at:

Alabama Polytechnic Institute	Princeton University
California Institute of Technology	Stanford University
Columbia University	University of California
Cornell University	University of Chicago
Harvard University	University of Illinois
Johns Hopkins University	University of Michigan
Lawrence College	University of Minnesota
Massachusetts Institute of Technology	University of Notre Dame
Northwestern University	University of Washington
Ohio State University	University of Wisconsin
Pennsylvania State College	Yale University

Scholarships are maintained at:

Cases School of Applied Science¹
University of Delaware

Cooperative fellowship at the Institute of Paper Chemistry, for the study of the application of special chemicals to the paper industry.

EASTERN STATES FARMERS' EXCHANGE, Springfield, Mass. Fellowship at Massachusetts State College, for research in problems relating to forage crops. \$1000.

EDGAR BROTHERS Co., Metuchen, N. J. Industrial scholarship at the Institute of Paper Chemistry, Appleton, Wis. \$500.

EVAPORATED MILK ASSOCIATION, 203 North Wabash Ave., Chicago, Ill.

Fellowships are maintained at:

- Columbia University, for research on the antipellagra vitamin content of evaporated milk.
- Iowa University School of Medicine, for research in metabolism.
- Los Angeles Health Department Clinics, for studies on infant feeding.
- Massachusetts Agricultural College, for study of the use of milk in the school lunches of rural Massachusetts.
- Michigan State College, for developing improved recipes for milk-containing foods.
- New York Post Graduate Medical School, for studies on infant feeding.
- University of Chicago, for research on the antigenic properties of milk.
- University of Chicago, for developing improved recipes for milk-containing foods.

FERRRO ENAMEL CORP. OF CLEVELAND, Cleveland, Ohio. Fellowship at Western Reserve University, for study of fundamental reactions involved in manufacture of enamel. \$900 to \$1500, and free tuition from the university.

FRANKFONTS TIRE AND RUBBER Co., Akron, Ohio.

Fellowship at Johns Hopkins University, for the study of chemistry. \$1000.

Fellowship at the University of Akron, for study of rubber. \$1000.

FRITZSCHER BROS., INC., 78 Beekman St., New York, N. Y. Fellowship at University of Wisconsin, for study of volatile oils and related subjects. \$500.

GENERAL ELECTRIC Co., Schenectady, N. Y. Charles A. Coffin Fellowships, which may be held either in this country or abroad, for research in electricity, physics, and physical chemistry. \$5000.

GENERAL FOODS CORP., 250 Park Ave., New York, N. Y.

Fellowships are maintained at:

- Cornell University, for research in chemical spectroscopy.
- University of Illinois, for research in biochemistry.
- Western Reserve University, for research in biochemistry.
- GENERAL MOTORS CORP. RESEARCH LABORATORIES, Detroit, Mich. Fellowship at Johns Hopkins University, for research in chemistry. \$1000.
- GILBERT PAPER Co., Menasha, Wis. Student research fellowship at the Institute of Paper Chemistry, Appleton, Wis. \$1800.
- GRASSELLI CHEMICAL Co. See DU PONT DE NEMOURS AND Co., E. I.

HILLS BROTHERS Co., 110 Washington St., New York, N. Y. Fellowship at Massachusetts State College, for research on chemical and microbiological studies of dyes. \$1600.

IODINE EDUCATION BUREAU, 62 Water St., New York, N. Y. Fellowship maintained under the direction of the Crop Protection Institute, at Agricultural Experiment Station, New Brunswick, N. J., for study on new iodine compounds as fungicides.

J. H. R. PRODUCTS Co., Willoughby, Ohio. Jeavons graduate fellowship at Western Reserve University, for research in problems in inorganic chemistry. \$1500.

¹ Requested by the Grasselli Chemical Co.

JOHN-MANVILLE INC., Manville, N. J. McMillan research associate at Bureau of Standards. Project: Studies in heat transfer by convection.
JOHNSON AND JOHNSON, New Brunswick, N. J. Fellowship maintained under the direction of the Crop Protection Institute, at University of Wisconsin, for study of surveyors' tape.

KELLOGG CO., Battle Creek, Mich. Fellowship at Teachers College, Columbia University, for study of "All Bran." \$5000.

KELWAHNE MANUFACTURING CO., Keweenaw, Wis. Fellowship at Johns Hopkins University, for the study of chemistry. \$1000.

KOPPERS RESEARCH CORP., Koppers Bldg., Pittsburgh, Pa. Scholarship in the Department of Gas Engineering, Johns Hopkins University.

Under the administration of the Crop Protection Institute, a fellowship is maintained at the University of Illinois to investigate agricultural uses of sulfur recovered in the liquid purification of fuel gas. \$4500.

KRAFT-PRINCE CHEMICAL CORP., 650 Rush St., Chicago, Ill.

Fellowships are maintained at:

Cornell University, for study of nutritive properties of "Kraeco" milk sugar feed. \$1800.

Rutgers University, for general research problems at the College of Pharmacy. \$10,000.

LESLY AND CO., Elm, Indianapolis, Ind.

Fellowships for the study of chemistry are maintained at:
 Johns Hopkins University.
 University of Chicago.

Fellowship in bacteriology at Washington University, St. Louis, Mo.

LEWIS CARBONIC CORP., Chicago, Ill. Fellowship maintained under the direction of the Crop Protection Institute, at Iowa State College, for use of solid, liquid, and gaseous carbon dioxide in the application of insecticides and fungicides.

MCCNELL, ROBERT, Philadelphia, Pa. McNell Fellowship at the Lankenau Hospital, Philadelphia, Pa., for the study of the oxidation and reduction potentials of cysteine and its oxidation problems.

MAKFRACH AND CO., Wareham, Mass. Fellowship maintained under the direction of the Crop Protection Institute, at the Cranberry Station, Wareham, Mass., for methods of extraction of pyrethrum.

MASCHOTT CORP., Laurel, Minn. Student research fellowship at the Institute of Paper Chemistry, Appleton, Wis., for physical and chemical study of wood. \$1500.

MERCK AND CO., INC., Rahway, N. J. Fellowships maintained at:
 New Jersey Agricultural Experiment Station, for research in fungicides. \$1800.

University of Pennsylvania, for research in pharmacology. \$4000.

Pennston University, for research in analytical chemistry. \$1000.

University of Virginia, for research in colloidal chemistry. \$700.

MERRILL CO., Wm. S., Cincinnati, Ohio. Fellowship at University of Cincinnati, College of Medicine, for research in biochemistry. \$1500.

MICHIGAN GAS ASSOCIATION, Grand Rapids, Mich. Fellowship at University of Michigan, for research in gas engineering. \$1250 (\$750 to holder, \$500 for expenses).

MOORE AND MUMFORD, New York, N. Y. Industrial scholarship at the Institute of Paper Chemistry, Appleton, Wis.

MUNSTROM GROWERS ASSOCIATION OF PENNSYLVANIA, Kennett Square, Pa. Fellowship at Rutgers University, for research in developing a method of making artificial manure out of straw. \$1200.

NATIONAL ASSOCIATION OF HOSIERY AND UNDERWEAR MANUFACTURERS, 468 Fourth Ave., New York, N. Y. Research associate at Bureau of Standards. Project: Study of methods of manufacture of hosiery and knitted goods, investigation of defects and tests of materials.

NATIONAL BUILDING UNITS CORP., and **NATIONAL CINDER PRODUCTS ASSOCIATION**, 1800 Arch St., Philadelphia, Pa. Research associate at Bureau of Standards. Project: Investigation of aggregate for, and properties of, slender concrete building units.

NATIONAL CANNERS ASSOCIATION, 1739 H St., Washington, D. C. Fellowships maintained at: University of California, for study of nutritive value of food. \$9000. Columbia University, for study of nutritive value of food. \$3300.

NATIONAL LIVE STOCK AND MEAT BOARD, 407 South Dearborn St., Chicago, Ill. Fellowship at the University of Minnesota, for the study of the role of certain body acids in nutrition. \$3000.

NEENAH PAPER CO., Neenah, Wis. Industrial scholarship at the Institute of Paper Chemistry, Appleton, Wis.

NEW JERSEY ZINC CO., 160 Front St., New York, N. Y. Scholarship at Lehigh University. \$15,000, total endowment.
 S. S. Palmer Scholarship at Stevens Institute of Technology. \$15,000, total endowment.

NEWPORT CHEMICAL CORP., Box M, South Milwaukee, Wis. A fellowship is maintained by the following subsidiary company of the corporation: **ACTROL PRODUCTS, INC.**, New Brunswick, N. J. At Rutgers College, for research on vitamin D. \$1200.

NIAGARA SPRAYER AND CHEMICAL CO., INC., Middleport, N. Y. Two fellowships are maintained at New York State College of Agriculture, Cornell University. One for research on the control of fruit diseases by dusting, and one for research on the relative toxicity and efficiency of fungicides and on methods of determining toxicity and efficiency. \$1500 each, plus cost of materials and equipment. Amount optional with donor.

NICHOLS COPPER CO., New York, N. Y. Two fellowships maintained under the direction of the Crop Protection Institute, at Agricultural Experiment Station, Newark, Del., one for the development of new copper fungicides, and one for study of copper in relation to plant nutrition.
NON-FERROUS INGEST METAL INSTITUTE, 308 West Washington St., Chicago, Ill. Research associate at Bureau of Standards. Project: Physical properties of copper alloys in ingot form.

NORTHWEST PAPER CO. and CLOQUET LUMBER CO., Cloquet, Minn. Cloquet wood fiber fellowship at the University of Minnesota, for the study of the fundamental chemistry of paper manufacture. \$1500.

NORTHWEST PAPER CO., Cloquet, Minn. Cloquet wood products fellowship at the University of Minnesota. \$2580.

PACIFIC COAST GAS ASSOCIATION, 447 Sutter St., San Francisco, Calif. Fellowship at University of California, for study of gas engineering. \$750.

PAPER MAKERS CHEMICAL CORP., Kalamazoo, Mich. Two industrial scholarships at the Institute of Paper Chemistry, Appleton, Wis.

PENICK AND FORD, 420 Lexington Ave., New York, N. Y. Fellowship at Iowa State College, for research in chemistry and bacteriology. \$1200, expenses \$500.

PITTSBURGH PLATE GLASS CO., PAINT AND VARNISH DIVISION, Milwaukee, Wis. Fellowship at the University of Wisconsin, for paint, varnish, and lacquer technology. \$1000.

PORTLAND CEMENT ASSOCIATION, 33 West Grand Ave., Chicago, Ill. Research associate at Bureau of Standards. Project: Constitution and hardening of Portland cement.

QUAKER OATS CO., 141 West Jackson Blvd., Chicago, Ill. Fellowship at the University of Wisconsin, in the field of animal nutrition. Fellowship at Iowa State College, for the study of chemistry.

RADIOLOGICAL RESEARCH INSTITUTE, St. Louis, Mo. Research associate at Bureau of Standards. Project: X-ray research.

RAG CONTENT PAPER MANUFACTURERS ASSOCIATION, Springfield, Mass. Staff fellowship at the Institute of Paper Chemistry, Appleton, Wis., for study of the factors influencing the permanence of papers.

REYNOLDS TOBACCO CO., R. J., Winston-Salem, N. C. Fellowship at Johns Hopkins University, for the study of chemistry. \$1000.

ROHM AND HAAS CO., Philadelphia, Pa. Cooperative fellowship at the Institute of Paper Chemistry, Appleton, Wis., on the application of special chemicals to the paper industry.

SEARLES SOLVENTS CORP., Philadelphia, Pa. Fellowship maintained under the direction of the Crop Protection Institute at the Ohio Agricultural Experiment Station, with supplementary work at N. H. Agricultural Experiment Station, on synthetic organic compounds as fungicides and insecticides.

SHELL DEVELOPMENT CO., Shell Bldg., San Francisco, Calif.

Fellowships for research in chemistry are maintained at:
 University of California. \$900.

Stanford University. \$900.

SQUIRES AND SONS, E. R., New York, N. Y.

Fellowships are maintained at:

University of Pittsburgh, for the study of oral hygiene.

University of Wisconsin, for the study of nutritional problems.

Yale University, for the study of organic syntheses.

Research associate at Bureau of Standards. Project: The investigation of antifreeze mixtures.

STALEY SALES CORP., Decatur, Ill. Student research fellowship at the Institute of Paper Chemistry, Appleton, Wis. \$1500.

STANDARD BRANDS, INC., 595 Madison Ave., New York, N. Y.

Fellowships are maintained at:

Columbia University

Emory University

Johns Hopkins University

N. Y. Post Graduate Medical

School and Hospital

University of Illinois

University of Minnesota

University of Oregon

University of Washington

Yale University (two)

STANDARD OIL CO. OF INDIANA, Chicago, Ill. Fellowship maintained under the direction of the Crop Protection Institute at the Illinois Agricultural Experiment Station, for the study of summer spray oils.

STANDARD OIL CO. OF NEW JERSEY, New York, N. Y. Fellowship maintained under the direction of the Crop Protection Institute, for study of pyrethrum culture.

STEARNS AND CO., FREDERICK, Detroit, Mich. Fellowship in the College of Pharmacy, University of Michigan, for research in pharmacy. \$500.

STEIN-HALL MANUFACTURING CO., Chicago, Ill. Staff fellowship at the Institute of Paper Chemistry, Appleton, Wis.

TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY, 370 Lexington Ave., New York, N. Y.

Fellowship at Forest Products Laboratory, Madison, Wis., for research on the relation of sheet properties to fiber properties through sheet structure. \$1000.

General fellowship at the Institute of Paper Chemistry, Appleton, Wis. \$1000.

TEXAS COTTON SEED CRUSHERS ASSOCIATION, 1408 Santa Fe Bldg., Dallas, Tex. Two fellowships at Agricultural and Mechanical College of Texas, for study of cottonseed oil mill problems. \$900 each.

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TOMCOO BY-PRODUCTS AND CHEMICAL CORP., Columbia Bldg., Louisville, Ky. Fellowship at Rutgers University, for the study of the effect of nicotine in the control of injurious insects. \$2700.

UPJOHN CO., Kalamazoo, Mich.

Scholarship at Kalamazoo College, for research in chemistry. \$750.

Scholarship at University of Michigan, for research in pharmacy. \$750.

U. S. INDUSTRIAL ALCOHOL CO., 60 East 42nd St., New York, N. Y. Fellowship at Johns Hopkins University, for the study of chemistry. \$1000.

UTILITIES RESEARCH COMMISSION, INC., 72 West Adams St., Chicago, Ill.

Research associate at Bureau of Standards. Project: Fundamental characteristics of liquid dielectrics.

Ten projects on various engineering problems at the Experiment Stations of the University of Illinois, Purdue University, and Massachusetts Institute of Technology, and at The Johns Hopkins University.

Three similar projects are placed in the laboratories of the individual companies which sponsor the commission.

WARNER AND CO., INC., WILLIAM R., 113 West 18th St., New York, N. Y.

Fellowship at Johns Hopkins University, for study of chemistry. \$1000.

WILBY AND SONS, INC., JOHN, 440 Fourth Ave., New York, N. Y. Fellowship at Johns Hopkins University, for the study of chemistry. \$1000.

WISCONSIN UTILITIES ASSOCIATION, ELECTRIC SECTION, 135 West Wells St., Milwaukee, Wis. Fellowship at University of Wisconsin, for the study

of electrical engineering research. \$750.

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