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# History of Civil Engineering Department

By PROFESSOR C. E. SHERMAN, *Chairman*

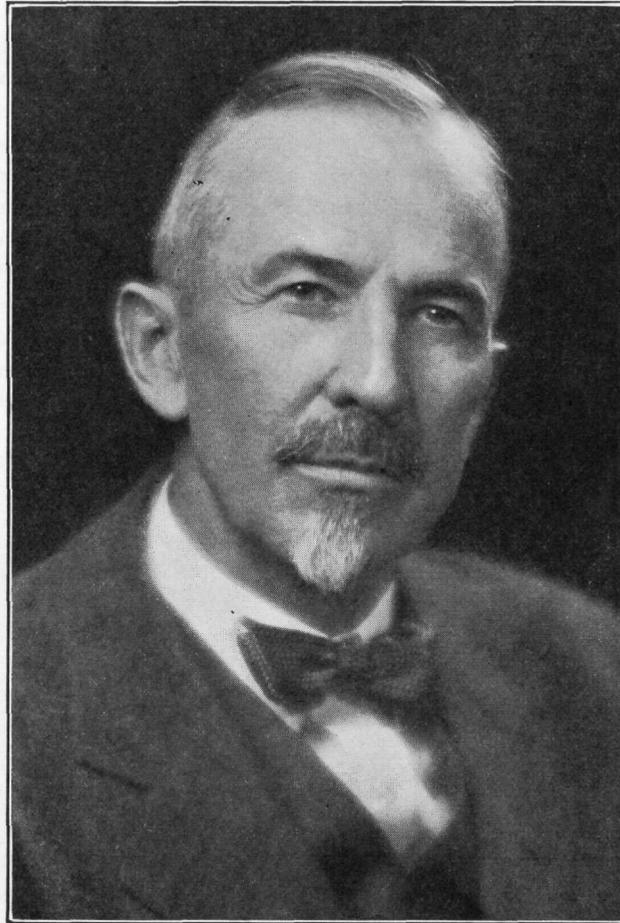
ON JULY 2, 1862, President Lincoln signed the land grant act which was the beginning of so many state universities. One of these resulting institutions was the Ohio State University, which opened her doors September 17, 1873, as the Ohio Agricultural and Mechanical College. It is interesting to note that all surrounding states and many west of the Mississippi started similar state institutions from five to ten years before Ohio State opened.

Although a civil engineering curriculum was established at the beginning in 1873, it was ten years later before a diploma was awarded in this field, when one student (Fremont Ackerman) took his C.E. degree. This delay in awarding such degrees was due to the dislike of the first professor (Professor R. W. McFarland) for

technical degrees. He was classically trained, and the technology then for the first time introduced into an Ohio school was too much of an innovation for him, perhaps. At any rate many students studied under him and took B.Sc. degrees rather than the professional degree, if any degree was taken. Among McFarland's students who thus took no degree was C. N. Brown, who later became head of the department and who still later was dean of the College of Engineering at the time of his death in 1902. For him Brown Hall was named.

At the beginning one professor with no assistance handled all the work in civil engineering, and was at the same time professor of mathematics and instructor in military science. This was when the classes were very small, of course. It is hard to realize, now, the small beginning, but the present writer recalls when he first came to the University there were less students in the whole University (i.e., of freshman, sophomore, junior, and senior rank) than there are now in civil engineering alone. Besides the growth in student attendance just noted, the staff of instructors has grown from one at the beginning to twelve at the present time.

Some other contrasts are instructive for present-day



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readers. Professor McFarland's low estimate of the value of an engineering degree was echoed by practicing engineers over the State, and in hunting for a job, if the applicant were a college graduate, it was usually best to keep it quiet.

There were no such things as "points" to be worked for. One had to stand high enough to take the next subject in advance. Not even credit hours were counted in some subjects. For example, a thesis was required of each graduate, but it carried no hours of credit. In spite of this—or shall we say rather because of neglecting credit and concentrating on the work—the students under Professor Brown took great interest in thesis projects. In a series of thesis contests during the four years 1892-95, the students of Professor Brown averaged first of all the engineering

colleges throughout the United States.

The curriculum expanded with succeeding years and with development of special fields. In 1900 summer surveying was added as a requirement for graduation. This kind of work was done in the rough southeastern part of Ohio, by sophomores and juniors immediately after the close of the year's work on the campus.

In 1903 the practice of having the summer surveying students do real work was begun, by taking contracts to survey highways, railways, rivers, town sites, or whatever could be had. Some notable work has thus been done both within the state and at long distances from home. For example, in 1905 topographical surveys of roads were made in Yellowstone Park; in 1916 surveys were made in southeastern Tennessee for water powers; in 1930 the Susquehanna River was surveyed for flood purposes in eastern Pennsylvania.

Most of these summer surveys have been made on various public projects in Ohio. Students who secure other engineering work of suitable character can substitute it for the surveying required and done with the University outfit of instruments, tents, and other equipment. The department has been unusually fortunate in the past

in getting a great variety of work to do. The present depression presents an unusual difficulty in measuring up to past performances.

The department has always attempted to train its students broadly, for most civil engineers are called upon to do many things rather than concentrate upon some research or specialty. It is believed that the broad training is better even for the student who expects to specialize.

The civil engineer is in general more in contact with the public than are persons engaged in most branches of technology. The roster of Federal employes is an index of this situation, as it shows there are more men with such required training than all other engineers put together in Uncle Sam's service.

All college graduates who have been Directors of the State Highway Department have graduated from Ohio State. The present director was a member of the class of 1922, and has charge of expending thirty or forty million dollars—far and away the State's largest expending bureau. The present State Director of Public Works is a member of the class of 1906. He has final approval of all state public building construction, including buildings on our campus, together with what is left of the canals and similar public works.

Some spectacular things have been done by former students of the department, such as that of Colonel Birdseye in running a continuous survey through the Grand Canyon of the Colorado for the Hoover Dam project. It is ordinarily counted a strenuous trip to go through the canyon without surveying it.

But the usual work of the civil is as a responsible officer in a corporation public or private, where his work though not spectacular is often far-reaching in its ramifications and variety of contacts. Graduates of the department thus hold important positions in railway, highway, structural, sanitary, municipal, and managerial fields. The position of city manager, if this form of municipal government becomes widespread, offers attraction to the civil engineer, for the bulk of a city's expenditures lie in this direction.

The staff of the present civil department at Ohio State is made up of men experienced in the subjects they teach, as may be seen by examining the University *Bulletin* entitled "Teaching Staff." In fact, no member of the staff has been employed in the past unless he first had practical experience, for the civil engineer's chief laboratory is the wide world outside the campus and here is his chief graduate course in most instances.

This brief article is notable for its omission of early history which may be partly supplied to the curious reader by examining in the University Library a Commemorative Bulletin of the department published in 1910.

An amusing incident from that bulletin may suffice to close this story. When Professor A. H. Heller, our first professor of structural engineering, entered college he had 100 marked after each study he had taken in the high school. This looked suspicious, because he was of retiring disposition and perhaps looked "dumb," so they

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made him take examinations for entrance. Afterwards while still a student he took charge of the classes in calculus while the head of the mathematics department was absent for a week.

You're in bad you see, whether you look dumber than you are or are dumber than you look.

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