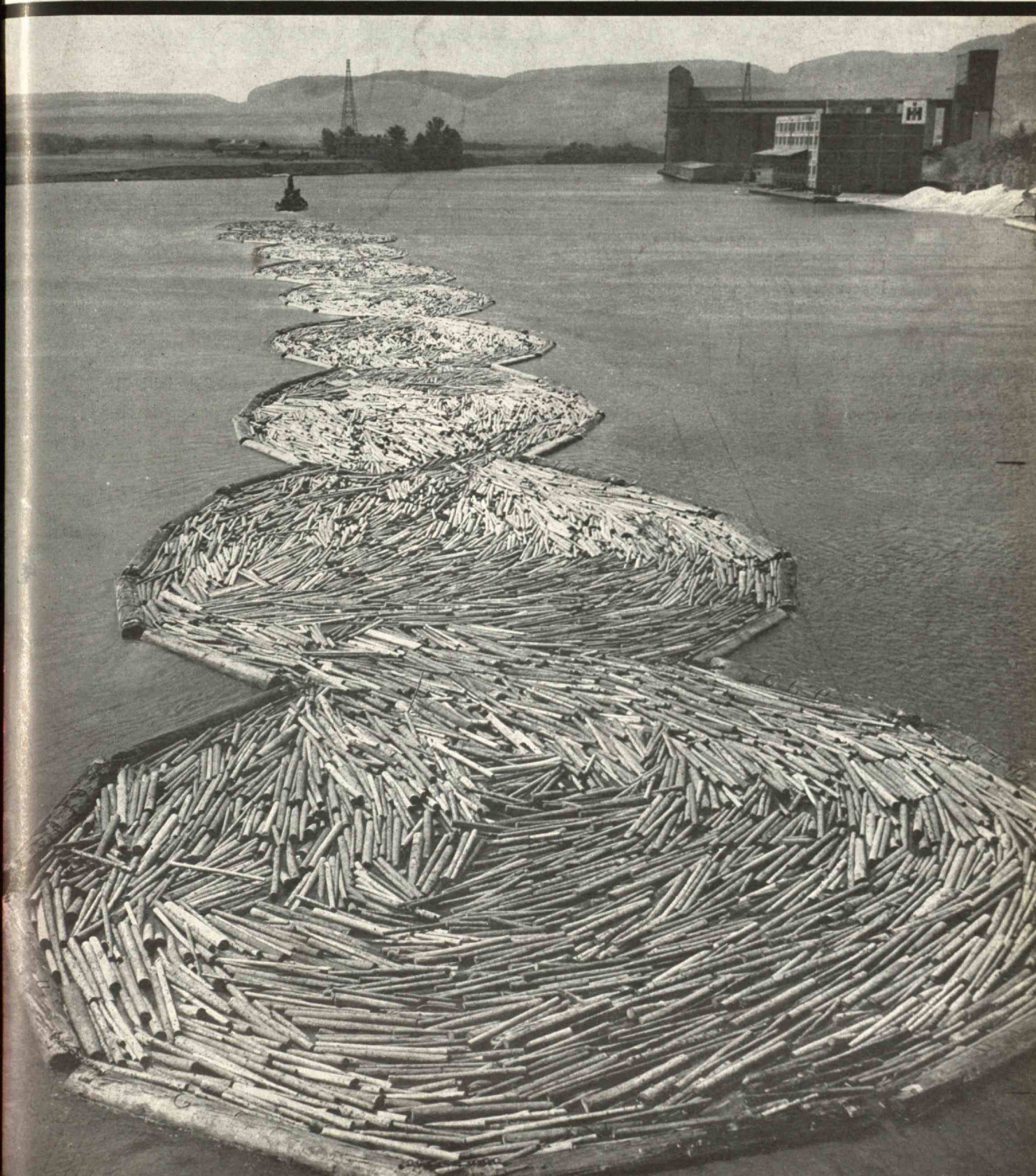
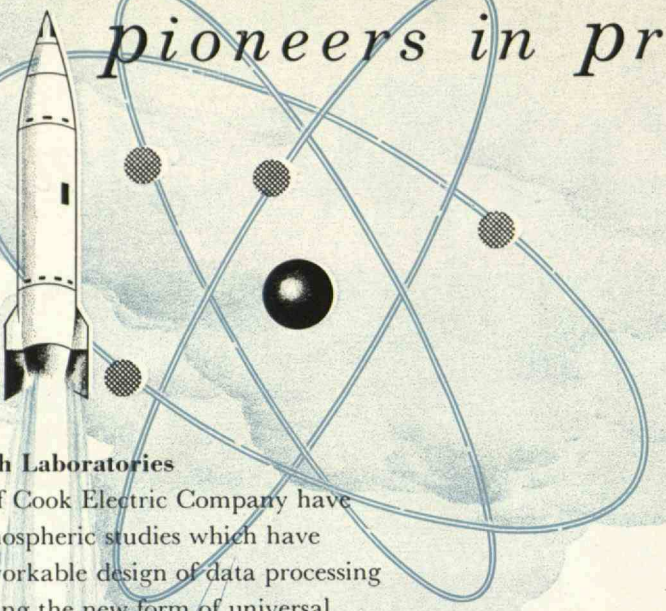
TECHNOLOGY REVIEW

June 1953



NO. TEN OF A SERIES

pioneers in precision



Cook Research Laboratories

a Division of Cook Electric Company have conducted atmospheric studies which have resulted in a workable design of data processing equipment, using the new form of universal records developed by this post-war pioneer in laboratory testing techniques.

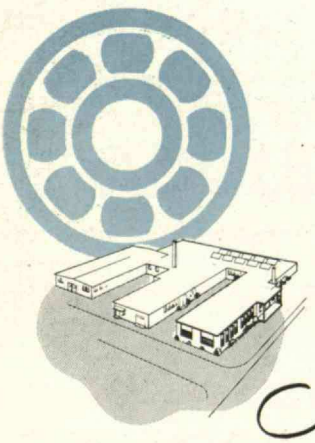
Miniature Precision Bearings

— incorporated, are the originators and pioneer developers of radial ball bearings in miniature sizes. More than twenty years ago, **MPB** engineers developed the first miniature radial ball bearings with ground races. From an original group of five ball bearings, **MPB** has developed a comprehensive line of more than 130 types and sizes, many of which now form the basis for international standardization.

Thousands of contemporary problems involving space, weight, and friction are being solved by the extensive variety of **MPB** ball bearings. They are fully ground, lapped, and/or honed to ABEC 5 tolerances or better. **MPB** ball bearings are torque tested, ultrasonicly cleaned, supplied in specific tolerances and classified within the tolerances for prompt assembly and maximum service. **MPB** ball bearings are normally supplied in 10 series, from 1/10″ to 5/16″ o.d., of high carbon chrome bearing steel. Most are supplied in stainless steel, some in beryllium copper, and all are assembled with best quality balls.

The wealth of engineering knowledge gained through participation in more than a million applications is available. Call on us for assistance, also request new catalog 53 and supplementary data sheets TR6.

Because of recent plant expansion, our facilities permit us to schedule prompt delivery of most sizes. We would welcome the opportunity to quote on your specific requirements.



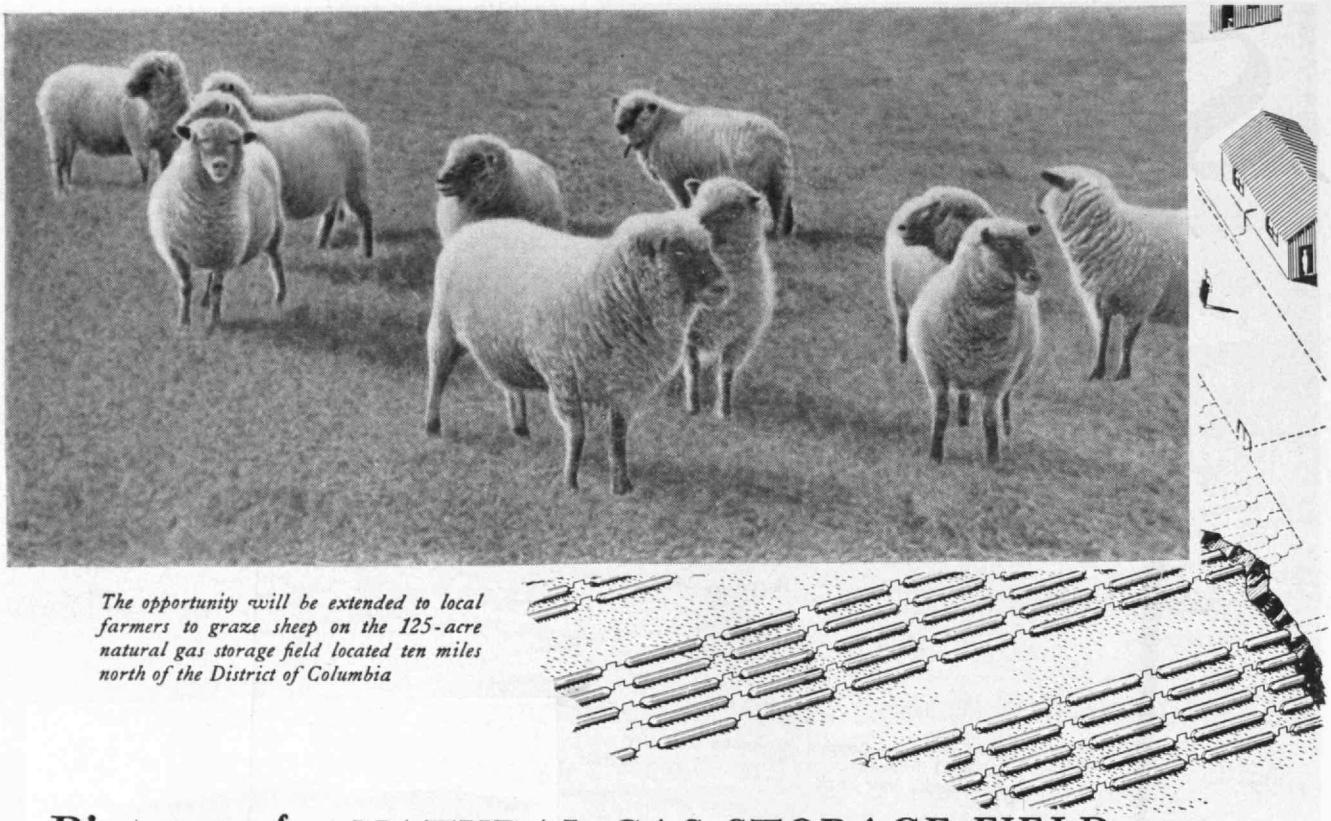
Miniature *precision* Bearings

Incorporated MPB Keene, New Hampshire

"pioneer precisionists to the world's foremost instrument manufacturers"

save
space
weight
friction

THE TECHNOLOGY REVIEW, June, 1953, Vol. LV, No. 8. Published monthly from November to July inclusive at Emmett Street, Bristol, Conn. Publication date: twenty-seventh of the month preceding date of issue. Annual subscription $3.50. Canadian and Foreign subscription. $4.00. Entered as second-class matter December 23, 1949, at the Post Office at Bristol, Conn., under the Act of March 3, 1879.



The opportunity will be extended to local farmers to graze sheep on the 125-acre natural gas storage field located ten miles north of the District of Columbia

Picture of a NATURAL GAS STORAGE FIELD

Managements faced with the problem of increased peak demands for natural gas beyond normal supply capacity, as well as providing stand-by capacity, can benefit from Stone & Webster Engineering Corporation's knowledge in this field.

For the Washington Gas Light Company the Engineering Corporation designed and constructed underground high pressure natural gas storage facilities with propane storing and mixing equipment, giving the Company, in addition to its other facilities, the equivalent of 100 million cubic feet of gas available for stand-by and peak shaving.

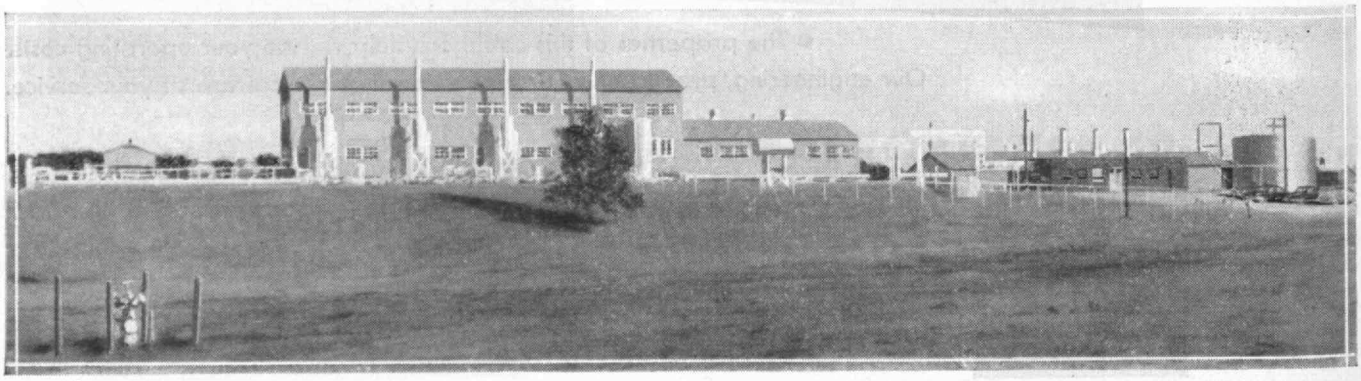
The new Washington Gas Light Company storage field is one of a number of high pressure pipe gas storage fields that Stone & Webster Engineering Corporation has designed and built for its clients.

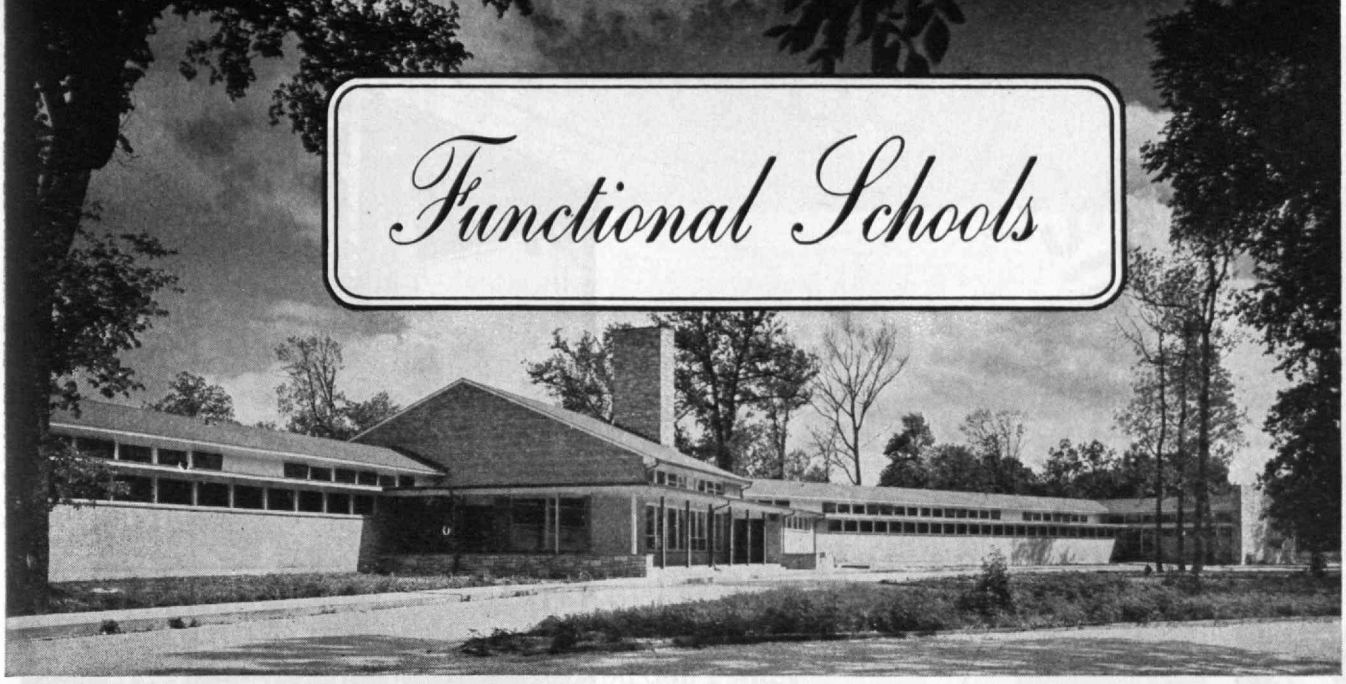
The Corporation has also designed and built gas compressor stations, and has made studies for clients on peak shaving problems involving catalytic reforming of hydrocarbons, natural gas liquefaction and other processes. This broad experience is available to the gas industry.

STONE & WEBSTER ENGINEERING CORPORATION

BADGER PROCESS DIVISION

AFFILIATED WITH E. B. BADGER & SONS LIMITED





Clyde L. Lyon School, Glenview, Illinois. Walvector in special enclosures along entire walls of windows assures comfort regardless of outside temperatures. Photo by Hedrich-Blessing.

Perkins and Will, nationally known Architects and Engineers, specify "perimeter" heating for comfort and economy . . . .

Many schools designed by this Chicago firm feature large glass areas, for beauty, better vision and more cheerful classrooms. To off-set resulting heating problems, the consulting engineers, E. R. Gritschke and Associates, have specified Webster Walvector Tru-Perimeter Heating for comfort and economy in many of the Perkins and Will schools.

Webster Walvector gently and evenly warms the exposed walls of the building. Heating-up is quick, and easily controlled. Buildings can be heated just before occupancy and the heat lowered as soon as they are empty. No blowers, fans or filters are used. Webster Walvector uses less piping than conventional radiator systems. There's no expense to conceal unsightly pipes in furred walls or trenches, no complicated run-outs.

Webster Walvector may be used in new construction or modernization with forced hot water or low pressure steam. See the Webster Representative for complete details, or write us.

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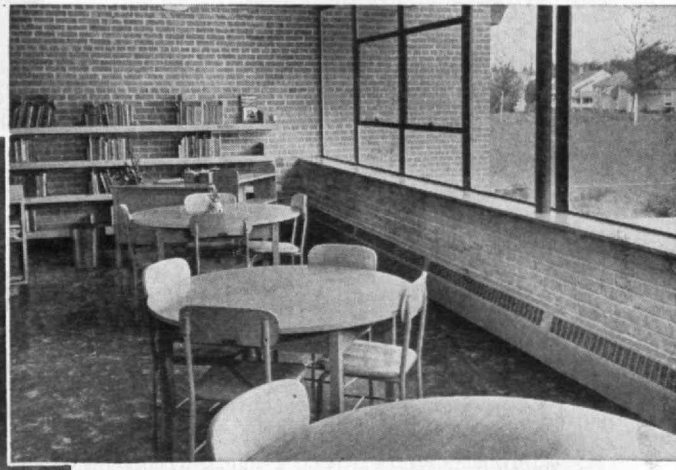
For Steam or Hot Water Heating

Left below: Teacher's lounge in Technical Building, Evanston Township High School, Evanston, Illinois. The exposed walls are heated with Webster Walvector painted to match wall color. Photo by Hedrich-Blessing.

Right: Library in Cascades Elementary School, Jackson, Michigan. Auditorium and gymnasium, in separate wings, are available for community use without opening the school proper.



You have to go inside

Almost all cables look alike on the outside. You have to go inside the jacket to the insulation if you want to see how good the cable really is. In power cables it's the insulation that makes the difference. This fact may be borne out in years of service or as a result of rigorous laboratory tests.

When you put a cable underground you don't want to dig it up again in a couple of years because it failed from water-absorption. Inside *this* cable you will find insulated conductors that can take continuous soaking over a long period of time and yet retain their physical and electrical properties almost unchanged.

Whatever your installation conditions, use Simplex-ANHYDREX Insulated Cables. They are made for installation as aerial cables or underground in ducts or direct burial. For more information write to the address below.

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WIRES & CABLES

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THE TABULAR VIEW

Industrial Management. — As its first full year of operation draws to a close, E. P. Brooks, '17, Dean of the School of Industrial Management, reviews the hopes, objectives, and accomplishments of the Institute's newest school (page 419). In establishing the School of Industrial Management, Dean Brooks and his associates have aimed to develop future leaders of industry who have a good basic background in science and engineering. Dean Brooks is a graduate of the Institute's Course in Business and Engineering Administration which now forms part of the new School. He has had a distinguished career in business, holding executive positions with American Cotton Oil Company, Montgomery Ward and Company, United States Steel Corporation, and serving Sears Roebuck and Company for a quarter of a century. From 1938 to 1951 he was vice-president in charge of factories, and from 1941 to 1952 was a director of the Chicago mail order firm. From 1949 to 1951, Dean Brooks was chairman of the Committee on Equipment and Materials, National Research and Development Board, and in 1945 was vice-deputy in charge of the American Mission to China for the War Production Board.

Nuisance Electricity. — In the May issue of The Review an article on the "History of Static Electricity" by Sidney M. Edelstein, '32, developed the principal points of progress in early electrical science. Mr. Edelstein concludes his two-part article with a discussion of the role of static electricity in the textile industry, and methods which are being used to combat its annoying characteristics (page 425). That there are problems worthy of any engineer's attention will become evident by Mr. Edelstein's recital of devices which have been used in the past to eliminate static. Mr. Edelstein is technical director of the Dexter Chemical Corporation. He has an extensive personal collection of great works, documents, and letters in the history of science, which has been put to good use in the past few years, in his position as secretary for the Division of History of Chemistry of the American Chemical Society.

Mechanical Resurgence. — The resurgence now taking place in nearly all branches of mechanical engineering is reflected in undergraduate training in this profession. In this issue (page 429) C. Richard Soderberg, '20, Professor of Mechanical Engineering, emphasizes the ways in which an extended program of graduate study, intensive research on problems of real value, and close contact with leaders in industry all act to benefit the undergraduate curriculum in Mechanical Engineering at the Institute. Professor Soderberg was graduated from Sweden's Chalmers Institute of Technology in 1919, and received the honorary degree of doctor of technology from that institution in 1951. He also received the B.S. degree from M.I.T. in 1920. After nearly two decades of engineering work in industry, Professor Soderberg returned to the Institute in 1938 as a member of the Department of Mechanical Engineering. He became head of that Department in 1947.

(Concluded on page 410)