

now proposed to direct the attention of all industrial concerns throughout the state to the fact that such facilities are available and to emphasize as strongly as possible the benefits to be derived from research.

The main features of the plan include provisions for research; use of the university library facilities; employment of scientifically and technically trained Yale graduates; the training of specially qualified young men sent by manufacturers to the graduate school of the university; the loan of equipment to the university for use in training students; and the inspection of factories, summer employment of students and cooperative education, as a part of technical and semi-technical courses at the university.

The provision for research will be worked out under the plan as follows: a member of the Manufacturers Association desiring the investigation of a problem may send his inquiry to the association headquarters at Hartford. At the discretion of the research committee of the association the problem will be submitted to a committee acting for the university, and arrangements will be made to carry out the investigation either at the university or at the plant of the party proposing it. The research work, under the direction of well-known experts in a variety of fields, will include economics and finance, administration and management, transportation, applied psychology, public health, bacteriology, chemistry and chemical engineering, physics, mining and metallurgy, and civil, electrical and mechanical engineering.

Under the plan industrial concerns are to have access to the library facilities of the university for obtaining statistics and information concerning technical processes that usually can not be obtained in public libraries.

The attention of manufacturers is to be directed to the possibility of securing scientifically and technically trained young men through the university Bureau of Appointments, which assists in placing Yale graduates in positions for which their training fits them.

In order that the university may train students in the designing and use of special machinery and apparatus, arrangements will be made through the committee for the loan of equipment to the university. Tests will be made of such equipment, and the results will be available to the company furnishing it.

The cooperation of manufacturers with the committee will be sought in developing plans for summer employment and cooperative education. The advantages which will accrue to industry through such cooperation are believed to be great.

Students will be given the opportunity to visit plants throughout the state as a part of technical and semi-technical courses.

CHEMICAL INDUSTRY

THE progress of industry in the United States is more and more being bound up with the progress of chemical science, and "it is absolutely necessary for both the banker and the manufacturer to appreciate this if they are to avoid stagnation," according to Dr. John E. Teeple, of New York, treasurer of the American Chemical Society.

Addressing the Delaware Bankers' Association recently Dr. Teeple said that more than one half of the manufacturers of this country, with a total value exceeding \$62,000,000,000, were dependent upon chemistry. So rapidly was chemistry's invasion of industry spreading, he added, that this proportion was constantly becoming larger.

He named six groups—textiles, iron and steel, leather, paper, ceramics and glass, metals and metal products—with a production valued at more than \$33,000,000,000 which have a definite chemical basis. Chemical and allied products, he said, have risen in value from \$750,000,000 in 1899 to more than \$6,000,000,000 in 1924.

The chemical industry now ranks fourth, being outranked only by food, iron and steel and their products, and textiles, in all of which chemistry is an increasingly important factor.

Stressing the importance of research in any industry, Dr. Teeple said:

Given any chemical industry to-day, I would rather judge its future by its fixed attitude toward research than by its fixed assets, its working capital or its past earning power.

In 1915 there was no potash industry here. We wanted one suddenly and the price of potash was high. In 1918, forty-four plants were actually producing potash as a main product, not as a by-product of some other operation. Just one of these forty-four plants deliberately organized a research department and kept it constantly at work making a complete and fundamental study of its problems.

To-day potash is back to pre-war prices or lower, and only one of the forty-four plants is operating in competition with French and German potash. This one plant had no particular advantage of location, raw materials, patented process, or knowledge of the industry over many others, but its directors had the foresight and its financial backers had the nerve to organize research and put up the money for it month after month in good times and in bad ones.

THE HISTORY OF SCIENCE SOCIETY

THE History of Science Society, to which reference has already been made in *SCIENCE*, has been definitely organized with an initial membership of about three hundred. The officers for the current year are as follows: