

**T. E. N. WILL PUBLISH
NEXT ISSUE RIDAY**
(Continued from Page 1)

Tech Engineering News will run during the year. Among the numbers on the table of contents are the following:—

Undergraduate Activities. This article will deal with Technology's remarkable development of activities despite serious handicaps. There will be an article on Dean Burton's idea of the two great ideals of Technology's activities, namely, that there is no remuneration for the men who do the work, and that there is no faculty supervision over the activities. They will run a preliminary article regarding a series which will appear in the issues of this year, this series to deal with various phases of the Institute life about which every student should know, but about which nothing has ever been written before. The articles of this series will be written by various men of the Faculty.

There will be a short piece on the Engineering College Magazines Association, which is an Association of collegiate scientific magazines formed in 1921 by R. A. St. Laurent '21, then General Manager of THE TECH and The Tech Engineering News. The Association has 17 members, all papers similar to the one at the Institute. There are here at Technology two of the officers of the Association. These are C. F. Lyman, Editorial Counselor, here this year as English Instructor, coming from the University of Wisconsin and H. E. Lobdell '17, Eastern Vice-Chairman, E. C. M. A., Assistant Dean of the Institute.

The book will also contain directories of the various activities, fraternities, and Professional Societies; lists of the members of the Institute Committee and of the Sub-Committees of the Institute Committee; and a number of other articles.

The first regular issue of Tech Engineering News will appear Monday.

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**COOP PAYS DIVIDENDS
ON OCTOBER SIXTEENTH**

The dividends of the Harvard Co-operative Society will be paid at the Technology Branch October 16. They will pay their usual eight per cent on charge accounts and ten per cent on the cash accounts. There will be a representative of their bank at the store from 10 till 3.30 o'clock on the sixteenth, for the purpose of cashing the dividend checks.

They had the largest membership last year at the Technology Branch that they have ever had, the total number of members being 3204, as against 3150 the year before.

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Roofs Thatched But Town Is Modern.
In the thatched-roof homes of Tacloban, on the little Philippine island of Layte, the electrical idea shines brightly every night, for most of these homes are electrically lighted, and the town, with a population of 12,000, has its electric light and power plant with three 22½ kilowatt generators. The streets are bright at night.

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Curious Arizona Cactus.
In the Rincon valley, 18 miles from Tucson, Ark., is a giant cactus, the summit of which has been so deformed as to make it an object of curiosity to visitors. The inhabitants of the valley are proud of their freak cactus and refuse to allow botanists to cut the head to determine the cause of the deformation. The botanists think it is due to the work of insects, but the country people believe that a stroke of lightning was the determining cause. This species of cactus, the *Cereus*, not infrequently develops strange forms. In this case the head has assumed the appearance of a gigantic cauliflower.

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Greatness and Lowliness.
It is dangerous to show man too plainly how like he is to the animals, without, at the same time, reminding him of his greatness. It is equally unwise to impress him with his greatness and not with his lowliness. It is worse to leave him in ignorance of both. But it is very profitable to recognize the two facts.—Pascal.

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**MANY INSTITUTE MEN
AT R. O. T. C. CAMP**
(Continued from Page 1)

that next year actual practise will be given the men in anti-aircraft guns. Various sorts of athletic contests were held. Swimming, high diving and other water sports were most prominent. The Liberty Theater was a recreation centre of the camp. Here theatrical performances were given, in which Technology men took a prominent part. Major P. H. Ottsen of the Institute's Military Science Department was at the camp.

Engineers at Camp Humphreys
The Engineers' Camp was situated

at Camp Humphreys, on the Potomac River not far from Washington, D. C. About 60 Technology men attended of whom a few were of the basic course out of a total of 150 at the camp. Captain Clark and Lieutenant Ogden of the Institute were at the camp.

Many subjects were covered during the six weeks' stay. Bridges were a large feature of instruction, pontoon bridges, both heavy and light, A. E. F. trestle bridges, and Lampert foot bridges being constructed and used. Other subjects of instruction were demolition with T. N. T., map sketching, target practise, minor tactics, and field fortifications. Inspection tours were made and attention given to special engineering problems. Horseback riding was voluntary and many took advantage of the opportunity. Next year it is expected that this will be compulsory and in addition a practise march with manoeuvres lasting several days will be held.

Technology Unit Wins Cup

Baseball, tennis and swimming were the main sports at camp. The Technology unit, by taking first place in the field meet, won the cup offered the winner. Other forms of recreation were afforded to make the stay pleasant. Trips to points of historical interest was a favorite form of amusement, Mount Vernon, Arlington, and Washington being close by.

The Signal Corps Unit was at Camp

Alfred Vale, New York. Technology was the only institution to send a large representation, there being 32 Institute men with a few more from other colleges. Field telephones, radio communication, map problems, and infantry drill were the main subjects covered.

The air service unit was stationed at Mitchell Field, N. Y. The Institute had the largest representation of any other college. Major McDonnell and Capt. Wright of the Institute were there.

Major Maish on Sick Leave

The ordnance men were at Aberdeen, Maryland. The Institute had 26 men there. Instruction was given in heavy artillery, and the use of many instruments necessary for artillery manipulation.

Many pictures were taken at the different camps of Technology men and other units. These are in the Military Science Headquarters, room 3-31 and may be seen by all those interested.

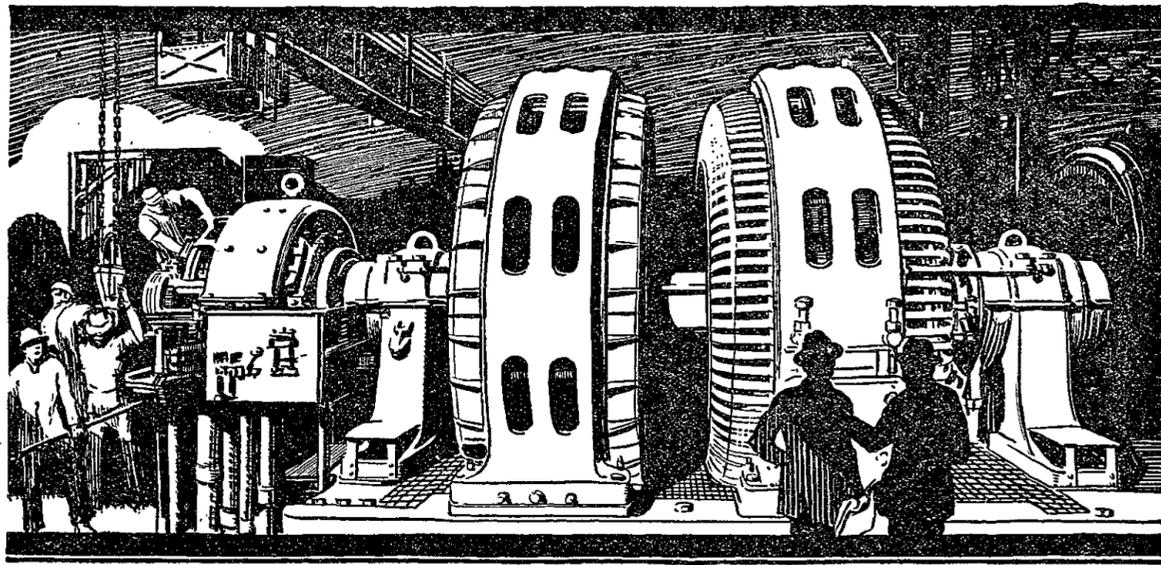
Colonel J. B. Christian, who has been the head of the Military Science Department for several years, will be on a leave of absence with the beginning of the year and will later retire from active service after 30 years of duty. It is not known yet who will be his successor. Other changes in the personnel of the department have taken place. Major Maish of the Ordnance Department is now on sick leave in the hospital and will be retired on account of physical disability.

Captain L. L. Clayton '17, after a year's service at the Institute in the Signal Corps, will leave the service. Lieutenant Heath has been ordered to take his place. Captain H. F. Clark '12, has left the Institute for another official position as inspector of dredges with a ship-building concern at Chester, Pennsylvania. His place is taken by Captain E. H. Levy, who is already on duty at the Institute. He is a graduate of West Point with the Class of 1917 and has seen service at the Mexican border and in Hawaii.

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Real Service Must Be Engineered

Many of the men whose names are writ large in engineering history are design engineers; men like Westinghouse, Lamme, Stanley, Hodgkinson, Tesla, Shallenberger. Their inventions have the quality of usefulness, of reliability, of productability; which is an involved way, perhaps, of saying that they have the primary requisite of all really great inventions: *Serviceability*.

Engineering history abounds in instances of near-genius that produced no product, and of great developments that never reached completion; and most of these instances are explained by the lack, somewhere in the system, of that ability to give real Service.

Service, in a machine or a system, or wherever you find it, is not there by accident but because it was incorporated by men who understood what was required and knew how to provide it.

Much more is required of the designer than facility in calculation and mastery of theory. He must have first hand and thorough familiarity with manufacturing operations and with commercial and operating conditions. It takes more than mere ingenuity and inventiveness to design apparatus that will be really serviceable and will "stay put."

The design engineer, in the Westinghouse plan, is responsible for the performance of the finished product. He cannot possibly have the proper understanding of operation unless he operates and tests, unless he spends time and thought in investigation and study, not in the laboratory or drawing room, but right on the operating job. Here, most of his ideas will develop; and here he will see and prepare for all the different things which the product will later have to encounter. Then when he comes to put his creations on paper, his calculations will be necessary and helpful to check the conclusions which he has reached, and this right use of them requires training and a high degree of understanding. This proper balance of the physical and mathematical conception of things is what constitutes engineering judgement.

It should be thoroughly understood that the primary function of the design engineer is the conception and the production of new or improved apparatus, and familiarity with the practical is essential to the proper discharge of this duty.

It is this view of designing that makes this branch of Westinghouse engineering so important, so effective, and so productive of real developments.

W Westinghouse
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