

## The Knowledge Bank at The Ohio State University

### Ohio State Engineer

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# WELCOME

**W**HEN you, as a new student at this University, came upon the campus, presented your credentials, and then found yourself regularly enrolled in the College of Engineering, it probably did not occur to you that just then you became a very welcome member of a large company of young men who have for their objectives important places in the great engineering fields of the future.

You may have very little conception of what an engineering education means to you, and what will be required of you in obtaining that education. The part you will play in the process is an important one, and that being so, it is reasonable to assume that to us, who are intrusted with the operation of this educational plant, you are an important, and therefore, a welcome factor.

An estimate of the value of your welcome may be gauged largely by a brief statement of the history of engineering education in this country, and also by a little knowledge of the demands of the engineering world today for those young men who have been fortunate enough to secure an engineering education.

Engineering education in the United States began 101 years ago with the opening of the doors of the Rensselaer Polytechnic Institute at Troy, N. Y., and here the first course in civil engineering, as well as one in science, was offered. At that time there were only two recognized fields of engineering: military and civil.

For twenty-five years, Rensselaer and West Point Military Academy were the only institutions to supply the engineering demands of the country, and consequently, many of our most prominent railway engineers and railway executives have been and are graduates of the Troy institution. About twenty years after the opening of Rensselaer, or sixty-five years ago, three other engineering schools were established: Lawrence Scientific School of Harvard, Sheffield Scientific School of Yale, and a department of Civil Engineering at the University of Michigan. These four institutions held the engineering field until the passage of the Morrill Land Grant Act of 1862, which granted Federal aid to the states for the purpose of establishing colleges of agriculture and engineering, although the act as passed used the words, "agriculture and mechanic arts." The passage of this act made greater advancement in engineering education possible, so that there was at once a rapid increase in the organization of engineering departments or schools. The four original institutions had grown to seventy by 1872, and this number has so increased that there are now 126 engineering colleges or schools.

Ohio State University opened its doors in the fall of 1873, and for the teaching of those subjects required in that early engineering education there were provided one

professor for mathematics and one for civil engineering. The first engineering graduate was in the year 1878. This beginning was followed by a good healthy growth, so that there were graduated 174 engineers in 1926, and the College up to the present time has had a total of 3,247 graduates, which means that between eight and nine thousand students have received instruction in its several engineering departments.

Six years ago the increasing demand for engineering graduates was considered of such importance by the Federal government that the National Industrial Conference Board made a very complete survey of manufacturing activities for the purpose of answering three questions:

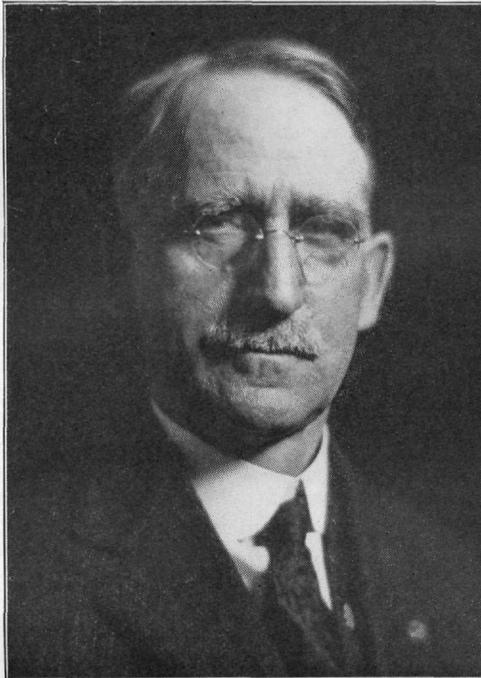
1. Do the industries of the United States need more or fewer engineers than the number now being graduated from the engineering schools and colleges?
2. What kind of men do the industries require from the engineering schools and colleges and what should be the nature of their education?
3. What are the responsibilities of the industries in this matter?

The investigation showed that of those employed in gainful occupations, less than four per cent of them planned the work and directed the activities of the group. Of those connected with manufacturing and mechanical industries (numbering about thirteen million) only 750,000 held positions of responsibility. In this latter group came the engineer, and there were only seventy thousand engineering graduates living. At the time of this investigation, there were only 51,908 engineering students.

The Board estimated that for a ten-year period there was need of 400,000 additional engineers for positions of responsibility. The engineering schools of the United States were turning out about nine thousand graduates per year when forty thousand per year were the estimated need. Is it strange, therefore, that during very recent years the demand for engineers has been much beyond the supply, and that many of our prospective graduates are engaged one year before graduation?

When we consider, therefore, the age of engineering education, the enormous developments in science and engineering during the life of engineering education, the equal if not greater advance which will be made in the next hundred years, and the demand for young men having an engineering education, is it strange that you should be welcome in the College of Engineering? That welcome, however, may be far from cordial as the months go by. The attitude of the college depends upon you. If you now recognize your responsibility

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DEAN E. A. HITCHCOCK

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**WELCOME**

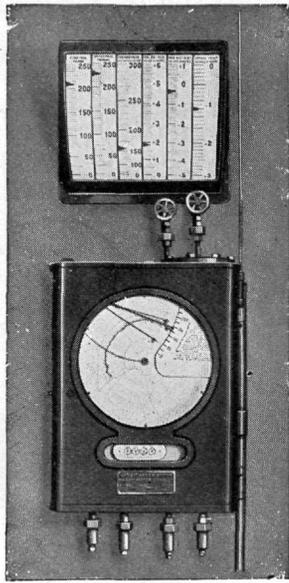
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to your parents, your University, and the State, and as a consequence, make the most of the wonderful opportunities which are now before you, the welcome extended to you at this beginning of your college career will be multiplied many times before the completion of your college requirements.

In welcoming you, therefore, to our College, my greatest hope is that you will do your best, "play the game," and always bear in mind that your responsibility to the institution requires that the reputation and good name of this University must be guarded most jealously, not only by constant and conscientious effort on your part, but also by conducting yourselves as gentlemen at all and under all circumstances.

E. S. HITCHCOCK.

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