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The Rose **TECHNIC**

MONTHLY PUBLICATION OF THE STUDENTS
OF ROSE POLYTECHNIC INSTITUTE



NOVEMBER
1927

VOL. XXXVII

TERRE HAUTE, IND.

NO. 2

MEMBER OF ENGINEERING COLLEGE MAGAZINES ASSOCIATED



C. D. SMITH,
Sales Engineer
Georgia Tech. '18



F. L. KOUCKY,
Salesman
North Dakota, '12



M. S. HANCOCK,
Motor Engineer
Illinois, '17



H. W. WILLIAMS,
Control Engineer
Cornell, '18



YOUNGER COLLEGE MEN ON RECENT WESTINGHOUSE JOBS



W. F. EAMES,
Control Engineer
Carnegie Tech. '18



D. SANTINI,
Control Engineer
Ohio State, '23



C. M. PURDY,
Contract Administration
Westinghouse Tech. '26



G. W. HUNTER,
Contract Administration
Westinghouse Tech. '27

The World's Largest Hotel

Great achievements in engineering are brought about by the harmonious work of many. The individual's largest opportunity comes through the exercise of his own creative talents in the field for which he is preëminently prepared.

THE larger a hotel, the larger loom the difficulties of ventilating it; of handling the crowds that ride its elevators. The larger, too, looms the interest of engineers in designing electrical equipment to meet such unprecedented demands, of salesmen in selling it,

of service engineers in installing it and keeping it in top-notch operating condition.

To Westinghouse came the Hotel Stevens for ventilating motors, for its elevator system, for the electrical equipment of its laundry. To Westinghouse come many undertakings of such kind and size—a steady stream of imagination-stirring opportunities to do the never-before-

accomplished. All of tremendous interest to college men who have ambition, resourcefulness, capacity; disciplined sales and engineering minds.

The Hotel Stevens contains 3,000 rooms and baths. The Variable Voltage Control System used in the elevators was designed by Westinghouse. Whether you rise ten floors or only one, there are no jerks or jars. Speed is the same whether the car is empty or whether it's packed. Cars automatically stop level with the floor—no "jockeying"—no "step up," or "step down, please."

Westinghouse



THE ROSE ♦ TECHNIC

PUBLISHED MONTHLY BY THE STUDENTS AND
ALUMNI OF ROSE POLYTECHNIC INSTITUTE ♦ ♦ ♦



VOL. XXXVII

NOVEMBER, 1927

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Prof. Leslie Van Hagan, Chairman, University of Wisconsin, Madison, Wisconsin

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The Two Young Men

ONCE on a Time there were Two young Men of Promising Capabilities.

One pursued no Especial Branch of Education, but Contented himself with a Smattering of many different Arts and Sciences, exhibiting a Moderate Proficiency in Each. When he Came to Make a Choice of some means of Earning a Livelihood, he found he was Unsuccessful, for he had no Speciality, and Every Employer seemed to Require an Expert in his Line.

The Other, from his Earliest Youth, bent all his Energies toward Learning to play the Piano. He studied at Home and Abroad with Greatest Masters, and he Achieved Wonderful Success. But as he was about to Begin his Triumphant and Profitable Career, he had the Misfortune to lose both Thumbs in a Railway Accident.

Thus he was Deprived of his Intended Means of Earning a Living, and as he had no other Accomplishment he was forced to Subsist on Charity.

Moral: This Fable teaches that a Jack of all Trades is Master of None, and It Is Not Well to put all our Eggs in One Basket

—Carolyn Wells

Rose Graduates in Underwater Adventure

A most interesting article was called to the attention of the Alumni editor by the following letter: My dear Mr. Harris:

A few days ago I received from Mr. Nathan A. Bowers, C. E., Ph. D, class of 1910 a personal letter such as he favors me with now and then telling me about his work and affairs.

You may do whatever you please with the letter. Sincerely,

C. L. Mees

Copy of letter to Fred Schmitt. Written en route across the Nevada Desert—July 11, 1927.

Dear Fred:

The air mail letter to you about the earthquake insurance editorial has just been finished. This is a personal note that you can put in your pocket to read in the subway at the rush hour, if you care to. I write it because possibly you may find, as I do, a cooling restfulness in thoughts of exploring submarine gardens—and, also because I need an excuse to pound this mill a little longer in the comfortable compartment here where they put idiots who insist on "working" on this trip of heat, perspiration and dust.

* * *

About 30 miles off the Pacific coast opposite Santa Barbara is an island some 30 miles long and 10 miles wide. It shelters bays and coves, on the lee side, where submarine growth is abundant and where the water is clear and blue with the turquoise hue of the tropics. If this island were more convenient to civilization, I am sure it would be visited often by tourists and doubtless concessions would be let for glass-bottomed and probably also hot-dog stands, et al.

As it is the island has for many years belonged to a great estate that has discouraged visitors, and it remains unspoiled. I spent 10-days on it in 1920 and learned something of its attractiveness; its fishing opportunities and the great caves at sea level that one may enter in a boat if he has no fear of the dark and the roaring and gurgling of water surging in cavernous depths.

A few weeks ago "our gang" made a second raid on this island retreat, this time with a definite purpose and with a trip programmed as an "expeditionary venture". We had nearly all the adventure we needed on the boat going over. Ran into a blow that made a plaything of our launch; she performed all the antics fitting on such occasions except that she did not founder. The anchor and its chain had been stowed on the for'd deck and after we got across it was found that this part of our

equipment, like everything else exposed to the pounding of the waves, had gone by the board.

But that was all forgotten in the assembly of apparatus and preparation for the first expedition into the submarine gardens. Right here let me stop to ask if you are familiar with Beebe's book "The Arcturus Adventure." If you are not, may I suggest that you will find it one of the most readable books on scientific adventure. There is a true story of what must have been one of the most interesting sea voyages ever made. All we did was to play with one of the schemes that he employed.

We were, however, better equipped than was Dr. Beebe, I believe. His diving helmet was a commonplace affair while ours was a helmet of sorts, equipped with telephone and a lot of modern conveniences that his lacked. Indeed, wouldn't you expect a helmet in which three Ph. D.s were interested to show some good points?

Anyway, we had designed and built our own, it was a joint product in which each of the four men in our party had developed a certain part. Each man was confident that his scheme was sound and he was eager to try it out for himself and to co-operate with the other fellows in producing a really habitable "hat" to wear in Father Neptune's court.

Well, that's all there is to my story except to say that the scheme worked 100%. I must leave you to use your imagination as to the impressions and experiences. Beebe does very well in his descriptions and I hope you will read them, if you have not already done so, but more than that I hope you

will someday come on in with us where the old saying about the water being fine is really true.

You may be interested to know that in a rig like ours, which uses no suit or airtight attachment to the helmet, the equipment need not be assembled with any great care, because any derangement in that service, unlike the case of the professional diving suit, is no menace to the safety of the diver. The worst that can happen is that the diver will have to abandon the helmet by simply ducking out from under it and swimming up to the surface. Indeed, once out from under the weights with which the helmet is provided, the diver finds it absolutely impossible to stay down and he has only to give a slight shove in order to find himself shooting upward.

We used a small air receiver into which to pump air that was fed into the air line as the needs of the man below required. The telephone pair ac-

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ROSE alumni often receive interesting letters from their old classmates which might prove of interest to the men now in school, or to the alumni reached by the Technic. The alumni editor is glad to receive any of these letters suitable for publication in the Technic.

Alumni Address Delivered June 9, 1927

By Roland C. Rehm, '12

I suspect that the custom of the annual alumni address at Commencement originated in the assumption that it would reassure the members of the graduating class on the eve of being thrust into the business world and thrown upon their own responsibilities, to exhibit to them an alumnus of appropriately ancient vintage, as physical evidence that after all the battle with the world isn't so dreadful and that one may reasonably expect to live through it. The address of such alumnus was merely an invention to induce the alumnus to submit to a sufficiently thorough inspection and also to demonstrate that he was still able to walk and talk.

But the fallacy of that conception of the purpose of the alumni address, lies in the fact that you require no reassurance. You approach your new life and your new tasks with justifiable enthusiasm and confidence,—the only attitude of mind in which approach any task. Furthermore, reassurance is no longer needed because experience has demonstrated that casualties among your alumni from contact with the world are surprisingly low.

So at the present time, since the custom has survived, the one service, as I see it, that an alumnus can render on an occasion like this, is to try to give you a general picture of the world you are about to enter and try to help you make advantageous use of the enthusiasm and confidence with which you enter it. And indeed it is a new world for most of you. I would not say that your conceptions of it are incorrect, but in most cases they are sufficiently incomplete to make it doubtful whether you will at once be able to see the path which you can most successfully travel.

While I have made no investigation of it, I have no doubt that many alumni who have preceded me as alumni speakers have had the same conception as I have, of their office on this occasion; therefore, their remarks have had more or less the same trend as mine will have. But I am comforted in the reflection that if the same ground has been traveled many times by my predecessors, each graduating class has been obliged to listen to them only once—only the members of the faculty are imposed upon repeatedly; but since they are in a measure re-

sponsible for the preservation of this custom they must suffer in silence.

At the same time I am conscious of the fact that bald advice is neither especially appropriate nor appreciably received on a happy occasion like this. The giving of advice always mars the perfection of the occasion, because of the implication that advice is needed. We can assume that you have the intelligence and ability to make your way in the world once you clearly perceive the way. Hence, I shall try to fulfil my role with as little mere advice as is possible under all the circumstances. I should suppose that you would be aided more by an appreciation of some phases of your new life than by suggestions of how to conduct yourselves in relation to it. It seems appropriate, therefore, to attempt to picture to you what seems to me to be the background of the period in which we now live and

of the immediate future—at least so far as it involves modern enterprise and the engineer. I shall characterize you as explorers, whose first reactions upon entrance to the business world will be to get your bearings and then to make a critical exploration of the world of modern enterprise and the opportunities it offers you.

It has long been apparent that the

engineer and the scientist have been essential to the growth of business enterprise. It is also becoming more and more evident that this background I speak of involves almost our entire modern life. At least the developments of the arts and sciences today have so far colored and determined our mode of life that the background of one is the background of the other. It is impossible to picture one without the other.

There is hardly a branch of the arts and sciences in which has not occurred, during the last five or ten years, developments of profound significance and importance. It is unnecessary to detail these to you—you are much more intimately familiar with most of them than I am. It is easy to observe how far reaching these developments have been, and it requires little imagination to appreciate what profound changes, even in our mode of life and economic structure, may be effected in the future.

Changes in all phases of our life are much more

It has been the custom, for the last thirty years, to have some prominent alumnus to address the graduating class at the time of commencement. The address to the class of '27 was delivered by Ronald C. Rehm, who graduated in 1912, and who has since achieved success as a patent lawyer in Chicago. In order that Mr. Rehm's message might reach a larger audience, we are herewith presenting the address.

rapid—(and probably will be still more rapid) than in the past. In the past the rate of change was not so great but that many hoped to be able to secure a sort of fixed or unchanging condition of things. But now we see that is not possible. Every conquest of modern enterprise is nothing more than the entrance to a new field and the starting point for not one but many, diverging conquests. Every new development at once stimulates corollary adaptations, perfections, and improvements.

So at the present time the field of modern enterprise stimulated by science and engineering has vastly widened and extended, and with increasing rapidly is widening and extending,—much as the growth of a spreading vine,—from each of its numerous branches many smaller branches and twigs diverge and each of these eventually grows to become a branch from which other branches and twigs spring.

The field of engineering has never been so limited as is popularly supposed; but today it is evident that the engineer is a necessary element not only in industry generally but in modern business. The engineer no longer is one who is merely skilled in applied sciences—he may now become the modern business man. Each of us can cite many instances where the service of the engineer has extended far beyond the conventional field. Engineering is no longer a profession in any narrow sense—it is co-extensive with modern business and industry.

This diversification of the engineer's activities along widely diverging channels has wrought a number of very important changes. It has not only broadened and extended the field of activity so as to require the services of many more real engineers, thereby eliminating the need for the engineer to compete with the trained mechanic and the graduate of the trade school, but it has resulted in almost an infinite subdivision of the entire field.

A field formerly efficiently embraced within the activities of one group of engineers has today been so subdivided as the result of a multitude of developments that an individual can no longer work constructively and productively unless he confine himself to a small portion of the original field. Of course it is still possible to have a certain familiarity with a relatively wide field but as measured by modern requirements, that familiarity must be considered superficial and inadequate. In order to render oneself able to make real contributions and to render real service one is obliged ordinarily to concentrate on a very small field. However, such field does not long remain small, but soon develops so that the sum of knowledge embraced thereby becomes so large as to be incapable of being advantageously assimilated by one person.

The same subdivision or specialization has occurred in law, medicine and other professions.

This change has required and will require from time to time some readjustment not only in our business life but in our mode of becoming productive members of the business world. Under these circumstances the question arises whether or not a substantial part of the readjustment ought to be made within and by the engineering colleges. Some of you no doubt have wondered whether the edu-

cational training you have received has adequately equipped you to meet the demands of these changing conditions,—whether or not the engineering colleges ought not revise and readjust their curricula and modes of training—for example by giving training in highly specialized fields. That has been proposed often as you will recall. It was proposed when I was in college—it has been proposed since. That these proposals have not been adopted generally by engineering colleges is very significant as indicating the fundamental character and purpose of your college engineering education. I dare say the inclusion of highly specialized courses in engineering colleges has been prompted in most cases by considerations of expediency or to secure some temporary benefit. No—. Engineering colleges such as ours are not merely professional or trade schools. Their aim and purpose is not to start you out with a mental bias, not to give specialized training such as might tend to limit you to a narrow field of endeavor, and that probably the wrong one because selected prematurely and without an adequate perception of your real ability or of existing opportunities. Without the balanced judgment acquired by experience in the business world such a specialized training (even if it proved to be in line with your mature ability and preference) would seriously impair your development. There are many other reasons which will occur to you why such a training would not only be harmful but futile.

The aim of your engineering college is not so much to give you a profession as to train you to think, to give you the capacity for independent analysis, to enable you to learn readily as occasion requires. In addition, you are grounded in fundamentals and certain optional and broad subjects such as chemical engineering, electrical engineering, etc. In my judgment the details of the latter are of subordinate importance for most of us—if my conception of the purpose of engineering education be correct. You are wisely given the nucleus of a general business education,—not that simply of a profession. To be sure it sounds less romantic but it will eventually prove to be the more valuable to you.

It is because of the broad character of this training that the engineer has become an important factor in almost every branch of business. Above all men, he is able to think constructively and practically.

I said this sort of training would eventually be the more valuable. It is not immediately more valuable. It is true that you are not immediately as useful in a specialized field as individuals who have confined their study to that field. You are unable immediately and acceptably to become productive units in a specialized field. In other words, you are not in a position to sacrifice your future for immediate gain.

This temporary disability I regard as most important under present conditions.

This disability will afford you the important opportunity of learning much of the business world before you make a selection of your specialized field. You can at once profitably exercise the capacity you now have above any other capacity, that of

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The Convention of the Engineering College Magazines Associated

THE mere statement that the annual convention of the Engineering College Magazines Associated was recently held at Ohio State University would probably not arouse any undue amount of interest, because very few Rose students know anything about the organization. On the front cover of the *Technic* there is a line which reads "Member of Engineering College Magazines Associated," but few have stopped to consider the significance of the statement, or wonder about the nature of the E. C. M. A., or why the *Technic* should be a member of the association.

Ever since the *Technic* had its beginning, back in 1891, the magazine has held a rather high place in the field of engineering college journals. The organization was formed in 1920, and the following year the *Rose Technic* was admitted to membership and was represented at the first convention, held in 1922. The purpose of the organization is primarily to develop better Engineering College Magazines, not only by setting standards of practice for the member magazines, but through co-operation, to secure more national advertising for its members. Since the organization of the association, its mem-

bership has increased from ten to twenty-one, and includes the *Armour Engineer*, *Colorado Engineer*, *Cornell Civil Engineer*, *Illinois Technograph*, *Iowa Engineer*, *Iowa Transit*, *Kansas Engineer*, *Kansas State Engineer*, *Michigan Technic*, *Minnesota Techno-Log*, *Nebraska Blueprint*, *Ohio State Engineer*, *Penn State Engineer*, *Pennsylvania Triangle*, *Princeton News-Letter*, *Purdue Engineering Review*, *Rose Technic*, *Sibley Journal*, *Tech Engineering News (M. I. T.)*, *Virginia Journal of Engineering*, and the *Wisconsin Engineer*.

Publications of other engineering colleges are always petitioning the E. C. M. A. to be allowed to affiliate with the organization, and as soon as the association feels that the magazines come up to the standards of the E. C. M. A., the petitions are granted. It should be considered quite an honor for the *Technic* to have been among the first to belong to this select group.

Each year a convention is held, with one of the member magazines as host, each magazine sending as many of its business and editorial staff as it can, one of these being the official or voting delegate. These conventions are of great value, and the publications profit greatly by the formal and informal

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(Delegates to the E. C. M. A. Convention)

Research and Progress

Conducted by M. Heinig, ch., '28

Testing of Welded Joints

IT is desirable to formulate a test for the soundness of welded joints, which may be applied to every joint made instead of certain test specimens. In reviewing the possible test media, light, X-ray, and similar visual indications of unsoundness of weld have been discarded because of the opaqueness of the metals. Electrical conductivity offers considerable possibility in the case of welded rods, tubes, and similar regular cross-sections, but presents serious difficulties in the case of large and irregular sections such as flat plates, beams, and the like.

Vibration transmissibility as a test of soundness of the joint offers certain interesting possibilities. It is well known that a tight bearing sounds different from a loose bearing when tapped with a hammer. It takes but a slight alteration in structure to make a marked change in vibration characteristics. It is reasonable to suppose that a tight homogeneous joint would have different vibrational or sounding characteristics from a joint that was porous or loosely bonded. Whether the difference could be detected by the human ear is a question, but there is little doubt that a vibroscope could detect these differences. Comparing a joint that is only 50% bonded to a perfect joint, it is reasonable to suppose that the two would transmit vibrations of different amplitude, and perhaps of different wave form, duration, and frequency as well, in response to a given measured hammer blow.

The method would find its initial application in the testing of standard parts produced in large quantities. A joint known to be poor would be subjected to the vibration test with a joint in exactly similar bodies which was thought to be good. The two joints then would be subjected to confirming tests "to destruction," and the ultimate strengths would be compared with the vibrograph charts. In this way it would be possible to isolate certain vibrational characteristics of the poor joint which should, over period of such test experience, become reliable to far more than fifty per cent accuracy of strength indications expected of them.

It is anticipated of course that hammer blows will be applied longitudinally and transversely to the joint on one side thereof, and that the vibration will be measured on the other side of the joint; preferably, but not necessarily close to the weld.

—Mech. Eng. Oct., 1927.

Paraffin Solution Used on Molds for Cement Mortar Briquettes

Paraffin has been found to be much better than oil for preventing cement mortar from sticking to briquette molds, glass plates, or any other laboratory apparatus, according to R. B. Dayton materials engineer for the State Road Commission of West Virginia.

A six to seven percent solution of paraffin in carbon tetrachloride is used instead of the customary heavy mineral oil. It may be applied with a brush or rag. The surfaces of the molds are very easy to clean, requiring but a slight brushing with a stiff fiber brush. The top and bottom of briquette molds require a slight scraping with a small trowel to remove the mortar, as the process of forming removes the paraffin coating, but this also happens when oil is used.

One advantage of the paraffin solution is that the paraffin solution is quick in drying and does not become incorporated with the mortar as sometimes happens with excess oil on the plates and molds.

Anti-freeze Compounds

Many people at the first glance might think that the problem of securing a suitable anti-freeze compound for automobile radiators in ordinary winter conditions would not be so difficult. The chemists of this country, after having seriously considered this matter during the recent past, have appreciated the fact that it is not so simple. Let us consider some of the requirements for an ideal antifreeze compound.

Major requirements: (1) It should prevent freezing of the cooling medium at all ordinary temperatures. (2) It should not injure by corrosion any metal parts of the engine or radiator and must not soften or deteriorate the rubber connections. (3) There should be an adequate supply at a reasonable price. (4) It should be stable.

Minor requirements: (1) It should have a low viscosity at all working temperatures. (2) Water solutions should have a high specific heat and a high conductivity. (3) It should not materially change the boiling point of the water. (4) It should not produce an unpleasant odor. (5) It should not attack automobile finishes. (6) It should keep its antifreezing property for a long time (low partial pressure). (7) It should have a low coefficient of expansion.

The main classes of antifreeze compounds are:

oils, salts, sugars, alcohols. Let us consider these separately.

Oils. The various hydrocarbons, notably kerosene, have been used to replace water as a cooling medium, especially in tractors. These have not been very successful in general. The general disadvantages of oil are as follows:

- (1) High viscosity at low temperatures.
- (2) Low specific heat and low conductivity.
- (3) Softening and dissolving effect on rubber.
- (4) High boiling point may cause overheating of engine.

(5) Leaks permit oil to come through and vapors are dangerous because they are inflammable.

Salts. Salts in general have the chief disadvantage that they promote corrosion by being electrolytes. Calcium chloride was popular for many years as an antifreeze compound, because it not only lowered the freezing point to a marked degree, but also stayed in the system, not being lost by evaporation. Its real fault, however, was that, in common with all chloride salts in solution, it would corrode all common metals. Where two metals join and form an electrolytic couple, this corrosion is extremely vigorous. The addition of chromates proved helpful in some cases by making the material passive, but failed in other cases, especially where parts were made of aluminium. Where leaks occurred, the salt, being a conductor, would sometimes short-circuit the spark plugs and ignition wires. There was also a tendency to crystallize out and clog up passages and pumps.

Sugars. Honey, glucose, and various sugars, syrups or waste sugar liquors have been suggested as antifreeze compounds and some tests have been made. The trouble is that the sugar molecule is too large and the freezing point lowering is therefore relatively small. The concentrated solutions are, moreover, highly viscous. In general these compounds have proved to be unsatisfactory.

Alcohols. From a fundamental viewpoint, we would first of all consider those liquids which are completely, or almost completely, miscible with water in all proportions at all ordinary temperatures. We would naturally choose a liquid that most nearly resembled water. The alcohols most nearly resemble of all classes of compounds, and methanol stands at the head of the list. Let us take several characteristics of some members of this class.

Methanol: Methanol has distinct advantages. It not only gives a marked lowering of the freezing point, a greater lowering than the other alcohols, but is absolutely non-corrosive in a pure state. Thanks to the developments of modern chemistry, it can be produced synthetically from carbon monoxide and hydrogen in unlimited quantities at a reasonable price. Unfortunately it has a high partial pressure in water solutions and a low boiling point, thus causing it to vaporize readily from the radiator solution and to be dangerous on account of its toxic character. The low boiling point is the chief disadvantage of this liquid.

Ethyl alcohol: The public buys about 40 million

gallons of ethyl alcohol per year for denaturing purposes. Of course this has been purchased in the denatured form. Advantages of ethyl alcohol are as follows:

(1) Its ability to reduce the freezing point of water is adequate when compared with other antifreeze compounds.

(2) It is no more corrosive toward metals than ordinary water and will not affect rubber connections.

(3) Its water solutions have a low viscosity, even at low temperatures.

(4) It boils without decomposition.

(5) It is sold at a moderate price, is easily obtainable, and is produced in adequate quantities.

Like methyl alcohol it has the disadvantage that it has a low boiling point and is therefore lost by evaporation.

Glycerol: This liquid has more or less recently come into prominence as an antifreeze. Its advantages are as follows: (1) Its partial pressure in water solutions is relatively low. There is little loss due to evaporation.

(2) It is odorless.

The disadvantages are as follows: (1) It has a tendency to soften rubber.

(2) It has a high viscosity at low temperatures, therefore necessitating forced circulation.

(3) Only about ten million gallons are made annually. Until a synthetic process is developed this liquid cannot be used as an antifreeze.

(4) Its first cost is rather high. Although there is no loss in evaporation, and the cost for a long period would be cheaper than alcohol, nevertheless, the rather high first cost is a psychological disadvantage.

Ethylene glycol: From a chemical point of view, ethylene glycol is a cross between glycerol and ethyl alcohol. It has interesting possibilities. Its advantages are as follows: (1) It has a low partial pressure up to 45% by volume, thus resembling glycerol.

(2) It is no more corrosive toward metals than alcohol, glycerol.

(3) Unlike glycerol, it has only a slightly greater viscosity at low temperatures than alcohol solutions.

(4) It does not appreciably change the boiling point of water.

(5) Water solutions of it have a high specific heat and a high conductivity.

(6) As a synthetic product made from cracked petroleum it can be produced in large quantities.

Its disadvantages are as follows:

(1) Ethylene glycol has a tendency to soften rubber, therefore necessitating the replacement of hose connections.

(2) It appears to leak more easily through minute cracks or holes than the corresponding ethyl alcohol solutions.

(3) Its high initial cost is a disadvantage.

Conclusion. It is only through an exhaustive study of the chemical characteristics of these compounds that we have been provided with substances that are satisfactory antifreezes, and which are chemically and economically sound.

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The Rose TECHNIC

A Magazine Pertaining
to Engineering and
Allied Sciences

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DR. JOHN WHITE

The Matter of Writing Articles for The Technic

NOWADAYS, people are realizing more and more the importance and value of personal advertising. The newspapers are full of stories which show the lengths to which some people will go in order to get their names before the public. There are publicity stunts of various sorts taking place all over the country in order that some man may have the attention of the world focused on his name. Today, the man who gets his name in print in some prominent place feels that he has achieved something like success, whether it is due to building a bridge or jumping off of one. To get his name in print is to lift himself from a mere unit in the great mass of people—to be an individual.

The opportunity to place not only his name, but his ideas before his fellow students is offered every Rose man, and the procedure is comparatively simple. The Technic is more than anxious to print articles written by Rose students, and yet few avail themselves of this opportunity. By spending a little spare time and writing an article, short or long, on any subject which may be of general interest and a subject with which the writer is familiar, the writer is serving two purposes. In the first place, he will be helping the magazine, and incidently, the school. Secondly, he will be advertising himself by placing his name and ideas before the entire school. At the same time, he is gaining some rather valuable training which he doesn't fully appreciate at the time.

The Technic welcomes articles of general interest, whether along technical or general lines, and draws no line as to the class of the author. Articles written by freshmen are just as acceptable as those written by upperclassmen. The only thing the Technic asks is that the articles show that some thought has been applied to the subject, in their preparation.

Campus Improvements

Constructive criticism such as this is valuable, and the subject of campus improvement offers a wide field for editorial comment. The Technic is glad to print suggestions for bettering conditions around the school.
—Editor.

IN the past year the campus at Rose has been improved greatly in appearance. Yet there is room for more improvements, all of which will take much time and money.

During my first year at Rose, many times while waiting for a bus on the highway, I have looked back over the campus and thought what a satisfaction it would be to attend a school surrounded by beauty, where one could walk out across a beautiful campus. Rose has a campus which can be made, in time, equal to that of any school. Our one hundred twenty-three acres offers many possibilities.

There should be something to show tourists going over the National Old Trail that they are passing Rose Polytechnic Institute. It has been suggested that a large sign board be placed on the campus. I do not like that idea, as there are too many sign boards decorating the highways already, but a bus and traction waiting station could be built at the end of the walk which would be attractive as well as serviceable, and on this could be the name of the school.

Parking of cars to the west of the front of the school, and all along the west side should be prohibited, but first a parking space should be provided. Why could this not be at the west of the rear of the main building or on a fill at the rear? It would not take a large space to park the students' cars if it were a space built for parking, and the drivers were required to park their cars in some kind of order.

I have mentioned only two of the many things which would help to make a better campus at Rose.

I would not give up the many things in which Rose surpasses other schools for a more beautiful campus alone, but I feel that an attractive campus would be inspiring and help strengthen the pride of Rose students, and at the same time be a drawing card for prospective students.

—John W. Chinn, m. '30.

A New Publication

ROSE finds itself rather unexpectedly blessed with a new publication, the newcomer being in the form of a weekly newspaper. The idea of a newspaper of this sort is not a new one, several students having, in recent years, expressed the opinion that a weekly newspaper such as this would be popular with the students, as well as of some value. It was felt that even with the comparatively small student body such as we have here at Rose, news and ideas do not circulate rapidly enough, and that a newspaper issued at frequent intervals might help tie the student body closer together by keeping before it questions of timely interest.

It seems the policy of the paper to invite students to voice their opinions of school affairs in a light or serious vein, as the occasion demands, and this open exchange of ideas can not fail to quicken school spirit.

While volume one, number one of "The Weekly Nuts" may not be the acme of typographical and editorial perfection, the spirit behind the enterprise shows that it is due for success, and it may not be long before the paper can be really printed in the manner it deserves. While the new publication has had a rather humble beginning, it may be recalled that the *Technic*, although having an entirely different aim, was begun in a somewhat similar manner.

Here is a cause which seems worthy of support, and it will take the backing of the whole student body to make the publication a success.

Rose Graduates in Underwater Adventure

(Continued from Page 3)

accompanied the air hose and both together would have served as a life line had there been any need—which there was not, although four men used the outfit three of them without previous diving experience. We had only 50 ft. of hose (common garden variety) and did not use all of that in actual depth. Probably 30 ft. is about the practical depth limit, although light conditions and the interesting things to see and do on the ocean bottom are more likely to be in a depth of 10 to 20 ft., we found.

The one feature of our equipment that was wholly novel, I believe, was our body-heat retainer. Unlike Beebe, we had rather cool water to contend with, and although I know one gets very warm in the air-tight rubber suit that the professional diver wears, it is a very different thing to have the ocean currents carrying away one's precious body heat. We agreed that unless we could devise some way

to remain comfortable for considerable periods under water the fun would be spoiled.

The evolution of this idea was as follows: Greasing the body with a heavy coat of axle grease or its equivalent would probably serve our purpose, but would be most inconvenient when we wanted to make several dives a day without conveniences for removing such an unpleasant grease coat. The next step was some sort of an envelope to contain the grease and to encase the body. Then came the idea of impregnating underclothes with grease, and finally, the scheme of doing this with a grease that would not be "greasy".

We finally found a compound of paraffine and vaseline that can be cooled to the freezing point without becoming brittle and which is not soft enough under ordinary air temperatures to exude from cloth impregnated with it. I put two pounds of such a compound in a suit of ordinary heavy underwear. On dressing for a dive, the diver puts on first a suit of light underwear, then the heavy "grease suit" and over this ordinary trousers and woolen shirt. The outfit includes shoes and gloves, of course, because barnacles and crustaceans generally are hard on the bare skin. With this kind of a suit the water did not carry away body heat and because the wrapping was not altogether air tight one did not get unduly warm as is the case within a rubber suit.

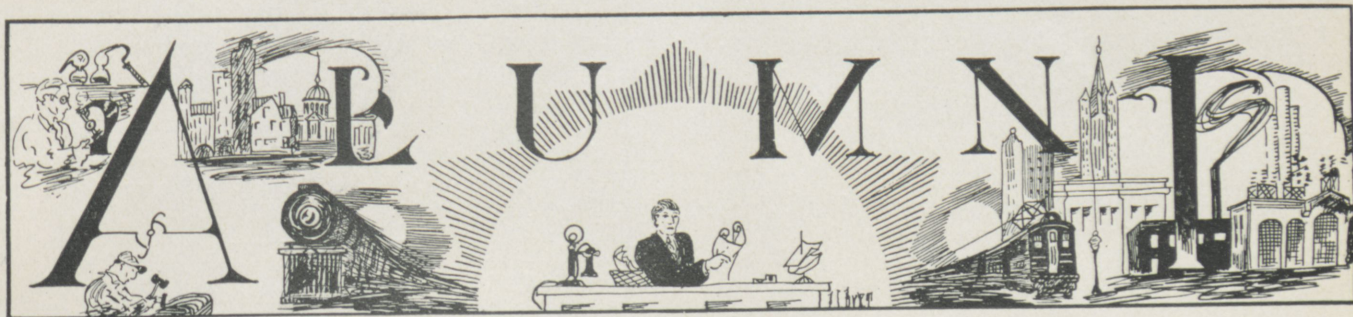
Have I told you the idea of a little jaunt down in the briny? Imagine yourself in a wee glass house, just large enough for the head to turn in, but supplied with an adequate ventilating system, equipped with telephone and weighted so as to give you a specific gravity suited to submarine locomotion; that is, just enough weight to have traction. There is great resistance to motion, but having little relative weight your strength is prodigious—you can, by simulating the operations shown with a slow-motion camera, leap across a wide space between two boulders or jump to great heights (limited only by the surface) only to settle easily down again immediately afterward.

The colors, forms, and movements of submarine life are not as you would see them with the blurred vision of the swimmer, but rather as you would see them in an aquarium where you look from your natural element, air, at fish on the other side of a glass. Just so is it in a helmet except that here you are free in a new element and may walk in the woods, as it were, instead of seeing the wild life in a cage.

We are ready now, when we can find the time, for the next move in our general scheme—making submarine movies. Need Eastman co-operation on supersensitive films, but the camera and the submarine box to work in, think are pretty well worked out.

If you are interested, I would like to sometime show you the pictures we made on the island expedition (it lasted only two days) and to discuss with you some of the things that rather surprised us when we dipped down into a new element.

I hope you will take this, Fred, in the spirit in which it is written. It is a relief to write something that does not have to be edited for publication and I am not even going to look back through it for the grammatical laxities.



Robert Lee Wilson, '92, Again Promoted at Westinghouse

THE Westinghouse Electric and Manufacturing Company recently announced the promotion of Robert Lee Wilson, Polytechnic Institute '92, to the position of Assistant to the Vice-President and General Manager at East Pittsburgh.

Mr. Wilson has been actively connected with the electrical industry since 1893 when he joined the Westinghouse Company, following his graduation from Rose Polytechnic Institute, where he received his degree of Bachelor of Science in Mechanical Engineering, and a year's post graduate course at John Hopkins University in Electrical Engineering. After a few months as an apprentice, he was employed as a draftsman. From 1895 to 1898 he was an inspector and from 1898 to 1901 he served as road engineer. Mr. Wilson for the next two years served as district engineer in New York, where he handled the Interborough Rapid Transit Electrification and other important jobs. He was then recalled to East Pittsburgh as Superintendent of Construction until 1906 when he was appointed Superintendent of Railway Construction.



In the three years he held this latter position he handled the electrification of the New York, New Haven and Hartford Railroad, from New York to Stamford, which at that time was the biggest electrification project the world had witnessed. Mr. Wilson also supervised the electrification of the St. Clair Tunnel.

Recalled again to East Pittsburgh, he became Superintendent of the Railway Department in the factory, where his outside experience proved especially valuable. His next position was Assistant General Superintendent, in which position he had much to do with employment and welfare work in addition to his work in the Railway Department. In 1920 he was appointed Works Manager of the

East Pittsburgh Works, which position he held until his present appointment.

Mr. Wilson goes about his work in a quiet, unobtrusive manner. Always on the job, deliberation is his motto. He never allows himself to be burdened with unimportant details, but at the same time makes sure that the work is done. His quiet manner and absolute fairness are the big factors in securing that co-operation which is the greatest essential in manufacturing. Mr. Wilson enjoys the confidence and respect of every one and is one of the few who have been honored by the Veteran Employees Association by selection to the Board of Directors. Never known to hurry, Robert Lee Wilson moves in only one direction—forward.

Alumni Notes

At a meeting of the Los Angeles Tech Club which was held on October 8, James N. Johnson, '09, was elected President and Scott Mace, '12, was elected to the Secretary-treasurership.

Harold Corp of the class of '29 was a guest at the meeting and addressed them giving recent news of the Institute. Corp is working in Los Angeles for an old Rose man, August H. Albrecht, who is an electrical engineer with the Southern Division of the Standard Oil.

Following Corp's talk, President Johnson gave such an interesting illustrated lecture on Diesel Engines that the meeting did not break up until after mid-night. Mr. Johnson is the manager of the engine department of the Fairbanks, Morse & Company at Los Angeles.

'90

William D. Elder, who is Assistant Engineer with the Michigan Central Railway at Detroit, Michigan, paid a visit to the Institute during October.

ex '92

H. S. Henner writes from Charleston, West Virginia, where he sells Diesel engines for use in tow-boats. He may be addressed at the Kanawha Apartments, McFarland Street, Charleston.

'00

Mr. Sidney J. Kidder has changed positions from El Paso, Texas, where he was general manager of the Mogollon Mines Company, to Capelton in the Providence of Quebec, Canada. Mr. Kidder, who received his E. M. degree in the Columbia School

of Mines in '04, is now general manager of the Consolidated Copper and Sulphur Mines at Capelton.

ex '04

Howard Miller is living at 4135 W. Pine Street, St. Louis, Missouri.

ex '06

Another visitor to the school was H. E. Fuqua, who looked over the Institute on October 10. Although Mr. Fuqua did not graduate from Rose, he put in two years here prior to finishing up at Stanford in 1909. He is now an assistant engineer with the General Electric Company, and is stationed in Los Angeles where he may be addressed at 2411 Fifth Avenue.

'06

Harry R. Canfield has matriculated at the Cleveland Law School to further his education. Mr. Canfield, who is a Patent Engineer and Attorney in Cleveland, received his E. E. degree in 1911.

'07

Walter M. O'Loughlin is Senior Signal Engineer for the Interstate Commerce Commission at Washington, D. C.

'08

Carl B. Andrews, winner of the Hemingway medal, and a professor of engineering at the University of Hawaii at Honolulu, is studying at Harvard this winter and living at 4 Barstow street, Allston, Massachusetts.

'09

Another alumnus whose whereabouts have for a long time been unknown has turned up. Amos D. Pritchard is with the Western Electric Company at the Hawthorne Station, Chicago, Illinois.

'20

Herbert Briggs Jr., came back to visit his alma mater last month. Mr. Briggs is assistant to the advertising manager of the Philadelphia Company & Affiliated Corporations at Pittsburgh, Penn.

'23

Ralph B. Bennett has been transferred from Schenectady to Cincinnati. He is in the D. C. engineering department.

'26

Frank Swearingen has been transferred from Owensboro to Louisville where he is with the Kentucky Actuarial Bureau.

Bruce R. Walsh, winner of the Hemingway medal, is in the General Engineering Department of the Westinghouse Electric & Manufacturing Company.

O. H. Crockett and A. E. Faust are in the Switchgear Apparatus Sales Department of the same company.

ex '26

Nattkemper is attending Georgetown University at Washington, D. C.

'27

Emil J. Yansky is with the Insley Manufacturing Company of Indianapolis.

Dick Kadel is with the Engineering Corps of the Chicago and Eastern Illinois Railway at Danville, Illinois.

Russell W. Staggs is enrolled in the Westinghouse Electric and Manufacturing Company's Graduate Student Course. At present he is located at the East Pittsburgh Works of this company.

Ray Davis and Earl Cunningham with General Electric at Schenectady, have been transferred to Erie, Pennsylvania, where they may be reached at 147 West 9th Street.

The Convention of the Engineering College Magazines Associated

(Continued from Page 6)

discussions on business and editorial matters which constitute a large part of the convention program.

The seventh annual convention of the E. C. M. A. was held Oct. 21, 22, and 23, at Columbus, Ohio, and was sponsored by the Ohio State Engineer, the publication of the Engineering college at Ohio State University. One or more delegates from each of the magazines, with the exception of the Nebraska Blueprint and the Princeton News-Letter, were present at the convention. The engineering college of the University of Tennessee sent a delegate as a visitor to the convention, for while their magazine is not a member of the E. C. M. A., they are making their magazine conform as closely as possible to the E. C. M. A. standards, with a view towards petitioning for membership soon. The Rose Technic was represented at the convention by Ralph C. Bailey, Business Manager, and J. Bartley Smith, Literary Editor.

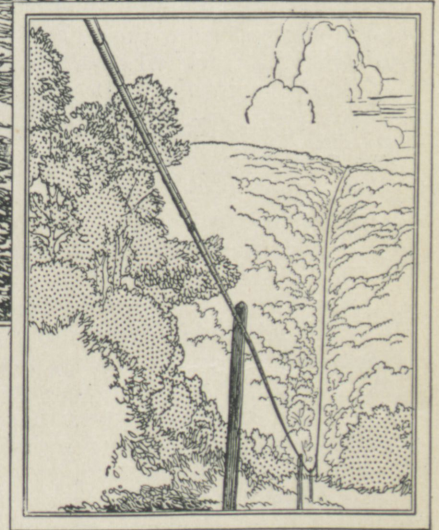
At the Thursday morning session of the convention, one of the features that was of special interest to Rose was the announcement of awards. Taking each month's issue of every one of the member magazines for the past year, the executive committee of the association had prepared awards on the excellence of various features of the magazine. Awards were made for the magazine running the best student articles throughout the year, for the best single article appearing in any of the magazines, for the best cover, for the best single editorial, and for the best alumni section. In the most important of the six awards, that for the best student articles throughout the year, Rose was rated in third place, topped only by The Pennsylvania Triangle and the Illinois Technograph. The Rose articles were judged to be of more general interest than those in the Technograph, but were not presented quite as well. It is a compliment to Rose that it can fare so well in competition with schools having so many more students to draw from. These three, with the Ohio Engineer were in a group well above any of the others.

For the best single article of student interest, an article appearing in the Minnesota Techno-Log, written by this year's managing editor, Lawrence A. Clousing, took first place. The Technic was awarded fourth place for an article appearing in the May, 1927 issue, "The Mississippi Flood Control Problem." Awards in both of these classes were governed by these considerations: interest to student readers, timeliness, style, phrasing, amount of work done in preparing articles, reliability of information, and soundness of reasoning.

(Continued on Page 19)



Today telephone cables cross country that Daniel Boone knew.



To the Daniel Boone in every man!....

It is still the day of the trail blazer. In the telephone industry pioneers are cutting new paths in the knowledge of their art.

This industry is continually on the threshold of new ideas, with each development opening up a vista for its explorers to track down.

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but also in supervisory and executive positions—planning the course of activity for groups of men and carrying the burdens of administration.

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“OUR PIONEERING WORK HAS JUST BEGUN”

A T H L E T I C S

November 19 Set for Homecoming Day. Full Program of Events Arranged

ROSE alumni and rooters will make a gala day of Saturday, November 19, when Rose is slated to battle with the visiting Hanover College eleven on Homecoming Day at the Rose Field. Under the direction of Professor Wischmeyer a program which begins with the arrival of the first visitor and closes with a dinner and talk in the Dormitory dining room has been arranged and is expected to make the day one that the alumni and all of our friends will remember.

The first part of the day's festivities will be the general inspection of the Institute and Dormitory, for several of our old graduates have never seen that building as yet. The morning will be occupied in getting the old Rose men on equal terms with the new phases of the school and new students until 12:00 o'clock when the cafeteria luncheon in the dining room of the Dormitory is held.

Rose vs. Hanover

At 2:00 P. M. the game between Hanover and Rose will take place. The game is expected to be a thriller from all angles, for the two schools have been having some hard battles in the last few years which have made them more or less traditional enemies. This year's game is expected to live up to all that is said to be forthcoming, and it will certainly be a fine one to play before the old grads.

At 6:30 P. M. the final session of the day—a dinner by the Indiana Section of the A. S. M. E.—will be held at the dining room of the Dormitory. Following the dinner there will be a talk on Color and Photography by Professor John Peddle. The talk will be made more interesting by slides.

The dinner, meeting of the A. S. M. E. and noon luncheon are open to all Rose alumni and their wives.

Rose Loses to Evansville

Visitors take advantage of breaks to win 19 to 7.

Outplaying the visiting Evansville College eleven at all times but lacking the punch and initiative before their home fans by a count of 19 to 7. The when in need of only small yardage gains, Rose lost losers gained more yards, made numerous more first downs and did almost everything that should bring them victory, but the winners simply made the breaks count in their favor and were on the long end of a big count.

Evansville scored first in the second quarter when Dick, Evansville fullback, intercepted a pass on the 40-yard line. T. Rea caught a 40-yard pass from his brother, R. Rea, to put the ball in dangerous territory for the first time. On the third attempt

Dick carried the ball over for the first touchdown of the game. R. Rea scored the extra point.

The Aces scored again in the third period. Fritch took a 25-yard pass. A line attack gave them seven yards and another 20-yard pass to Fritch put the ball only five yards away from Rose's goal line. Dick then crashed through for the Aces' second touchdown. The try for point was wide.

Then Engineers managed to score their only marker in this period. Ogan fell on a blocked kick behind the line as Evansville was backed up on their own goal line. The ball had been forced back gradually as the Clarkmen had been playing with a little more pep and were making the Alices fight for yards. Harvey's kick was good, but Rose's scoring ended with this touchdown.

The visitors made their last touchdown when Dick intercepted a lateral pass by Taggart and raced 70 yards for a touchdown in a nice run through the two elevens. The point was missed and scoring ended at 19 to 7.

Dr. Mees, President Emeritus, was introduced and cheered in the intermission between halves. Dr. Mees came on the field, met Coach Heze Clark and was given a lusty ovation.

Lineup and summary:

Evansville (19)

Rose (7)

Davis	.....	L. E.	.....	Hauer
Lang	.....	L. T.	.....	Derry (Capt.)
Brian	.....	L. G.	.....	Harvey
Cooksey	.....	C.	.....	Ogan
Abel	.....	R. G.	.....	Martin
Stoltz	.....	R. T.	.....	Ellis
T. Rea	.....	R. E.	.....	Alexander
R. Rea	.....	Q. B.	.....	Taggart
Fritch	.....	L. H.	.....	Cooley
Whitligge	.....	R. H.	.....	Leake

Substitutions—Rose Poly: Eldred, Scully, Davis, Evans. Evansville: Dickman, McBride, Masters.

Scoring—Touchdowns: Ogan, Dick (2), Fritch. Points after touchdown: R. Rea, Harvey.

Officials—Referee, Goldsberry; umpire, Dick Miller; head linesman, Jack Hanna; field judge, Tatlock.

Time of quarters—15 minutes.

Score by quarters—

Evansville	.....	0	7	6	6—19
Rose Poly	.....	0	0	7	0—7

Central Normal Beat Engineers

Rose Loses Wey and Game by Count of 38 to 6

Danville, Ind., Oct. 21—A heavy line and a good passing game spelled defeat to the Rose Poly eleven here, the score being 38 to 6. Before Harry Wey, the freshman fullback of the visitors, had a broken shoulder and was forced to retire, the Engineers had been outplaying the Central Normal outfit, but when Wey was taken from the game the Engineers'

(Continued on Page 23)



MOTION PICTURES THAT TELL THE STORY OF EXPLOSIVES

HERE are films that will take you as quickly as the magic carpet of the Arabian Nights, to many places where men are busily engaged in mining, quarrying and construction. They will put before you on the screen some of the most interesting applications of modern explosives.

The film entitled "The Explosives Engineer—Forerunner of Progress" visualizes the uses of explosives and shows such interesting views as testing explosives, an actual mine explosion with flames shooting out of the mine entrance, and measuring the velocity of exploding dynamite.

Another interesting film in two reels is called "Rubbing the New Aladdin's Lamp." The first reel "The Blasting Cap" is a fascinating story of how industry uses these little shells that contain such terrific energy. The second reel "Hercules Electric Blasting Caps" clears up the apparent mystery that has hitherto surrounded this type of detonator. In both films animated drawings enhance the interest.

The title of another film "How Jimmy Won the Ball Game" apparently has no connection with explosives. The scenario is a story of human interest, tense with excitement, and some pathos, and it carries an important safety lesson in handling and using blasting caps.

All of these films are available for free distribution, the first two in Standard (35 m. m.) and narrow (16 m. m.) widths and the third film in Standard width only. Please make booking arrangements for showing these films as far in advance as possible to avoid disappointment.

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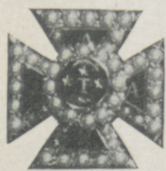
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FRATERNITIES

ALPHA TAU OMEGA



ON October 28, the Mother's Club entertained the chapter with a most delightful Hallowe'en party at the chapter house. The house was decorated in true Hallowe'en fashion with corn stalks, Jack-o-Lanterns, black cats, witches, and everything to create a real spooky atmosphere. Throughout the evening cider was dispensed from an old wooden keg. Either dancing or bridge was the diversion enjoyed by the brothers and their guests. As the hour grew late, the Mothers brought out some real pumpkin pie, doughnuts, and more cider, to the satisfaction of all present. After everyone had eaten to his heart's content, fraternity songs were sung with much gusto, accompanied by the A. T. O. ensemble. The party came to a successful close with the singing of "A. T. O. Girl." Our Mother's Club is up and going and has done much for the benefit of the chapter.

Homecoming on Nov. 19 is being looked forward to. Already some of the brothers have written their intentions of being on deck on that eventful day.

Gamma Gamma is making preparatory plans for the state conclave which will be held here on Dec. 3-4. At this time the chapter will be host to the chapters at Indiana, DePauw, and Purdue.

THETA XI



EVERY month Theta Xi has some sort of entertainment, and this month is not an exception. On the contrary, two events very worthy of mention are in store for the brothers, and every one will agree that the social committee "knows how."

On Saturday afternoon, October 15, the Theta Xi Mothers Club gave a bridge for the mothers and their friends. The house was full to the brim. Mrs. Jack Joslin was the outstanding "bridger," owing to the fact that her score was larger than any other. In the evening another bridge was held, also sponsored by the Mothers Club. The scene was much the same but the characters were different. The active brothers, with their dates, and a goodly number of alumni with their wives had a most enjoyable evening at cards. Brother Joslin showed his ability by winning the men's high prize, while Mrs. Joslin won the ladies' high prize, making it a family affair. Miss Zella Webster won the ladies' consolation and Brother Swartz captured the men's consolation prize. He would! It was a great party and every one had a fine time, thanks to the mothers.

But this isn't all for October. The annual Hallowe'en prank, better known as the Hard Times Dance, was scheduled for the 29th. The house was decorated in customary Hallowe'en style,

with scenery consisting of cornstalks, pumpkins, and the rest. A good orchestra was secured, and everyone enjoyed a good time.

Visitors at the house this month include Brother Wilcox of Theta chapter at Purdue, Pledge Brother Rainer, also of Theta, Brother Becker of Alpha Beta chapter at Illinois University, and Brothers Merrill, Fisbeck, Kadel, Joslin, Lyons, Matson, Kelly, and Bessell.

SIGMA NU



BETA Upsilon of Sigma Nu opened the social season with a bang on the night of October twenty-first when a dance was given at the chapter house on North Eighth Street. The urge which had compelled the brothers

ever since their return to the academic work of the Institute finally found definite form and was perfectly expressed by the social committee composed of William Houston, Robert Vendel, and Milo Dean when they announced that at last the first hop was scheduled. The party got under way with characteristic Sigma Nu spirit prevailing. Leo Baxter and his Liberty Boys furnished the incentive to "really get away" as well as the romantic impulse inspired by the waltz.

The affair broke up at the altogether too early hour of one o'clock with everyone enthusiastic in pronouncing the first social gesture of the Sigma Nu fraternity a huge success. The decorations were especially pleasing, the gold, the black and white dominating in a gorgeous flame of Hallowe'en colors, with fodder and pumpkins appropriately placed throughout the chapter house. Refreshments were pumpkin pie and coffee, and due to the fact that the pumpkin pies were of the real home made variety, thanks to the Sigma Nu mothers, every bite was appreciated.

Beta Upsilon wishes to express its thanks and appreciation to the friends and brothers who chaperoned the affair, Dr. and Mrs. Charles Spurgeon, Dr. and Mrs. John White, Brother and Mrs. John Moorehead, and Brother and Mrs. Fred Nicosin.

In a report to the chapter the social committee announced that plans for the Spring formal were being laid. This formal will be inaugurated as the first one of a series of annual affairs.

Brother Nathan A. Bowers has sent another interesting article which is being published in the Technic this issue. Brother Bowers was the first civil engineer to receive his Ph. D. degree from Stanford University, which is no small honor.

The Sigma Nu Fraternity is pleased to announce that the Sigma Nu Mothers Club is now in the formative period, it having been decided to form a club as soon as possible. This answers a movement that has been taking place for the past few years to have the mothers organized. Each year

the chapter holds a smoker for the Dads and a for the mothers with the result that the Sigma Nu Mothers Club was decided upon.

The brothers are guarding their shekels carefully as all eyes are turned towards the nations' capital at Washington, D. C., where the twenty-third Grand Chapter of the fraternity is to be held from December 29 to the 31 inclusive. Everyone is well pleased with the choice of location for the convention, and as many brothers as can possibly do so are planning to attend.

In the last issue of "The Delta" the annual ratings of chapters in the fraternity were given by the General Secretary. Division four of which Beta Upsilon is a member, placed third out of nineteen divisions, and in the division the chapter placed third. This speaks well for Beta Upsilon, the only two chapters ranking her for the last year being those at Indiana and Purdue.

Although the news is now a bit old, nevertheless it's news; namely, among recent marriages was that of Brother Willys P. Wagner, President Wagner's son who attended Rose, to Miss Jeanne Merrill on August 13 in New York City. The ceremony took place in the Little Church Around The Corner, famous for the notable marriages which have taken place there. Beta Upsilon extends its best wishes for success and a happy thereafter to Brother Wagner and his bride.

THETA KAPPA NU



INDIANA Gamma is well represented at school this year with thirty members. The fraternity inaugurated the school year at its new location at 524 So. 5th St. with ten house men and all of the under-classmen returning to

school with the exception of Max Wilson of Sullivan, Indiana, and Marion Houston of Lawrenceville, Illinois.

The social events of the year were admirably begun when a large percentage of the actives and alumni motored to Turkey-Run on Saturday afternoon, November 5th. On this occasion the members of the local chapter together with guests from the other three chapters of Theta Kappa Nu in Indiana met at the state scenic park to make the ninth annual Turkey-Run Dinner-Dance a huge success. Thirty-five couples were present and the chaperoning was ably taken care of by Professor and Mrs. Orion L. Stock and Dr. and Mrs. Clarence P. Sousley.

A delicious three-course chicken dinner was served at seven o'clock at which time Brother Hillis gave a toast for the alumni and Brother York for the actives. Toasts were also given by Professor Stock and Dr. Sousley. Dancing was enjoyed from eight until twelve with the Gaiety Club orchestra furnishing the music. Everyone enjoyed a good time and before leaving expressed the intention of attending again next year.

The social committee, of which Brother Davidson is chairman, was given credit for the success of the

(Continued on Page 18)



Sheet Metal Work that Resists Rust!



The destructive enemy of sheet metal is *rust*. It is successfully combated by the use of protective coatings, or by scientific alloying to resist corrosion. Well made steel alloyed with Copper will last longest. Insist upon

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Senior Dance

THE senior class officially started the years program of social events, with a senior dance at the Trianon Ball Room. The seniors will be remembered by dance-goers as the class which gave such a splendid series of dances last year, concluding with the Junior Prom which was such a huge success.

The dance was well attended, and every one present, including our president and members of the faculty, were well satisfied and considered the evening well spent.

Music for the dance was provided by Jack O'Grady and his Varsity Entertainers, and Paul Whiteman himself could not have put out more pep. Seniors in charge of the arrangements were Bill Houston, Walter Davidson, Bill Leake, John Mendenhall, and Art Drompp. This committee is now at work on plans for the annual Home-Coming Day which occurs this year on November 19. These plans include a dance for the alumni, students and their friends, which will probably be given at the school gymnasium that night.

Fraternity Notes

(Continued from Page 17)

dance and we are assured of a number of interesting social events for the ensuing year.

Indiana Gamma chapter is proud to announce that LeRoy Wilson, an alumnus of our chapter, has been elected to the office of Grand Scribe of the national fraternity. Brother Wilson was formerly province archon of Gamma province and his place has been filled by another of our alumni, Wayne Watkins.

The province convention is to be held at Terre Haute before the first of the year and, in connection with the convention, plans for a large dance have been formulated.

Several of the alumni have been recent visitors at the house, among whom were Miles Griffith of Racine, Wisconsin; Bill Hillis, Max Sherwood and Wayne Watkins of Cincinnati, Ohio; Leroy Wilson of Indianapolis, Indiana; and Max Wilson of Sullivan, Indiana. We have also heard from Brothers Ray Davis, Earl Cunningham, John Fairhurst, and Donald Fenner who graduated from Rose last year and are now employed by the General Electric Co.

Discouraged

The woodpecker wept in deep dismay
As the shades of evening stole,
For he had been pecking all the day
At a cast-iron telegraph pole.

-:- -:- -:-

Freshman: "How long could I live without brains?"

Prof: "That remains to be seen."

-:- -:- -:-

Prof: "Just keep still for the present."

Frosh: "I haven't said a word for an hour and you haven't ever offered me the present."

The Convention of the Engineering College Magazines Associated

(Continued from Page 12)

The Iowa Engineer was credited with carrying the best editorials during the past year, while an editorial in the Wisconsin Engineer was given the award for being the best published. The award for the best cover went to the Armour Engineer, with the Illinois Technograph second and the Pennsylvania Triangle third. The cover of the Rose Technic was noted as "Good, but not as distinctive as those chosen for awards." The Wisconsin Engineer had the best alumni section, and Rose was fourth due to the fact that the quality of this department varied during the year.

The business sessions proved to be very interesting as well as valuable. The informal discussions, where individual magazines were taken up and their various features thoroughly criticized and discussed, were especially interesting and instructive. The general interchange of ideas which took place, formally and informally, at this convention is sure to mean better magazines.

Among the purely business matters was the election of officers, and the appointment of the temporary committees. Willard V. Merrihue, formerly of the Penn Triangle was re-elected as eastern vice-chairman, and Paul B. Nelson, formerly of the

(Continued on Page 21)

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Alumni Address Delivered June 9, 1927

(Continued from Page 5)

learning. You will have the opportunity to make an unbiased examination of yourself to determine the lines along which your abilities lie. You can obtain an adequate perspective of the business world—and of what it has to offer you in the line of your ability—you can explore and analyze it. Your confidence and enthusiasm will not be wasted on tasks you are not immediately qualified to perform, but will be devoted to an attempt to secure a comprehensive understanding of the world of modern enterprise and to a completion of your education in fundamentals. A balanced education comprises not only your college education but your education in fundamentals in the business world. You have been students in college. Now you will become students of business.

From the standpoint of your future success it is unimportant that the immediate future be a period of little productivity. Your responsibilities are lighter, probably, than they ever will be and your financial requirements are less. You can well afford to postpone a plunge into a specialized field which will oblige you to concentrate upon the assimilation of knowledge of a detailed nature useful only in a limited field. Rather invest your time in securing a balanced education, in getting your bearings, and developing perspective—all of which will aid you in making a wise selection of your field of effective service. During this period of adjustment the particular nature of your occupation is not important provided you maintain a broad outlook on business in general until, with the mature judgment you acquire thereby, you are able to make an unbiased choice of your special field. In that connection, do not assume that your first occupation, which was probably largely determined by chance, is the correct one. You don't know and can't know until you have tried yourself and found your bearings. But it can at least be used to develop initiative and independence.

The importance of finding yourself and of obtaining an adequate picture of business generally, may perhaps best be appreciated by considering the alternative. Suppose that upon graduation and with inadequate knowledge either of the trend of your ability or the opportunities before you, you were to devote your attention to equipping yourself for a specialized field. Your advance would perhaps be relatively rapid for a short time, resulting perhaps in the premature assumption of additional responsibilities. But you would not have developed general independence and initiative. You might then tardily discover either that your ability or interest did not lie in your chosen field or that the opportunities in such field were limited or soon exhausted. Or you might simply be conscious of a vague dissatisfaction. But your added responsibilities coupled with your narrowed outlook—lack of broad vision—and unfamiliarity with the business world generally would make a proper and seasonable readjustment extremely difficult. And the realization of your lack of a broad outlook and of

the limited utility of your specialized experience, would tend to destroy your confidence.

To repeat:—In most fields of endeavor specialization is a prerequisite to success and advancement. The greater the specialization, the more one's utility is limited to a single field, the greater the importance of a wise selection of one's field; and, in the face of the diversified opportunities for the engineer today, the more deplorable the lot of the man who eventually realizes that he is in the wrong niche.

You have often heard it said that one can make a success of anything if one will but work hard enough. In a relative sense that is true. But how much greater will be your happiness and success if your energies are initially well directed and suitable for the task. On the average mere expenditure of energy without directing intelligence advances us very little. Brawn should be tintured with brain.

An intelligent determination of one's ability and of an advantageous field where that ability will be effective, impresses me as of such importance that I have made it the subject of my remarks at the risk of uttering numerous platitudes. Indeed what I have said has been nothing more than a reiteration of approved and well known rules of conduct. When we find ourselves in a new environment our natural impulses are first to get our bearings. We ought to look before we leap.

You can advantageously apply these rules to govern yourselves in your early business experience.

And here I shall conclude with the confident wish that you will realize the ambitious goals that each of you has set for himself.

The Convention of the Engineering College Magazines Associated

(Continued from Page 19)

Minnesota Techno-Log was elected to supersede Prof. W. Otto Birk, of the University of Colorado, as western vice-chairman. These two vice-chairmen, with Prof. Leslie Van Hagan, of the University of Wisconsin, chairman, constitute the executive committee of the association. Ralph C. Bailey, of the Rose Technic was appointed chairman of one of the most important of the committees, that which handled the pro-rating of the railroad fares of the delegates.

While the business end of the convention was being handled in such an efficient manner, the question of entertainment for the delegates was not neglected. The fraternities co-operated with the staff of the Ohio State Engineer and provided accommodations for the delegates. The delegates were entertained Thursday night at a smoker at the Beta house, where everyone enjoyed a fine time. Friday afternoon was spent on a sight-seeing trip through the expansive campus of the university and through the city of Columbus, followed by an interesting inspection trip to the Columbus waterworks. This was followed by a drive out to the two dams which hold the city's water supply in storage. Immediately after the inspection trips a banquet

(Continued on Page 23)

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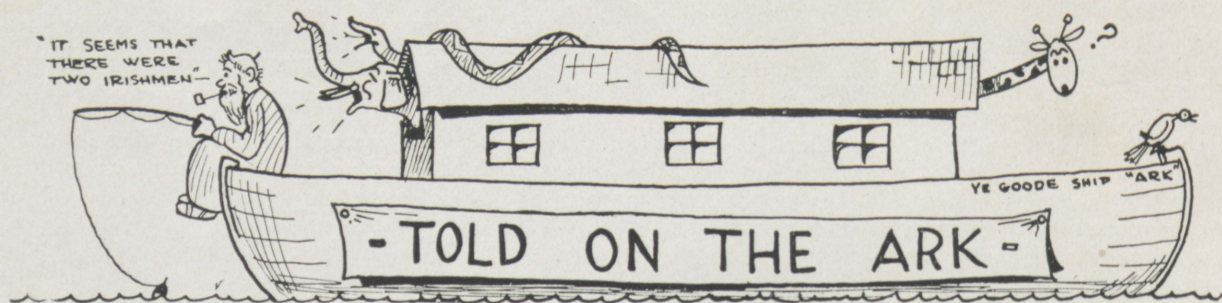
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Sandy: "Gosh you're dumb. Why don't you get an encyclopedia?"

Mike: "The pedals hurt my feet."

-:- -:- -:-

Doc Sousley, in class before mid-term: "The quiz questions are in the hands of the printer. Now are there any questions any one has to ask?"

Bright Stude: "Who is the printer?"

-:- -:- -:-

Prof.: "So you've never used sodium stearate?"

Stude: "No, sir, what is it?"

Prof: "Soap."

-:- -:- -:-

Smile Stuff

"Pin money," said the guy hocking his fraternity badge.

-:- -:- -:-

A Birdie!

He: "Are you fond of golf?"

She: "Am I? You should see the greens I ate for lunch."

-:- -:- -:-

Grandpa in a speedy car,
Pushed the throttle down too far;
Twinkle, twinkle, little star,
Music by the G. A. R.

-:- -:- -:-

Soph: "So your father is ill. I hope it is nothing contagious."

Frosh: "So do I. He's suffering from overwork."

-:- -:- -:-

Delta: "The Universities must be wicked places."

Gamma: "Yes, yes go on;"

Delta: "Boys and girls under sixteen not admitted."

-:- -:- -:-

"Our heart goes out to the man who joined the navy to see the world and then spent four years in a submarine."

-:- -:- -:-

"The hen is immortal. Her son never sets."

-:- -:- -:-

"Well if they put you in a glass bowl without your swimming suit you'd turn red too," protested the goldfish.

"Is your father a good undertaker?"

"Baby, he knows his buries."

-:- -:- -:-

Speaker (excited): "Ladies and gentlemen I ask you: Do I look like I descended from a monkey? Do I?"

Back Seat Wit: "No, ye don't now for a fact. Tell us how it happened."

-:- -:- -:-

"Have a drink of elephant whiskey?"

"What's that?"

"Take one drink and you throw your trunk out the window."

-:- -:- -:-

"I heard a new one the other day. I wonder if I told it to you."

"Is it funny?"

"Yes."

"Then you haven't."

-:- -:- -:-

And In Card Games—

Dumb: "How do so many boys get killed in football games?"

Dumber: "They kick off."

-:- -:- -:-

Physic Prof. (making assignment): "Tomorrow start with lightning and go to thunder."

-:- -:- -:-

Chicago's motto has been changed to, "Have you had your lead today?"

-:- -:- -:-

Permanent

Prohibition Officer: "Sonny d'ya wanta make five dollars?"

Mountaineer Boy: "Sure. How?"

Officer: "I'll give you five to take me up this creek to the whiskey still."

Mountaineer: "All right. Give me the five."

Officer: "Oh, I'll pay you when we come back."

Mountaineer: "Mister, you hain't comin' back."

-:- -:- -:-

When better ones are built, Ziegfield will sign them.

*The Convention of the Engineering
College Magazines Associatek*

(Continued from Page 21)

was held at the New Southern hotel, which provided a fitting climax to the social side of the convention.

Dean Hitchcock, of the engineering school was intensely interested in the convention, and his cooperation helped to make the affair the success that it was. Dean Hitchcock was present at all of the social events and made the acquaintance of every delegate. A great deal of credit should go to the staff of the Ohio State Engineer for the success of the convention, and especially to Homer W. Forschner, who was chairman of the convention committee.

Central Normal Beat Engineers

(Continued from Page 14)

main offensive threat was gone and Central Normal was able to take the offensive part of the game in their own favor.

Rose opened the scoring of the game when they punted to Normal's 40-yard line. The winners were stopped twice for losses. Cooley then intercepted a pass and made 15 yards before being downed. A 15-yard penalty made the advance easier. However, the next play was costly, for Harry Wey emerged from the scrimmage with a broken shoulder that he did not betray until sometime later. It was first down and less than ten yards to go, when Davis went over the line on the second scrimmage. Harvey missed his place kick.

The Normal outfit was restrained from scoring until the Engineers had opened the scoring session. Opening a strong passing contest they managed to send one over the line. After the second touchdown had been registered the winners had little trouble in sending over several others.

Lineup and summary:

Central Normal (38)

Rose (6)

Dean	L. E.	Hauer
Richardson	L. T.	Derry
Chilton	L. G.	Harvey
Ogle	C.	Ogan
Alexander	R. G.	Martin
Hazlett	R. T.	Ellis
Walls	R. E.	Alexander
Darnell	Q. B.	Cooley
Franklin	L. H.	Davis
Argenson	R. H.	Taggart
Bratton	F. B.	Wen

Substitutions—Central Normal: Evans, Cushman, Pruett, Fanchard, Morse, Akers. Rose: Eldred, Dicks, Bruce, Gibbons, Davy.

Scoring—Touchdowns: Davis, Bratton, Walls, Franklin (3). Points after touchdown: Franklin, Bratton.

Officials—Referee, Ralph Davis; umpire, George Sidenstricker; head linesman, Dr. Armstrong.

Score by quarters—

Central Normal	6	13	6	13—38
Rose Poly	6	0	0	0—6

Eastern Illinois Beats Rose

Teachers Win Easily 26 to 0

Charleston, Ill., Oct. 29—Rose Poly lost before the powerful attack and strong passing game of the Eastern Illinois State Normal by a score of 26 to 0. The winners showed a strong line game and were able to pass to good advantage to defeat the Engineers who held at times, but were unable to stave off the attack at critical moments.

The winners started out early in the first quarter making good gains at the start, but scoring was delayed until the second quarter when two touchdowns were registered. Thereafter the game was all in favor of the home club, with Rose fighting back vigorously.

Coach Heze Clark of Rose found occasion to

Continued on page 24)

Judge: "Guilty or not guilty?"

Prisoner: "You guess first."

— 4 — — 5 — — 6 —

Prof.: "What did Horatius do at the bridge?"

Frosh: "Probably trumped his partners ace, the darn fool."

- :- - :- - :-

Prof.: "Is that your cigarette stub?"

Stude: "Go ahead, you saw it first."

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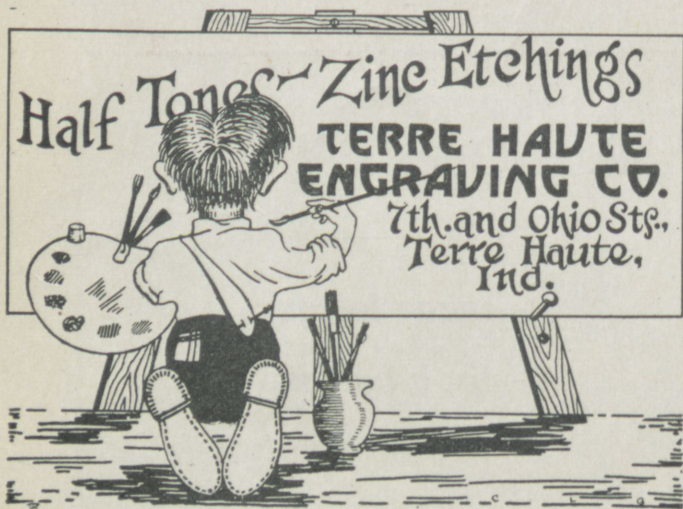
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Eastern Illinois Beats Rose

(Continued from page 24)

dispute the officiating, but the kicks made didn't make much of a difference in the game.

Lineup and summary:

E. I. S. Normal (26)

Rose Poly (0)

Cooper	L. F.	Hauer
Routledge	L. T.	Derry (C.)
Ives	L. G.	Bruce
Gibson	C.	Ogan
Smith	R. G.	Martin
Warren	R. T.	Ellis
Sims	R. F.	Alexander
Fenoglio	O. B.	Cooley
Kinsell	R. H.	Taggart
Powers	L. H.	Davis
Cremer	F. B.	Marsh

Substitutions—E. I. S. N.: Parr, Hall, Gilmoure, Jones, Miller, Galbreath, Blaase, D. Miller, Mattis. Rose Poly: Gibbons, Scully, Schaack, Eldred, Harvey, Evans, Davey.

Blaase. Points after touchdown: Fenoglio, Hall.

Scoring—Touchdowns: Fenoglic, Parr (2),

Officials—Referee, McMillan, umpire, Honn; head linesman, Pike.

Score by quarters—

E. I. S. N.	0	13	7	6—26
Rose Poly	0	0	0	0—0

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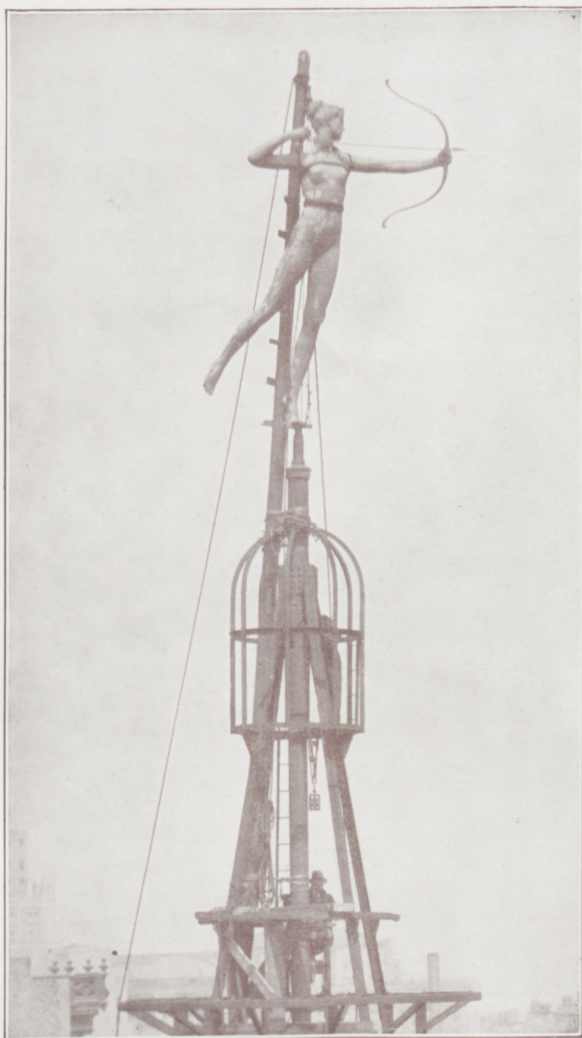
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. . .

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