vestigation, and production on a large scale was begun at once. The preparedness of the Commission of Conservation undoubtedly saved months of time in beginning the production of this valuable war material and enabled our air forces to attain that superiority which so largely contributed to the successful conclusion of the war.

Other Work of the Commission

The investigation of the forest resources of British Columbia was begun and completed during the currency of the war. Although every unmarried man on the staff, and some of the married men as well, was serving overseas, the Commission of Conservation has pushed onward with its huge task of finding out what Canada's natural resources are and ascertaining the best methods of developing them to give the greatest good to the greatest number.

Some of the other undertakings may be mentioned besides the report on the Forest Resources of British Columbia. A report on the forest resources of Saskatchewan (for it is a great forest as well as prairie province) is well advanced. For the past two years the Commission has been investigating the reforestation of pulpwood lands in Eastern Canada. The experiments will extend over many years, but it has already been found that spruce and balsam take from 50 to 150 years to grow to maturity, whereas most lumbermen have been basing their operations on the supposition that a new crop could be cut about every 30 years. This investigation is of fundamental importance to the pulp and paper industry, and some of the larger companies have made substantial grants to the Commission for carrying it on.

A report showing the distribution of electrical energy throughout Canada was recently given to the public, and a most exhaustive report on the water powers of British Columbia is now on press.

Many farmers who never before kept records of their farming operations are now becoming more efficient farmers and business men by utilizing the simple yet comprehensive Farmers' Account Book designed by the Commission, whilst many, also, are learning the why and wherefore of farming operations previously understood only in part, from the pages of the Hand Book for Farmers, a booklet which has proved immensely popular in the Khaki University among the soldiers who are looking forward to going on the land when they come back to Canada. Some 15,000 copies of the Commission's reports have been sent to this university at its request, to be used as text-books and supplementary reading in the courses dealing with Canada's natural resources. Each month, also, 1,000 copies of "Conservation," the monthly paper published by the Commission, are sent to the soldier-students of this university.

Another important phase of the Commission's work has been in town planning and housing. It is not too much to say that the educational and scientific basis of the present movements in favor of town planning and housing have been laid by the skilful and persistent work of the Commission's town planning adviser, Thomas Adams.

Public Interested in Efficiency

Not only has the organized work of conservation been carried on during the war with every effort exerted to accomplish as much as possible ere the period of reconstruction arrived, but the war itself has permeated the country with the ferment of conservation. Public opinion frowns upon waste and incompetency in business, and industrial leaders are realizing that the public they serve, as well as their own shareholders, are concerned over the efficiency of the methods they employ. Monopolistic and quasi-monopolistic business will be confronted with a demand for public ownership or close public regulation in proportion as its operations are wasteful and inefficient. Public opinion believes that the public has to pay for waste and inefficiency in private as well as in public business.

The Toronto Board of Control has been requested by John Berry, of Toronto, to investigate electrolytic treatment of sewage sludge. The Works Commissioner has been asked to report on Mr. Berry's proposed experiments, which would cost $39,000.

UNITED STATES ENGINEERING COUNCIL*

Joint Activities of Engineering Societies—A Resume of Work of Engineering Council and Engineering Foundation

By Alfred D. Flinn
Secretary, Engineering Council

ENGINEERS have had a tendency to separateness and segregation due to the nature of their work and their individual characteristics. Achievements in sciences have led to specialization in engineering. Branches and minor divisions of the profession have multiplied rapidly in recent years. Interchange of information early became necessary for the solution of technical problems and the establishment of correct practices. Consequently, societies were organized at the first for technical objects. With the rapid development of sciences, beginning in the latter part of the 19th century, new societies split off from the older ones or sprang up independently, pursuing the newer lines of specialization. Whereas, only sixty years ago there were in the United States one local society, at Boston, and one national organization, the American Society of Civil Engineers, at New York, there are now approximately 400 engineering societies and branches—local, state and national. In the main they have been until recently, independent one of another. Almost exclusively their organization and activity have been determined by technical considerations. Until quite recently, but little attention has been devoted to the humanistic aspects of engineering—to fellowship, to personal welfare, to community service.

Impotent to Aid Government

Indeed, when desires for activity along these latter lines began to be expressed, not many years ago, the profession found itself almost impotent for lack of solidarity. It had been organized chiefly for the preparation, discussion and publication of technical papers for the advancement of the arts and sciences of engineering. The organization machinery could not function satisfactorily in the new activities, excepting that some of the local units had developed a happy measure of fellowship, and in a few instances had taken some part in local civic affairs.

When the great war came to the United States, the engineering profession was unable to take advantage of a great opportunity. Individually, in small groups, and when organized in the military and naval services, engineers achieved marvels. But when engineers as a great professional body sought to aid the government and the government desired its aid, the Babel voices claiming to represent the profession made satisfactory co-operation impracticable. The same lack of effectiveness has prevailed in other fields of activity in which engineers are now beginning to realize they should have taken a larger part. At various times endeavors to deal with specific problems of public service or professional welfare, have been made by means of joint committees of two or more societies, or the several larger national societies have attempted to deal with them separately.

To Promote Solidarity

Desiring to promote the solidarity of the profession, a group of engineers, through the generosity of Andrew Carnegie, were able to establish the Engineering Societies Building in New York in the first decade of the twentieth century. For the purpose of holding and administering this property the American Societies of Mining, Mechanical and Electrical Engineers formed the United Engineering Society. After twelve years, the Civil Engineers accepted a repeated invitation to be one of the Founder Societies. United Engineering Society, therefore, now has four members. To accommodate the civil engineers, three additional stories were added to the building and completed in 1917. Engineering Societies Building is now a sixteen-story structure, and with its land represents an investment of approximately $2,000,000, one-half of which has been contri-

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*Notes on talk before Engineers' Club of Philadelphia, March 14th, 1919.