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# The Ohio State Engineer

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## A New Department

This Fall the readers of THE OHIO STATE ENGINEER have noticed a new department of the magazine. This issue, like October's, contains a number of book reviews by Wilson Dumble of the Department of Engineering English.

Mr. Dumble has kindly consented to prepare this list of books of current interest, giving in each case the most important characteristics with a few additional pithy comments. The works mentioned are invariably subjects of discussion in the literary world and make interesting reading for the layman.

Only too often the average Engineer devoted so little time to the gentler things of life that he finds himself at a total loss when talking to someone outside the fold. These articles are intended to supply that lack. It is certain that everyone will find these sketches sufficiently easy to read that the acquisition of "culture" will be made a delightful process.

—THE EDITOR.

## Politics

The Engineers' Council, the body entrusted with the student government of this college, has pledged the support of the Engineering College to a political combine.

It would seem to an impartial observer that such a body would do well to keep out of the mud-slinging of a campus election. The influence and worth of the council is only commensurate with the esteem and respect with which it is regarded. Political organizations, or organizations tarred with the political brush, are rarely the recipients of such regard.

THE OHIO STATE ENGINEER will this year, as previously, take an absolutely non-partisan stand. Its integrity and independence demand this. Its editors feel that it can accomplish its purpose only by avoiding entangling "alliances."

—THE EDITOR.

## The Quadrangle Jesters

Last year there was born on the Quadrangle a new organization, which took the name of the "Quadrangle Jesters." Organized as a group interested in musical drama, it presented as an initial effort, "The Belle of New York," with huge success.

This year will witness the second presentation of the "Jesters." "She Run Him Down" will be a musical farce of the same type as last year's, but, following the style, will feature the Gay Nineties. This is exclusively an Engineers' organization and event. While attracting campus-wide attention, it is of interest primarily to those of this college. THE OHIO STATE ENGINEER could find no object more worthy of editorial support and commendation.

## More Play for Engineers

Our teachers and leaders implore us to concentrate! Serious thought will reveal the logical reasons for the validity of this admonition.

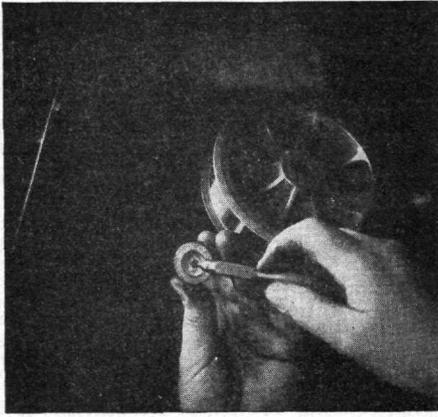
In a chemical reaction, one factor which affects the speed is the concentration of the substances involved. By analogy, we may say that the human equation entering into the Engineer's problem is a function of the degree of concentration applied.

Someone has remarked that life is made up of work and play. In engineering, it seems to be mostly work. The best way in which to get play into your schedule is to condense your work into as small a space of time as possible. Most people need very little urging toward concentration on their recreation.

Thomas Edison may be considered an outstanding example of concentration. We are told that, when working on a problem, his application was so complete that he neglected to both eat and sleep.

An Engineer should acquire this ability to apply his mental faculties exclusively to the matter at hand. Less work, more fun, less worry, and greater happiness will result.

—E. M.



## Spotlights Aids Threading of Dies

Threading tungsten filament wire through dies at the start of drawing operations is perhaps the most tedious work in all the manufacture of incandescent lamps according to J. J. McLaughlin of the Westinghouse Lamp Company. The work is so delicate that it must be done by hand and the eye strain on the die threader is so great that a special spotlighting is required.

The lighting requirements for this work calls for a high intensity beam of light which can be concentrated over an area of several inches in diameter where the die is held while being threaded. In the wire drawing division of the Westinghouse Lamp Company, this lighting unit is equipped with a 32 candle-power headlight lamp, which is operated on a 12-16 volt transformer off the 115 volt lighting circuit. It consumes only 25 watts altogether, and the intensity of the beam amounts to 200 foot candles.

By the time filament wire for the tiny 3 and 6 watt Mazda lamps reaches the last of some 90 drawing operations in succession, it is finer than human hair. Consequently it is difficult to thread through a hole of still smaller diameter.

The character of the opening in the die largely determines the time required to thread it, and of course the time is a measure of the tedium. Some dies can be threaded in one minute, others require 15 minutes. With the improved lighting, however, the eye strain of the lady threader (young girls were found to lack the patience for this work) has been lessened considerably, and unquestionably she can work faster.

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## Largest Non-rigid Airship

The largest non-rigid airship ever built in America has recently been completed by the Goodyear-Zeppelin Company for the U. S. Army Corps.

The blimp, which is known officially as the "TC-13," is over 200 feet long and displaces eleven tons of air. Of this four and one-half tons are available for useful load, including fuel, armament, equipment and a six man crew. The ship can make extended trips of four or five days, as sleeping quarters, facilities for preparing meals, and other accommodations are provided.

The craft is equipped with two 375-horsepower engines, each employing a 12-foot three-blade propeller. Special efforts have been made to muffle the engines and reduce propeller noise by use of gears.

The 40-foot car is boat-shaped so that the airship can land, if desired, on water. It has an inflated bumper to absorb shocks when the car strikes ground in landing. The car has been provided with bomb racks, machine gun mounts, photographic facilities, and the latest type two-way, long range radio equipment.

Something new in military blimp equipment is the spy basket or observation car that can be lowered by means of a cable while the ship remains above clouds. The basket is painted a color that makes it practically invisible against clouds. The observer in the car is connected by means of telephone with the airship above and can report observations and can direct its flight.

The TC-13, like other ships of this non-rigid type that rely wholly upon helium pressure to keep the bag in shape, are more practicable for military use than the rigid Zeppelin type. Because of their smaller size they have greater "maneuverability." They are far more economical both in original cost and in cost of operation.

Many of the early difficulties which gave rise to a considerable amount of trouble with the old blimps have been solved in designing the TC-13.

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## America's Oldest Road-Roller Found

A Carnegie Institution exploring party recently found, in a jungle in northeastern Yucatan, Mexico, what is believed to be the oldest road roller in America—of solid stone and cylindrical. Only a segment of the original was found. It was estimated that the original was thirteen feet in length, about two feet in diameter, and weighed about five tons. The roller, it is believed, was used by the ancient Mayan inhabitants, about 1,100 years ago, to smooth the surface of the magnificent highways built between their cities for pedestrians, since they had no beasts of burden. The highways were masterpieces of engineering and it was during an exploration of one of them that this roller was found. The traces of many of these ancient roads are still visible. Examining the construction of these roads it is found that they first dug down to hardpan and then they erected walls of stone and mortar on either side to the desired height of the road. The space between these walls was filled with large boulders and then smaller boulders. On top of this was run a surfacing of mortar cement and probably each layer was smoothed with the roller as it was applied. From this one can readily see where we get our idea for our modern highways.

—*Popular Science.*

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## Prospectors' Club

The Prospectors' Club held a picnic on November 3rd at Jack Jones' country home, near Worthington. About twenty were present. Dinner and cards featured the evening.