TROUBLES BEFORE ENGINEERS' NIGHT

Happenings in Engineering Building When Two Engineers Met While Preparations Were Being Made

It happened in the hall of the Engineering Building. Two Engineers met:

W'at you Grennan at?

Oh, Chat burned his hand.

No laughin' matter, w'at was 'e doin'?

Putting up some Bunting for Engineers' Night.

'Es a little Stout to climb around decorating.

Yes, but the Dean ordered it.

W'y, your Hoff-man, I don't believe it.

Well, its so; he Chased all over to find him.

Don't believe it; your no Moore of a Skinner than Ferguson, or Engberg, although Al-my profs say you are.

It's the fact, though; he was on the Brenk-e quitin' when the Dean told him.

Why didn't 'e get that Bridge-man to do it, and save usin' a ladder?

Because his wife came and Tuck-er-man home.

W'at, 'es married?

Yes, he's a Benedict, Raber says.

Look at Rass-mussen' up the decorations!

Who is 'e?

A blacksmith, a Slay-maker, I believe.

Did you see that? Mic-keyed his way in the bunch and wants to fight Rass, and says, "I will Rid-der-vold of sech peebles."

And Holli-stered not the least.

Say, let's get out before we get mixed up in it.

Exit.

Mechanical Engineering

Courses in the mechanical engineering schools of the country touch modern practical life on every hand and bear a close relationship to the development of the state. History and economics clearly show this fact, that although there is but slight increase in the consumption of primary, or soil products with increase of modern civilization, yet there is always a many thousandfold increase in the consumption of secondary, or manufactured products. Since considerations relative to the manufactured article and especially the treatment of the scientific principles underlying its production, constitute one branch of engineering, there is at hand, in this one branch alone, sufficient justification for the universal introduction of the study of mechanical engineering into the curricula of our great state universities.

The basis for the study of this branch of mechanical engineering is, of course, the shop laboratory, in which equipment the University of Nebraska is exceptionally fortunate. Facilities are provided for the study of foundry practice, pattern production, machining operations and the forging of structural materials. Theory classes of design, invention, calculation and testing are offered, as well as the economics of practical shop production. Practical machines, such as gas engines, power punches, lathes, telescopes and the like are designed and produced by the students.

Power generation and auxiliary subjects form another great branch of mechanical engineering. In this are included the basic courses in the practice and theory of heat motors, both steam and gas, the testing and burning of fuels and the design, construction and testing of steam boilers, gas producers, hydraulic power machinery, conveyors and other power plant equipment. Courses are offered in heating and ventilating buildings and in refrigeration and ice production, subjects which touch most directly the health and comfort of the people, and which are developing most rapidly.

DEAN O. V. P. STOUT

It is impossible in an article of this length to enumerate more fully the opportunities in mechanical engineering. In general, a very significant index of the demand by the growing state for a knowledge of things mechanical is to be found in the rapidly increasing introduction of elementary manual training in the secondary schools. At present the requests for college graduated manual training instructors far exceeds the supply. In this we see a more or less unconscious preparation for supplying the enormous increase in secondary consumption always accompanying economic development.

J. D. HOFFMAN.

Applied Mechanics

This department is somewhat polymathic; a better word, prehaps, is omnivorous. Besides theoretical and applied mechanics there is taught general engineering, drawing, descriptive geometry, mechanism, machine design, materials of construction, roads and pavements, architecture, and some other things. Mechanics is frequently confounded with machinery and mechanical engineering; while closely related to these subjects it is more nearly related to mathematics and physics. Mechanics in the abstract, that is theoretical or analytical mechanics, is a mathematical treatment of motion and the behavior of bodies under the influences of forces. The principles of mechanics applied to elastic bodies comprises the subject of strength of materials; applied to the movements of the parts of a machine, mechanism; to liquids and gases, hydrostatics and hydraulics. (The subject hydraulics is still being taught in the department of civil engineering.) The effects of forces upon bodies, such as the materials of construction, can not be determined fully by theoretical and mathematical considerations; it is necessary to supplement these by experiments upon the materials themselves. This brings up the need of laboratories and testing machines. The department of applied mechanics maintains three laboratories; one for the study and testing of those materials made up of lime and of hydraulic cement; one to study and test materials, both bituminous and non-bituminous, used in the construction of roads and pavements; and one of a more universal nature to study and test the strength of the building materials generally used in engineering structures.

All engineering freshmen are required to take the work in general engineering drawing. It is taught as a language, the universal language in which the engineer and designer expresses and records his ideas for the building of machines and other structures. Drawing as thus taught is a liberal and not a fine art. This is followed by descriptive geometry, of use for its mathematical and disciplinary value as well as its practical aid in later engineering work.

Mechanism and machine design are largely described in their names. That they are of great practical importance goes without saying when one thinks of the tremendous amount of machinery necessary to perform the world's work.

The writer, as head of the department, has general oversight and teaches mechanics. He also carries for the civil engineering department a general course in roads and pavements. Professor P. K. Slaymaker teaches mechanics, machine design and a course in architectural engineering. Associate Professor J. E. Rasmusen has charge of the work in engineering drawing and descriptive geometry; while Assistant Professor C. E. Mickey is fully employed with applied mechanics and the testing of road and building materials.

Architectural Engineering

A differentiation of the civil engineering group was deemed advisable in view of the fact that much of the work in the designing of modern buildings is of an engineering rather than of a purely architectural nature. An architectural engineer should combine the practical, reasoning, designing, economic temperament of the engineer with the artistic temperament of the architect; but may with advantage have more of the former than of the latter. The course is also designed to prepare men to become contractors and constructors as well as designers.

Professor Slaymaker has given considerable thought and attention to this group although it is logically placed under the head of civil engineering.

GEORGE R. CHATBURN.

Observation

It is better to know the habits of one plant than the names of a thousand, and wiser to be happily familiar with those that grow in the nearest field than arduously cognizant of all that plume the isles of the Pacific or illumine the mountains of the moon.—Ruskin.