

DEPARTMENT IN 1884

CIVIL ENGINEERING CREATED AT NEBRASKA THEN.

PROFESSOR LITTLE AT ITS HEAD

Only a Few Students Took That Course During the Early Years, Rapid Increase in Numbers Began in 1898-1899.

(By Prof. O. V. P. Stout.)

The first course in civil engineering offered in this university was formulated in 1877 by Lieutenant (now Colonel) Edgar S. Dudley, U. S. A., the first commandant of cadets. The department of civil engineering was created about 1884, with Professor C. N. Little as the head. Col. Dudley has been for several years a member of the faculty at West Point, and Professor Little has the civil engineering in the University of Idaho. The department has been in charge of the writer since the resignation of Prof. Little in 1893. E. J. Robinson, '84, known to many of the younger men through his connection with the engineering department of the Burlington, is the earliest graduate in active practice.

**Few Registered.**

During the early years but few students took the course. The rapid increase in numbers commenced about 1898-99. In the first semester of that year the registration numbered 29. In six years they had increased eight-fold. On the creation of the department of applied mechanics and the assignment to that department of the laboratory courses in civil engineering our registration was reduced to about 100. Now it is 267.

Only a very small percentage of the graduates thus far have engaged in occupations distinct from engineering. The University of Nebraska type of civil engineer is an industrious, resourceful, practical man, who is either a loyal and valued employe or a successful independent practitioner.

**Much Loyalty.**

It is a pleasure to be able to state that a high degree of loyalty to the university prevails, and that we have continual manifestation of a disposition on the part of the older men to introduce the younger brother to his opportunity.

here to the summit consists mainly of tunnels, bridges and switchbacks.

"Don't forget to send me one of those annual letters, as I'm looking for it. With the best wishes for the chapter, its members and the new chapter, I am,

"Fraternally yours,  
"CHESTER K. SMITH.  
"La Fundicion, Peru, S. A., care Cerro de Pasco Mining Co."  
I. B. Jones.  
"Redfield, Idaho, Nov. 2.  
"Brother Members in Sigma Tau:  
"Dear Brothers:—Another year has passed and I am looking forward for the Sigma Tau letter, as I like to hear what the other members are doing.

"Up to the last of May I was employed by the Tri-State Land Co., at Scotts Bluff, Neb., on concrete and pile driving inspection. I came to Idaho the first of June and am working for the J. G. White Construction Co., for which Jas. A. Green is supervising engineer. I am a division engineer on the construction of an irrigation system. I am well satisfied with my work and like this part of the country.

"Hoping to get the annual letter soon, I remain,  
"Sincerely,  
"I. B. JONES."  
Jas. A. Green.  
"Richfield, Ida., Nov. 4.  
"Dear Brothers:—Mr. Hrubesky handed me a note some time ago reminding me of the fact that the annual letter of Sigma Tau was due in October. I do not quite recall what I wrote the chapter a year ago, but as near as I can remember it was much in detail and carried me up until October of last year, at which time I was in charge of the engineering and construction for J. G. White & Co., on a large irrigation project adjacent to Denver. During the last winter this project was not actively pushed on account of financial troubles of the country and my time was devoted to making investigations and reports for White & Company on irrigation projects throughout the west. Since April I have been engaged as superintendent of construction and engineering for J. G. White

& Company in the development of the Idaho Irrigation company's project here in Idaho.

"Wishing you the very best of success for the coming year and looking forward with pleasure to your annual letter, I remain,  
"Very fraternally yours,  
"JAS. A. GREEN."  
C. L. Davis.  
"Wilksburg, Pa., Nov. 7.  
"Dear Brothers of Sigma Tau:  
"It is time our letters telling of our conduct during the past year, are arriving. However, there are a few of us who do not know to whom they should be sent. But, if this reaches you in time it will give my year's history as follows:  
"I have managed to keep in the employment of the Westinghouse Electric and Manufacturing Co., and lost but little time due to the financial panic. Not every one did so, and who did, feel ourselves in luck.  
"I spent five months, beginning with May first, in Kansas City, Mo., in the district sales office. Then returned here where I have now finished my two year apprentice course. I am still working on the course, however, getting some additional knowledge, and when times open again I wish to follow the erection business for awhile.  
"This gives you a short but clear idea of the way the year has gone with me and it has been very interesting. The further I advance in the knowledge of electricity the more interested I get.  
"Hoping this reaches you all O. K. and in good time, also that I may read of all your successes, I am,  
"Your Brother Sigma Tau,  
"C. L. DAVIS."  
396 Center St. Wilksburg, Pa.  
C. G. Hrubesky.  
"Gooding, Idaho, Nov. 8.

been tested were 660 H. P. horizontal turbines direct connected to a fire pump which was guaranteed to deliver 4,500 gallons per minute against 150-lb head. They did considerably better than that and part of them are now installed on a fire boat in the Chicago river. Incidentally on the same shaft with the pump and turbine was a 200 K. W. generator which drove a motor which was direct connected to the propeller. There was a very good report of these sets in a May issue of the Electrical World which you may have seen.

"Among the other especially interesting machines was a 1,500 K. W. horizontal set which is the largest horizontal set unit built here so far, although there is a 2,500 K. W. and a 3,500 K. W. set now in the course of construction.

"However, perhaps you may be more interested to know that on the nineteenth of August I was married to Elizabeth Countryman of Weeping Water, Nebraska. After a short visit in Nebraska and Illinois we came back here and now are located at the above address, where we will be very glad to see any Sigma Tau brothers who may chance to stray so far into the east.

"With greetings to all, fraternally,  
"LEONARD W. TURNER."  
E. E. White.  
"Fort Morgan, Colo., Nov. 27.  
"Dear Brothers in Sigma Tau:  
"The time for the annual letter to Sigma Tau has arrived, and if I mistake not it is past due. I can now appreciate the feelings of some of the past who have found it difficult to tell what they have done in the last year. What I have accomplished since I left school wouldn't fill a very large volume, but I will try and stretch it out and make it look as large as possible.

survey for a road from Bayamo to Cocoom, a distance of about fifty-six kilometers. This included drainage study, location of bridge sites, data on high water, floods, etc., cross sections and velocities of streams, study of the subsoil to determine foundation conditions and also as a means of locating rock for the road; also maps and estimation of cost of construction.

"To make a long story short, the entire force working on the new work was laid off in the fall and I came back to the United States about as fast as possible. Since then I have been doing some work around Fort Morgan in the engineering line and doing some office work to put in the time.

"With best wishes for a prosperous year in Sigma Tau, I remain, fraternally, a well wisher to all of the bunch wherever they may be.  
"E. E. WHITE."  
P. O. Box 223, Ft. Morgan, Colo.  
A. S. Harrington.  
"Lincoln, Neb., Nov. 29.  
"Dear Sigma Taus:  
"I had entirely forgotten that I was due to write a letter the fore part of October and was reminded of it by Brother Johnson a few days ago, so I will write a little of my meager experiences since graduation last June.

"I finally obtained work as electrician's helper in the Omaha shops of the Union Pacific railway, where I had plenty of real work and 'experience' in conduit construction and wiring and incidentally plugging holes in brick walls to hold up the conduit. After three months of this work I was needed at home and so gave up the work.

"Later I came to Lincoln and worked with Brother Johnson (C. G.), helping him in his work of installing electrical equipment in the plant of the

CROWDED BUT GOOD

THE MECHANICAL LABORATORIES OFFER PROPER FACILITIES. THE NEW EQUIPMENT WILL HELP

When it is Supplied Rooms Will Be On Equal Footing With Those in the Other Universities of this Country.

(By Prof. C. F. Dean.)

The mechanical engineering department is provided with the following shops and laboratories: Wood shop, forge shop, foundry, machine shop, fuels and friction laboratory and the steam laboratory. Space at this time will not permit of a complete description of the above, but a few words as to equipment and work done in these laboratories may be of interest.

In the wood shop instruction in carpentry, wood turning and pattern working is given. The shop contains 25 benches, each equipped with a complete set of carpenter's tools, and sixteen 10-inch speed lathes, with two sets of turning tools for each lathe. A number of other wood working machines are provided, and the tool room is supplied with a large number of small wood working tools.

Work in forging and welding iron and steel, and tempering, etc., is given in the forge shop. This shop contains 24 down-drop forges. The blast for the forges is supplied by a power blower, and the smoke is also removed by this blower. Other tools will be found here such as vices, shears, emery wheels, steam hammer, etc.

The foundry contains 20 moulders' benches, with complete sets of tools, a 24-inch cupola furnace, a power sand sifter, crane, core benches, core oven, ladels, blocks, etc. Here the student is taught molding, core making and casting.

**Iron Working Tools.**

In the machine shop instruction is given in the use of iron working tools and machines, and actual construction of machines is carried on. In this shop are lathes, planer, milling machine, shaper, drill press, etc. A course is also given in chipping and filing. In the tool room is kept a large assortment of drills, taps, dies, reamers, milling cutters, etc.

In the fuels and friction laboratory the testing of both solid and liquid fuel is carried on. Also considerable work is done in the testing of lubricating oils. Two transmission dynamometers and a belt testing machine are installed.

Such instruments as Carpenter's coal calorimeter, Mohler's bomb calorimeter and a Junkers' gas and oil calorimeter are used in this laboratory. With the lubricating oils, viscosimeters, flash apparatus, test hydrometers, etc., are used.

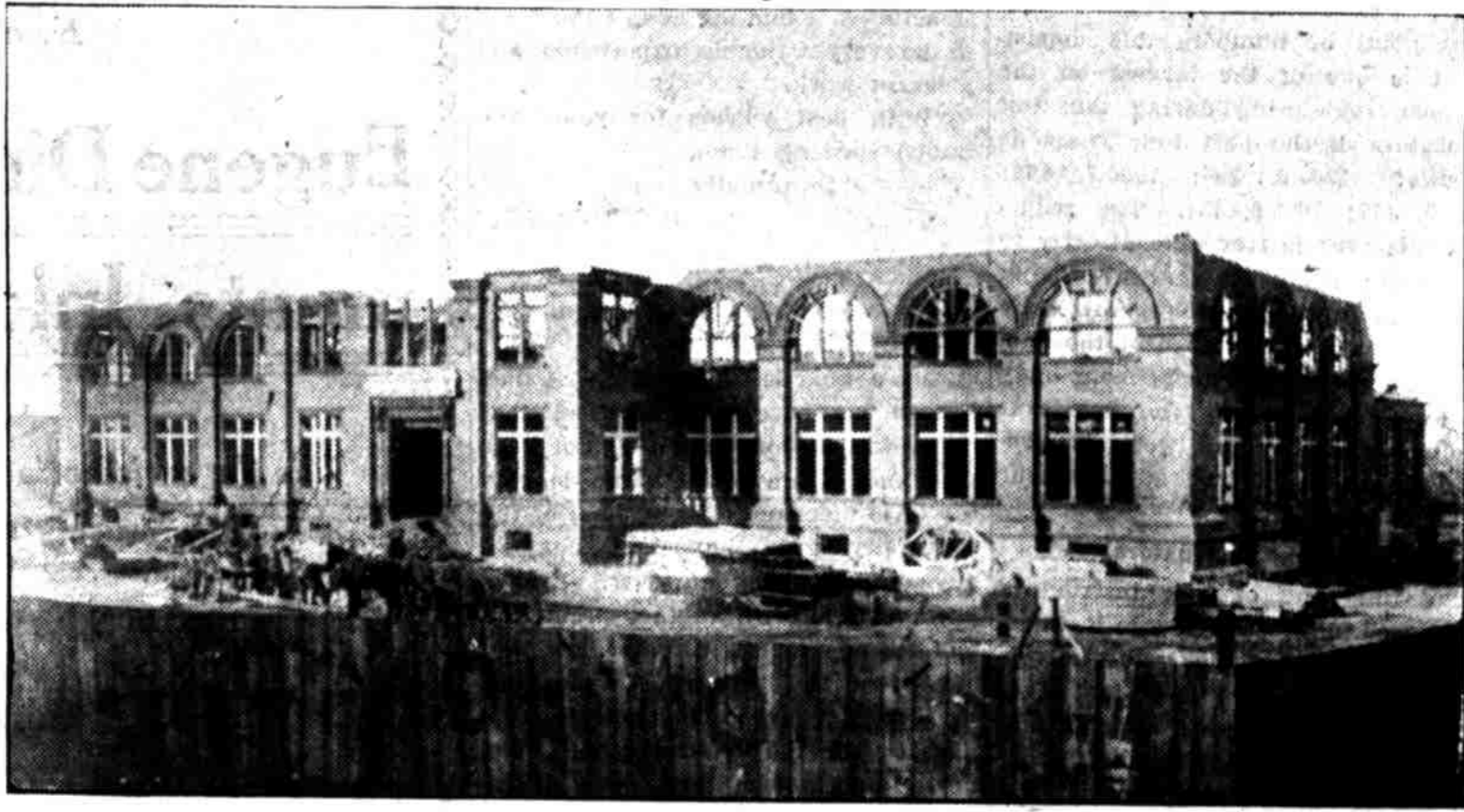
In the steam laboratory the student becomes familiar with the calibration of engineering apparatus, the testing of steam engines, gas engines and boilers. The equipment of this laboratory consists of four experimental steam engines, one gas engine, an injector testing outfit, a complete set of Westinghouse and New York air brakes, apparatus for the calibration of indicator springs, steam gauges, and thermometers, a surface condenser, etc. In addition to the above will be found steam and gas engine indicators, planimeters, gauges, pyrometers, etc.

**Facilities Are Good.**

The facilities for work in these laboratories are good, in spite of the fact that every laboratory and shop is crowded. But with the completion of the new engineering building the necessary room for the accommodation of these laboratories will be available, and with the new apparatus which we hope to install, our laboratories will be on an equal footing with those of the larger and older universities.

**SENIOR MEETING TUESDAY.**

Important business in regard to the play and Cornhusker authorization and appropriations must be made at once if class team pictures are to go into the annual. Plenty of other business.



Engineering Laboratory as it Looks Today

"Dear Brothers in Sigma Tau:  
"With as many Sigma Tau's as there are out on this job it doesn't seem as if a fellow could write much about the work except those who know more about it than I do. There being five other men out here and all of them closer connected with the work that I am I think I will leave it for some of them to describe more fully.

"I have charge of a party on location and am stationed at Gooding, Idaho, but it seems a lot like being among the fellows at school for there are so many Nebraska men on the job. Besides Hershby, Page and myself there are three other Nebraska men in this camp.

"I w'd certainly be glad to get the annual letter and hear from all the fellows, for a fellow hasn't any other way of keeping track of them.

"I had the pleasure of helping start Brother Day off on married life not long ago and surely tried to start him right.

"Don't forget to put this in and send me the big letter.  
"Fraternally yours,  
"C. G. HRUBESKY."  
Leonard W. Turner.  
Schenectady, N. Y., Nov. 17.  
"26 Division Street,  
"Dear Sigma Tau Brothers:  
"Did I hear some one say 'late again?' I fear it is true, though I fully intended to get in at least on time this year. I have not heard any thing to the contrary so I expect that Sigma Tau is booming and everything going along in much the same old way at the university. I could not find out very much either way when I was there this summer but I saw, with a great deal of pleasure, that the engineering building was coming along in fine shape.

"I have not much to add to my last year's report as far as the work goes, although we have been busy most of the time and some of the work very interesting. I am still in charge of the steam economy tests on turbines for the General Electric Co., and among the sets that have

I am waiting anxiously to get the annual letter. I want to hear from the other fellows and learn what they are doing and how the cold world treats them. I correspond with several of them and through them hear from others whom they hear from, but still there are a number that I know nothing about.

"I think that we were quite fortunate to get a chapter in at Iowa City last year and especially such a strong bunch of fellows as they were able to give us. Judging from the men that were picked I think that they have the correct idea of the meaning of the fraternity. To the old men in school I would say that I think the alumni expect at least one more chapter this year. We have a good start now towards a national organization but if a year is allowed to pass without adding at least one chapter we may never get any farther.

"If I remember rightly each man was supposed to give a short sketch of his life in his first letter for record, so I will make it as short as possible.

"After leaving school I came out to my home in Fort Morgan, Colo., with the intention of taking the civil service examination for civil engineer in the Philippine service, which was to be given in Denver in a short time. Just before taking the examination I received an offer, through Brother Jenkins' influence for a place as chief of a party on a preliminary survey in Cuba. I accepted it and started at once for the island. Mr. J. A. Sargent, engineer in chief of the province of the Orient, who is an old Nebraska man, has charge of the work. Mr. Sargent is a very loyal Nebraska man, as is evident from the number of Nebraska men he has around him. Jenkins and Schreiber are there and have their headquarters in Manzanillo. They are chiefly concerned in the construction of the road from Manzanillo to Bayamo, and I support that Jenkins will tell you all about that.

"My work consisted of a preliminary

Evans Laundry Co., and with him wiring some residences and doing a complete equipment for a mill, including wiring for lights, signal bells, setting the generator and switchboard, etc.

"How hard it is to keep track of the fellows and how nice it will be to get the annual letters from them (though if they all did not write sooner than I, I fear the annual letter would be two years old before it got around).

"I had the pleasure of attending our initiation this year in which twelve new brothers were taken in and no doubt the society is stronger this year than for several years.

"Long live Sigma Tau, may she grow and become more useful in uniting the men that are 'out' as well as those in school.  
"Fraternally yours,  
"A. S. HARRINGTON."  
Clarence G. Johnson.  
"Lincoln, Neb., Dec. 18.  
"Dear Brothers in Sigma Tau:  
"I am glad our fraternity furnishes an opportunity for us to send each other a word of greeting and to gossip a little about what has happened. Since graduation my own work has not been especially eventful and time has flown very swiftly. I have been fortunate enough to be busy since July first, and have spent the entire time here in Lincoln. I have worked for a local electrical contractor for a short time, and have done some contracting work myself, mostly inside wiring. My most engrossing work which has taken practically all my time since last summer has been the installation of the new electrical plant for the Evans Laundry Company of Lincoln, in the building with the New Yellow Front.

"Several Nebraska boys have worked with me on this job. Brother Guthrie, '08, will remember welding solder pot and angle brace during electrical engineering.  
"Since September Brother Harrington, '08, has shared my joy and woe;  
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