



JUICE LAB GETS ADDITIONAL GROUP ELECTRIC MOTORS

Motor - Generator Set Recently Placed in Lab.

SPECIAL EQUIPMENT

Through the efforts of Professor D. P. Moreton, professor of direct and alternating current machinery, a motor-generator set has recently been received by the electrical department.

The set, which has been installed in the dynamo laboratory, consists of a 110 volt direct current interpole motor and two three phase alternating current generators. The speed of the motor may be varied from 750 to 180 revolutions per minute. One of the generators is a four pole outfit; the frequency of its output may be varied from 25 to 60 cycles. The other generator is a 12 pole machine of the stationary armature type; it generates currents whose frequencies may vary from 75 to 180 cycles. The terminal voltage of these machines may be varied by making use of a field rheostat.

Study Made Easier

An interesting fact concerning these machines is that they produce an electromotive force which closely approximates a sine wave. Due to construction features a thorough verification of the fundamental laws of alternating current work is made possible. A study of this kind was not possible before, because no source of available alternating current approximated a sine wave upon which the fundamental laws are based. In addition, it will be possible to produce and study the fundamental and third harmonic currents, electromotive forces having frequencies varying from 25 to 60 cycles per second and combinations of the fundamental and third harmonics.

Variable Phase

The wave form of the resultant electromotive force produced by a fundamental and third harmonic may be changed by changing the phase relation; in this machine this is accomplished by rotating the stationary armature through a small arc. A means of measuring or determining the variation of iron losses in alternating current apparatus with the wave-form, a condition which should be studied thoroughly, is thus provided.

Professor Moreton states that a number of new experiments involving the use of the new equipment are being prepared to be given in the second semester of the Junior Laboratory Course.

Professor Roesch at Petroleum Meeting

The Anti-Knock Session of the American Petroleum Institute was held at the Stevens Hotel on November 12. Professor Daniel Roesch, of the department of Automotive Engineering at Armour, presented a demonstration of an Acoustimeter. This instrument, for measuring engine knock intensities, produced microammeter indications which were projected on an enlarged screen. Demonstrations were made showing variations of knock intensities with mixture ratio, variable throttle ratio, variable spark advance, and with fuels of various knock intensities.

Professor Roesch also made a report on the measurement of exhaust noises of about forty outboard equipped motor boats at Lake Geneva some eighteen months ago. In this work a range in noise intensity of from one to five hundred ergs per square centimeter per second was found in unmuffled racing quad engines.

At a recent meeting of the Armour Branch of the A.S.M.E., Professor Roesch gave a demonstration of his apparatus to the students.

Senior Activities Prominent Feature of Week; Men to Order Jewelry and Jackets; All Urged to Support Senior Dance; Cycle Requests Biographies

There is now under way one last spirited attempt to have a Senior Dance. Due to the deflated condition of the class treasury the school authorities will not stand back of a possible deficit. W. A. Schirmer, Social Chairman, with his committee has decided that they will endeavor to collect enough money by an advance sale of bids to assure financial success of the dance. With this assurance they will then definitely plan the dance, if not, the men who have paid, having received receipt for their money will get their money back upon presenting the receipt.

CYCLE SEEKS RECORDS

All seniors are urged to fill out and hand their biographies in to the Cycle staff on or before Wednesday, November 26.

Detailed information from each graduate is desired concerning place of birth, department, high school, honorary groups, social fraternities, clubs, organizations, athletics, publications and other activities that have to do with campus life. This information is vital for the early completion of the senior section. Blanks may be obtained from Stanley Livingston in the book store and after completion can be given to any member of the staff or placed in the Cycle box located on the first floor of the main building on the elevator shaft.

MEN TO ORDER JACKETS

Measurements for the senior jackets are to begin tomorrow, November 26. The jackets, which are now on display, are to cost \$7.50, according to Bob Wilson, chairman of the auxiliary committee. Payment will be required at the time of measurement, to prevent any jackets being left on the hands of the committee.

The jackets will be furnished by Rexford and Keller, according to the samples furnished the class. Delivery will be in two weeks after the measurement.

Assembly Learns of World Wide Outlook

At an assembly held Thursday, November 20, a discussion of the state and progress of countries of the world was given by Dr. John H. Randall, who is a director of the World Unity Foundation.

Dr. Randall was introduced by President Raymond and proceeded with a "trip" around the world showing the localities which see the

(Continued on page 3)

Work of Enlarging Electrical Lab Done

In order to provide more space in the electrical engineering laboratory, the machine shop which occupied a large corner is now being moved to the south end of the basement in the main building. Mr. Koster is in charge of the work.

It is expected that this increase in space will facilitate work in the laboratory.

J. R. Jackson's Mother Dies; Flowers Sent

John R. Jackson, F. P. E., '32, left Chicago a week ago, yesterday, for his home in Nashville, Tennessee, called there by the serious illness of his mother. Mrs. Jackson died on Wednesday morning, November 19.

Both the junior class and the F. P. E. society sent floral pieces to the family as an expression of their sympathy.

To date only forty of the one hundred and seventy seniors have kept their appointments with the class photographer. T. A. Woods, C. E. '31 chairman of the photography committee urges all seniors to visit the studio during the Thanksgiving holidays if possible. The studio will not be open on Thanksgiving Day.

Beginning Monday, December 1, definite appointments will again be made for those who have not had time.

Three Men Pledged by Pi Nu Epsilon

A meeting of Pi Nu Epsilon, honorary musical fraternity was held on Monday afternoon, November 10. At this time a tentative selection of candidates from the junior and senior classes was made.

Last Wednesday evening an examination was given the candidates at the Sigma Kappa Delta house at 3344 Michigan Ave. Formal pledging took place yesterday.

The men selected to wear the pledge ribbon of Pi Nu Epsilon are: Frank F. Strassenburg, '31. Philip H. Korrell, '32. George L. Bonvallet, '32.

Another group of men will be pledged next spring.

"Illinois Waterways," Subject of Talk at Last W. S. E. Meeting

"Illinois Waterways" was the subject of a talk presented at 9:30 last Thursday morning to the Armour Branch of the Western Society of Engineers by Mr. W. M. Smith, assistant chief engineer of the Illinois Division of Waterways.

Mr. Smith's address was given with the aid of colored slides of various waterway projects. A large part of the time was devoted to a description and explanation of the waterway along the upper Illinois river. Mr. Smith's talk started with the early forms of canal and river transportation and went through the various steps of development to the modern methods of today. He pointed out that, although to the novice it would appear that there is less river traffic now than in former times, in reality there is probably more because of the increased carrying capacity of barges over motor driven boats.

Mr. Smith described the construction and maintenance of the large modern canal locks, using as examples those recently installed near Chicago.

Mr. Smith is well known in engineering circles and was a member of the advisory board on the design and construction of the Panama Canal.

Ch.E.'s Celebrate by Gathering at Smoker

Flask and Beaker, professional chemical engineering fraternity, held a smoker at the Beta Psi house last Tuesday. The purpose of the affair was to celebrate the acceptance of the fraternity's petition to Alpha Chi Sigma.

Mr. M. F. Dull of the Upsilon Chapter of Northwestern represented the national fraternity and volunteered to answer any questions concerning the future installation of Alpha Psi Chapter.

No definite date for the installation has been set, but from present indications, it will probably take place on Saturday, December 13. This will be the second installation of a chapter of a national professional fraternity at Armour.

Records in the Dean's office indicate that four men named to serve on senior class committees will not graduate in June 1931. Four eligible men have been appointed by the class president, C. T. Link, to take their places so that those committees effected now stand as follows:

Announcement

- A. H. Jens, Chairman.
- M. J. Lamka.
- F. F. Strassenburg.
- C. M. Westerman.
- R. H. Windbigler.
- Auxiliary (Jacket)
- R. N. Wilson, Chairman.
- C. D. Brown.
- D. M. Fetterman.
- H. S. Holt.
- S. A. Ott.
- R. J. Schoen.

Cap and Gown

- E. J. Stehno, Chairman.
- F. S. Austin.
- T. B. O'Connor.
- R. Patzelt.
- A. F. Wilde.

JEWELRY SOON READY

The committee on senior jewelry, headed by T. R. Schueler, has decided on a ring and key similar to those used last year, in an effort to establish a standard for all classes. Both ring and key will have an "A. I. T." monogram, and the ring will have symbols of the six departments on the shank.

Several firms are now bidding for the contract, which will probably be let by December 1. After that date, orders will be taken by the committee, which consists of the following seniors:

- T. R. Schueler.
 - E. G. McLaughlin.
 - E. C. Erland.
 - R. M. Krause.
 - W. A. Schrader.
- First deliveries will be in February.

Drive for Press Club Membership Now On

The Press Club has opened its drive for members according to A. H. Jens, president of the club. Applications for membership should include name of the school attended by applicant before coming to Armour and the activities of the applicant, especially those relating to newspaper and school annual work. Address the applications to the Press Club, care of R. G. Kellner, Secretary-Treasurer, and place in News contribution box.

It was announced that the Club will have a meeting shortly to decide the future actions to be taken. Also a smoker is held tentative at which some prominent newspaper man will be the speaker.

CORRECTION

In the list of pledges to Eta Kappa Nu, honorary electrical engineering fraternity, printed in the News last week, the name of T. B. O'Connor was omitted. This makes a total of seven pledges to the fraternity at the present time.

CALENDAR

- Tuesday, November 25
- 5:00 P. M.—Orchestra Practice.
- 5:00 P. M.—Sigma Alpha Mu basketball practice.
- Wednesday, November 26
- 10:30 A. M.—Assembly.
- Thursday, Friday, Saturday, November 27, 28, 29
- Thanksgiving Holidays.

NOTICE

There will be no issue of the Armour Tech News next Tuesday, December 2, due to the closing of school November 27, 28, and 29 for the Thanksgiving holidays. The next regular issue will be distributed on December 9.

Tau Beta Pi to Set Up Marker

Plans are being made by Tau Beta Pi, honorary engineering fraternity, for the erection of a marker upon the Armour campus to commemorate the twenty-fifth anniversary of the chapter. This marker will be placed upon the plot of ground directly north of the Faculty Club entrance, and will be, according to the tentative plans, a rock-finished concrete base with a large bronze Bent upon the top.

The work is being done by the present pledge group under the direction of the active members. The Bent has been cast and the base will be erected in the near future. Professor Huntly is acting as a supervisor, and is arranging for the materials. It is hoped by the chapter that this marker will be an inspiration and a constant reminder to the lower classman that Tau Beta Pi is a goal for all men to work toward. Plans for the dedication of the marker are not yet fully decided upon.

Eta Kappa Nu's Hold Convention

Eta Kappa Nu, national honorary electrical engineering fraternity, held their 26th annual convention at Ames, Iowa, on Friday and Saturday, November 14 and 15. Nu Chapter of Iowa State College was host.

Delegates from other schools who passed through Chicago were guests of the Chicago Alumni Chapter at a dinner given at the Hotel La Salle, Thursday evening. Afterward, a meeting was held at the Lighting Institute in the Civic Opera building. A. R. Draus, of Delta Chapter, was the official Armour representative at this meeting.

The Armour delegation to the convention at Ames, consisting of W. Drigot, W. E. Penfold, C. Blahna, and R. Patzelt, made the trip by automobile and arrived with two worn tires and front wheels out of alignment.

The business session consisted of registration of delegates, discussion of topics, and the election of officers. G. H. Kelley, formerly a student at Armour Institute, was elected president of the organization.

The social program included a dinner, a smoker, and ended in the witnessing of the football game between Iowa State College and the Kansas Aggies on Saturday.

On the trip home our representatives were accompanied by the Oklahoma A. and M. delegation and the homeward journey made more interesting by an exchange of experiences and happenings.

Dr. G. L. Scherger delivered an address on the subject of "Vienna: Her Culture and Art" at the Beldon-Stratford Hotel last Thursday. The body assembled there was the Junior Friends of Art of which Miss L. Olga Menn is the head. This organization has a membership comprised of many society women of Chicago.

Thursday, November 20, Professor Amsbary delivered his new lecture on "Literature, Its Inspiration and Power" to the students of Northern Teachers College at Marquette, Michigan.

NOTED SCIENTIST TO DEMONSTRATE MECHANICAL MAN

Engineer Shows Results of Research at Assembly

FEATURES ELECTRON

Front seats will be at a premium for the assembly to be held tomorrow morning, for Dr. Phillips Thomas, research engineer of the Westinghouse Electric & Manufacturing company, is bringing his electric flea circus to the Institute. He has presented his circus before various groups with such huge success that it was necessary to turn people away because of limited facilities for seating. It is feared that a large number of outsiders will be on hand to attend this exhibit so the students are warned to get to the assembly on time. There will be no music at this assembly. The time for the assembly has been tentatively set at 10:30, but the definite time will be announced on the bulletin board.

Uses Electrons

Doctor Thomas uses the electron in much the same way as a showman uses his trained fleas. He thinks of the electron as a flea on the back of an atom. In numerous spectacular and interesting ways he forces these electrons to do things similar to those that they are made to do when working for an engineer. In addition to the electrons, Doctor Thomas will bring Rastus Robot, his mechanical slave, with him. This robot will perform various duties at the sound of his master's voice with a quiet, astonishing efficiency. In addition to seeing this mechanical man work, the students will have the privilege of listening to his voice, for, *miabile dictu*, he speaks. While watching these marvels of this modern age of machinery, the undergraduate body will have the privilege of hearing Doctor Thomas explain how these things were conceived and developed by him in conjunction with his associates.

Campus Club Smoker to Be Held Tonight

A smoker and card party is to be given by the Armour Tech Campus Club in its rooms in Chapin Hall this evening. An attendance of about thirty-five is expected, since only active members are to participate. Professor Mangold, faculty advisor of the club, will also be present.

There will be plenty of "eats and smokes." An elaborate program is not being planned but several skits will be presented by members. There will be enough bridge and pinochle decks to supply all wants and a prize will be awarded to the best piggye player.

A. S. M. E. Smoker Is Enjoyed by Members

The Armour branch of the American Society of Mechanical Engineers held its first smoker of the year at the Theta Xi house last Friday evening. After a number of rounds of bridge silence was called and the pledges of Pi Tau Sigma put on several stunts. Included in these stunts was one "The Student's Idea of an Ideal Class" and another "Broadcasting Station. A. I. T." both of which were very good entertainment.

After the refreshments were served, all gathered around the piano to sing some "Engineer" songs composed especially for the A. S. M. E. and then continued to warble on popular themes.

Important guests of the evening were Mr. R. Leonard, secretary of the A. S. M. E. in Chicago, as well as several Professors of Mechanical Engineering from Armour.

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ACTION

It has been the custom for nearly every student at Armour sometime to voice his displeasure at some phase of the student life here; and while most of the points have been exceedingly trivial, occasionally a point of major importance has cropped up. The News, too, has been wont to point out faults, but, as with the students, most of our energy has gone into talk and not into actions.

Probably the reason for the general lethargy in such matters is that everyone has labored under the delusion that the student body and its activities are under the direct supervision of the deans. While this is not true, no one seems really to know just how we are governed and what rights we have as students. We feel that by making this point clear, it will be possible to see many of our hopes gratified, and all disputes ironed out without the futile talk that has characterized the past.

We should like to quote verbatim two important clauses of the Constitution of the Armour Tech Athletic Association and Student Union, the governing body of the students. They read as follows:

"The object of this organization shall be to develop a unified Armour spirit by . . . organizing and systematizing all inter-class relations, all class customs, and privileges; . . . passing and enforcing such acts as it may deem advisable for the government and regulation of the student body providing that such legislation is approved by the executive council of the Institute."

"Act as a Court of Appeal . . . [in which] . . . the officers of this organization shall act as a committee with the president as chairman when considering . . . appeals of the classes, organizations, committees, or students."

Thus it lies in the hands of any interested group or groups of students actually to take action upon any project that they deem will be for the good of the Institute. In the previous editorial, we have mentioned two matters that struck us as desirable; should the students feel that such a course of action is desirable, they can act through the A. T. A. A.

Likewise it is equally possible for a student or a group of students to make a formal protest against actions which they consider detrimental to their class or the Institute. It seems that we have had periodic outbreaks of dissatisfaction; but to date it seems that no one has known of their right of appeal.

Needless to say, we hope that the A. T. A. A. will not be burdened with petty details, but that by taking action upon any major project that may be presented, make it impossible to find discontent among the student body.

A. B. A.

"The Slipstick"

Cleave to "The Slipstick"; let
the Slipstick fly where it may.

WHETHER OR NOT

Some thirst for glory, love, or money,
Just as the bee seeketh the honey.
But whether in Shanghai, London, or New York,
We all thirst after eating salt pork.
—M. C. H.

At Armour the first four years are the hardest.

Hazards of a Coach

Coach: "Hey! Don't do that! Why don't you use your head?"
Football player: "Oh! Is that allowed?"

Gems of Ancient History

"Egypt is bounded on the South by the Mediterranean, on the East by the Arabian Desert, and on the Northwest by Persia."

"The Pyramids are built of artificial stone."
"Cretan civilization was a civilized kind of civilization."

"Egypt is a dry country except for the three rivers which flow through it: the Nile, the Tigris, and the Euphrates."

"The Pyramids were made of solid rock like a human being with the face of some one on it."
"Egypt is famous for its system of alphabets."

WHO EVER HUNTED BIG GAME?

Game Hunter: "When I was in Africa I shot all my big game on an instant's notice."

Englishman: "Really?"
G. H.: "Yes, I got up late one night and shot an elephant in my pajamas."

Englishman: "But how did the bally thing get into your pajamas?"
—Dutch.

Ad in paper: "Wanted: A boy to take care of post-office with two years college education."

Traffic Cop: "Yer hitting sixty!"
Young Speedster: "But the man said I could go as fast as I wanted—after the first five hundred miles."
—Al.

Cubist Astronomy

"Day and night are caused by the rotation of the earth around itself. One-half is turned towards the sun and is called day. The other half is turned towards the moon and is called night."

After trying desperately for two days to balance his ledger the student is astounded to discover that one does not add the dates.

"Wife says I gotta give up the club or she'll leave me."

"Tough ain't it?"
"Yeah. I'll miss her."
—The Bongineer.

DOT'LL DO!

"There's a dot on my paper," said I in dismay.
But alas, it was a falsehood,
For the dot had moved away.

"Just been to the cemetery."
"Any one dead?"
"Yea! All of them."

Stout Lady: "I'm bothered with a little wart that I'd like to have removed."
Doctor: "The divorce lawyer is at the second door to your left."

Abe: "Do you play golluf vit knickers?"
Levi: "No, vit white people."

It was on a State Street car that a buxom woman was standing in the aisle hanging onto a strap. In front of her sat a rather cantankerous looking man, apparently absorbed in a newspaper. The car stopped suddenly and she trod sharply on his foot.

He looked up over the top of his paper with anything but a happy expression.
"Madam," he said, "will you please get off my foot?"
"Put your foot where it belongs," she replied shortly.
"Don't tempt me, Madam, don't tempt me," he countered.

English Professor: "Well, Jones, I suppose you were absent on account of the inclemency of the weather yesterday."
Freshman: "No, sir, I couldn't come on account of the rain."

FAIR ENOUGH

She had done everything wrong. She had disregarded the signal lights, then stalled in the middle of the street, and before starting, had taken out her powder puff and started to apply it to her face. An irate cop rushed up: "Say, lady, do you know anything at all about traffic rules?"

"Why, yes, what is it you wanted to know?"

Magistrate: "You are charged with habitual drunkenness. What excuse do you have to offer?"
Offender (brightly): "Habitual thirst, your worship."

Can't you smell that turkey and dressin' a cooking? We can.
—Phil J.

SALAMANDER

Honorary Fire-Protection Engineering Fraternity



Salamander is an honorary fraternity in Fire Protection Engineering which was founded at the Armour Institute of Technology in January, 1923. Its purpose is that of promoting high scholarship and encouraging original investigation in all branches of fire protection engineering.

Origin

The initial steps for the formation of Salamander were taken by O. L. Cox, '23, and R. M. Beckwith, '24, in cooperation with Professor J. B. Finnegan, head of the department of Fire Protection Engineering. At that time the aim was to develop a student activity in the form of a student branch of one of the established fire insurance fraternities.

In the end the founders deemed it a better plan to promote a distinct association in the form of an honorary fraternity. Since all members of the senior class in the department were outstanding in their school life they became the nucleus of the organization. These charter members were: O. L. Cox, '23; R. M. Beckwith, '24; G. G. Blair, '23; C. W. Hauth, '23; O. R.

Matson, '23; J. C. Worley, '23, and Professor J. B. Finnegan.

Election

The prime requisite for the election of a student to membership in the fraternity is a good scholastic standing. To be qualified for membership the man must be of good moral principles and show evidence of superior abilities. These may be indicated by his activities.

The badge of Salamander is a gold key whose general outlines represent a conventional sprinkler head. Corresponding to the fusible link in a sprinkler head we find the mythical Salamander, a creature which lived and rejoiced in fire. The seven notches in the deflector are in agreement with the number of founders. Engraved on the reverse side of the key, in addition to the bearer's name, are found two numbers, one giving the number of the chapter and the other the seniority of the member.

The colors of the pledge button are red and black, the red standing for fire and the black for the destruction inevitably following in the path of the fire.

A news letter, the "Deflector", is published annually by Salamander. In its pages are found news of the alumni members as well as that of the active members.

Each year an award, the "Handbook of Fire Protection" by Crosby, Fiske and Forster is made to the student of the freshman class in Fire Protection Engineering standing highest scholastically.

The six honorary members of the organization are: Professor J. B. Finnegan, O. L. Robinson, Fitzhugh Taylor, J. V. Parker, C. P. Holmes and W. R. Townley.

The alumni members are fifty-one in number and the actives are: A. F. Wilde, A. J. Lenke, F. S. Austin, W. E. Schirmer, P. E. Seidelman.

Arx News

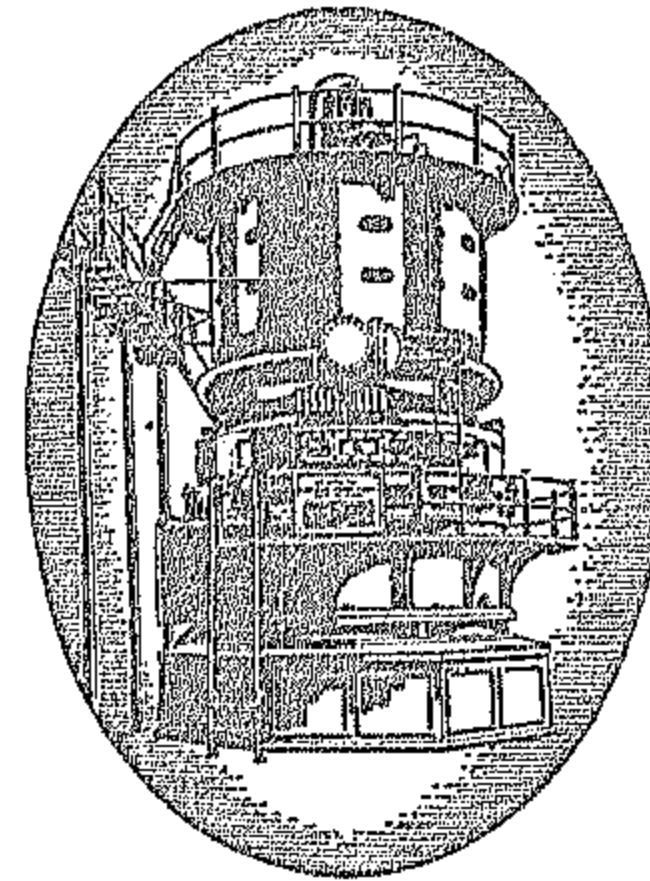
The New York Chapter of the American Institute of Architects, as trustees for the Pierre Le Brun Traveling Scholarship, announce the Competition program to be issued about January 15th, 1931. The drawings will be delivered about March 15th.

The Le Brun award is \$1,400, to be used by the winner for six months' travel in Europe. Last year's problem was, "A Natural History Museum."

The people who live in this house will have to be where there are no stones. The First Glass House in America is to be in Los Angeles, California. It is to be a store and is now under construction. It was designed by George F. Meyers. Hollow glass bricks are to be used similar to those used in Germany, France and Holland. Glass has a higher tensile strength than clay bricks. The glass bricks are made with corrugated sides and an interlocking device on the ends, which when cemented together, make the finished structure practically impervious to shocks and jars. The bricks have a highly glazed surface which reflects the sunlight in all the colors of the rainbow. Aluminum is to be used for joining. Plate glass windows will be used for display purposes. The ceilings are of opaque glass paneled in gold and silver tones. The roof of the building and of the small glass tower surmounting the structure are of glass.

It is claimed that the transparency of the glass will cause a soft lighting effect on the interior. The vacuum space of the bricks will serve to keep out the sounds and keep an even temperature.

E. C. K.



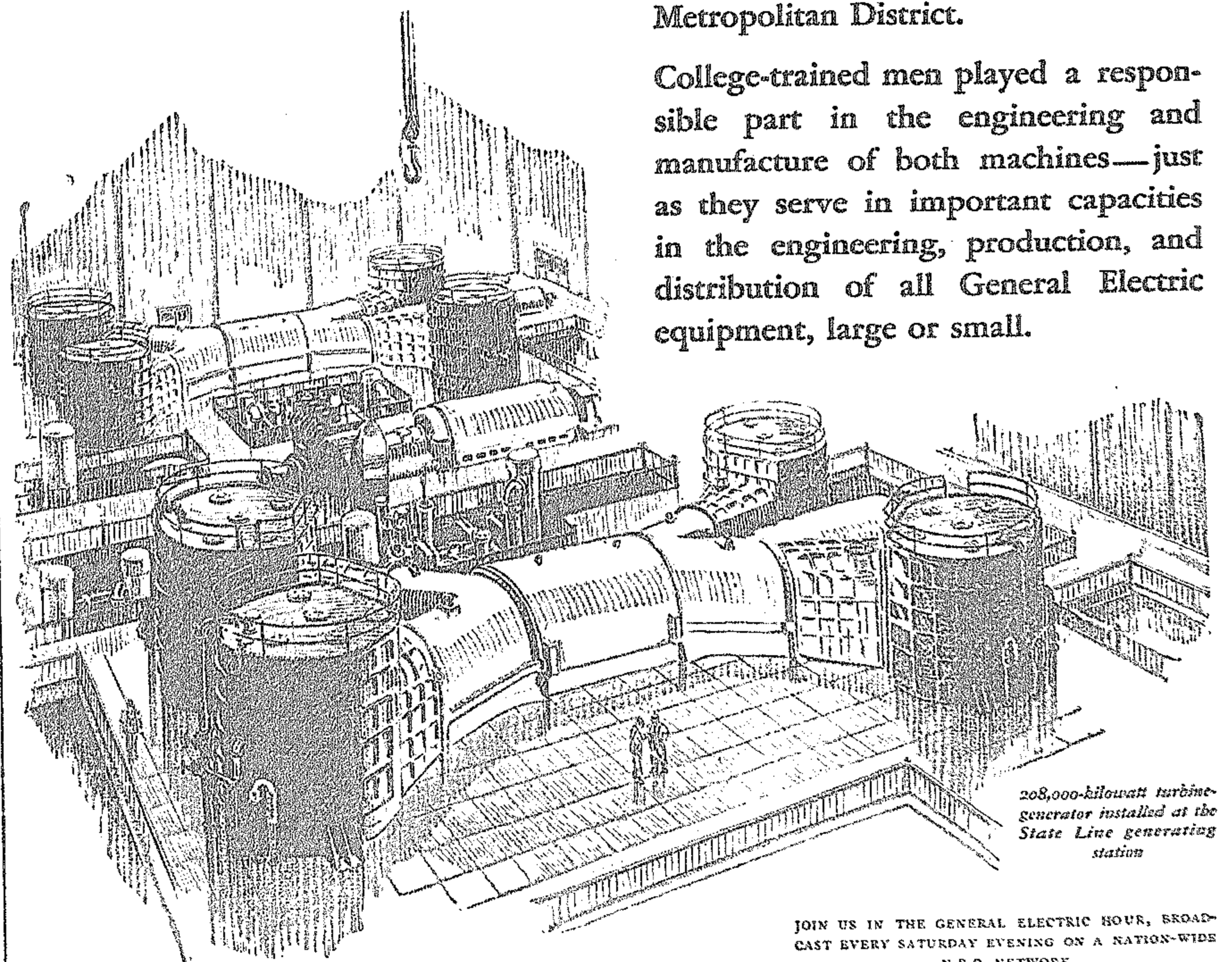
5000-kilowatt turbine-generator installed in 1903 at the Fish Street station of the Commonwealth Edison Company, Chicago

When Small Machines Were Big

MORE than a quarter century ago, the Commonwealth Edison Company, prophetically alive to the immense possibilities of the future, ordered from General Electric a 5000-kilowatt steam turbine—in those days a giant of electric power.

To-day, a General Electric turbine-generator of 208,000-kilowatt capacity sends out its vast energy to the Chicago Metropolitan District.

College-trained men played a responsible part in the engineering and manufacture of both machines—just as they serve in important capacities in the engineering, production, and distribution of all General Electric equipment, large or small.



208,000-kilowatt turbine-generator installed at the State Line generating station

JOIN US IN THE GENERAL ELECTRIC HOUR, BROADCAST EVERY SATURDAY EVENING ON A NATION-WIDE N.B.C. NETWORK

95-70cDH

GENERAL ELECTRIC

SALES AND ENGINEERING SERVICE IN PRINCIPAL CITIES

"Love Conquers All!"

Rally round, kiddies, while Uncle Jerry tells you the next installment. Isn't it nice of huncle to tell you all such nice stories?

Well, as you remember, that villainous hunk of tripe, Gordy Throckmorton Sneed, is forcing a lil' kiss on our darling—isn't he a meany? He'll foreclose on the mortgage if she doesn't.



Curtain

(Hero enters and sees Gordy and Susie necking.)

Danny—Hey, you!
 Susan—My hero!
 Danny—Wretch-scoundrel-viper, etc., what do you mean by such behavior?
 Gordy—Aw g'wan home you—we're just practising for the love scene in Act 3.
 Danny—What's the idea? Susan is my gal.
 Gordy—Whose gal?
 Danny—I'll show ya! (Bop)
 (They exchange quite rough blows.)
 Gordy—Awk!
 Danny—(Bong) Try that on yer piccolo.
 (He is sitting on Gordy)
 (Bam, Socko, Pow, etc.)

Susan—Watta Man!
 Gordy—I'll tell my ole man.
 Voice in the Offing—What's going on here?
 Danny—Jiggers—the Dean!
 Gordy—My ole man's a trustee.

Curtain

What now? How now?
 Caught fighting on the campus; this is serious. Be sure to come next week; bring the kiddies—bring your brother-in-law, bring a box lunch, so you won't miss one minute of this startling episode.

Standard Oil Shows Films to A. S. M. E.

The A. S. M. E. held a meeting last Friday, November 21st in Science Hall at 10:30. C. T. Link, president of the Armour Branch of the A. S. M. E., opened the session by introducing the President and then the Field Executive of the Chicago branch of the parent organization. The men introduced gave short addresses after which a representative from the Standard Oil Company of Indiana spoke on "Oil, Its Purification and Uses," illustrating his remarks with motion pictures.

There were three reels of motion pictures; the first two dealing with the purification of the oils. The crude oil was shown to consist of a mixture of impurities and the heavier hydrocarbons, the purification of which was accomplished by filtration and steam distillation. In connection with the purification were shown pictures of the laboratories of the Standard Oil Company at Whiting where tests on oils are conducted. Facts on flash points, tests on the viscosity of the oils, and pouring tests under varying temperatures were clearly demonstrated.

The last reel of the motion pictures showed the various applications in the field for the different types of oils. The principal example used was an automobile. In order to show the adhesion properties of the oil a glass bearing was used. This bearing showed how the oil was distributed on the journal. The problems in lubrication confronting the modern engineer and their application or solutions were also presented before the chemicals.

Assembly Learns of World Wide Outlook

(Continued from page 1)

with unrest and possible open revolt. It was evident from the discussion that the United States is very fortunate in not having to face the situation of the old world. The Filipinos are renewing their efforts for an independence which would be dangerous for them and China is in a civil war which authorities say will not be quelled for possibly a century.

A great change took place since last year. Parity and a disarmament program was reached at the London conference which would be void only if France and Italy failed to "come to time." Last year the whole situation was one of optimism as was evinced by the favorable report on Briand's plan for a United States of Europe. This plan has now been tabled as well as action deferred on the Kellogg Pact binding power as per Cuba's protest. There seem to be bickerings in the League of Nations such as has not been heard since its inception. The dominating word seems to be postponement. Others think a new world war is imminent in from 5 to 7 years, but as ex-Premier Stanley Baldwin of England said, another world war would sound the death knell of civilization. In Germany new forces causing the Fascist gain in power are in force and are causing a wave of nationalism in France to oust Briand because of his alleged sentimentality.

Dr. Randall concluded his address to the students with a plea to remember that problems will be put to them after they graduate and they should act according to reason and not emotion.

FRATERNITY NOTES

DELTA TAU DELTA

Jack Jackson, '32, has been called home on account of the sudden illness and death of his mother. He is expected to return after Thanksgiving.

Brother Frank Aste '30, dropped in from the south to check up on the boys.

TRIANGLE

Brother E. E. Bauer '19, editor of the Triangle Review, has informed us of a new directory issue that is to be published in the near future. This issue will contain a complete record of each alumnus and active member of Triangle.

John McKana and Edwin Kenner recently visited some friends at the Gamma Theta Pi fraternity of the Marquette University campus.

THETA XI

A tea dance was held at the chapter house Sunday afternoon, November 23. All of the brothers attended and also several alumni.

Brother Don Cleighorn from the Omega Chapter, Washington State College, is living at the house this year. Brother Cleighorn received major awards in boxing while in school and is now assisting the Armour boxing team in their preparations for future encounters.

Brother Rowley '30, returned to town for the week end. "Jeff" has been located in Cincinnati since his graduation last June.

BETA PSI

Beta chapter will hold an informal dance tomorrow evening, November 26, at the local chapter house. Several alumni are expected to be present.

H. W. Melville Again Talks to F.P.E. Group

Mr. H. W. Melville, manager of the Inland Marine Department of the Insurance Company of North America, addressed the F.P.E.S. last Friday. He was the speaker at the last meeting of the society and proved to be so popular that the members requested that he be asked to come again in order to add to his previous remarks.

Mr. Melville laid particular stress on the method of determining insurance rates on motor bus and trucking transportation; and also on parcel post delivery of such valuables as jewelry, securities and radium.

In regard to the trucking business, Mr. Melville stated it is so easy to commit a pseudo-robbery that instruments were devised to aid in detecting the stolen property. This device is attached to the insured auto and registers the number of stops the truck makes, and the distance traveled between the intervals. Aided by the police, the company lays out an area corresponding in diameter to the largest distance recorded on the meter of the suspected truck. From this an idea as to where the property may be located is gained.

PHI KAPPA SIGMA

Plans for a bi-annual alumni smoker, which is to be held during the first part of December, are now being completed, and every one is looking forward to a great evening.

SIGMA KAPPA DELTA

Sigma Kappa Delta wishes to announce the pledging of Gervase J. Stockmann '32 and Victor H. Camsky '34.

A Radio Dance was held Saturday night, which a number of alumni attended, helping to make it a big success.

Moore Speaks at A. C. S. Meeting

The regular monthly meeting of the Chicago branch of the American Chemical Society was held last Friday evening, November 21st, at 7:30 p. m., at the City Club, 315 Plymouth Court.

The topic of the evening was "The Fatigue of Metals Under Repeated Stresses," by Professor Moore, Research professor of Engineering Materials at the University of Illinois. Professor Moore was the recipient, last month, of the medal annually awarded by the American Iron and Steel Institute for outstanding work in that field. The lecture was illustrated by motion pictures and slides.

The usual group separation took place at the conclusion of the lecture, each of the smaller groups having discussion of some division of chemistry as its object. A number of the students of the Chemical Engineering Department of the Institute attended.

A local exhibition of the work done by the student and faculty members of the Architectural department is being held in the department's exhibition hall at the Art Institute. The work consists of water colors, pencil, lithograph pencil work and a few renderings.

The students represented are: Charles Dodson, Dave Chapman, Thomas Doane, Albert DeLong, A. D. Swanson, M. Dobberman, T. H. Irion, N. Altsuler, and Albert Goodman. The faculty are: Professors Reed, Suter, Bentley and MacCaughy.

Total revenues from forest resources in Louisiana for 1929 were \$154,000,000.

Tech Rifle Squad Ties New Yorkers

The Armour Tech Rifle Team held the second of its series of telegraphic rifle matches with the men from the New York Stock Exchange. The results of these meets are not known as yet due to some mistake made by the New Yorkers in filing their returns. The scores appeared to be even meaning that there was a tie but a mistake was noted, forcing the Armour team to send the score sheet back to New York for correction.

A meet with the Massachusetts Institute of Technology has been arranged and will be shot this week. The team at the present time is in good condition and promise that it is only a question of time before they start breaking all existing records.

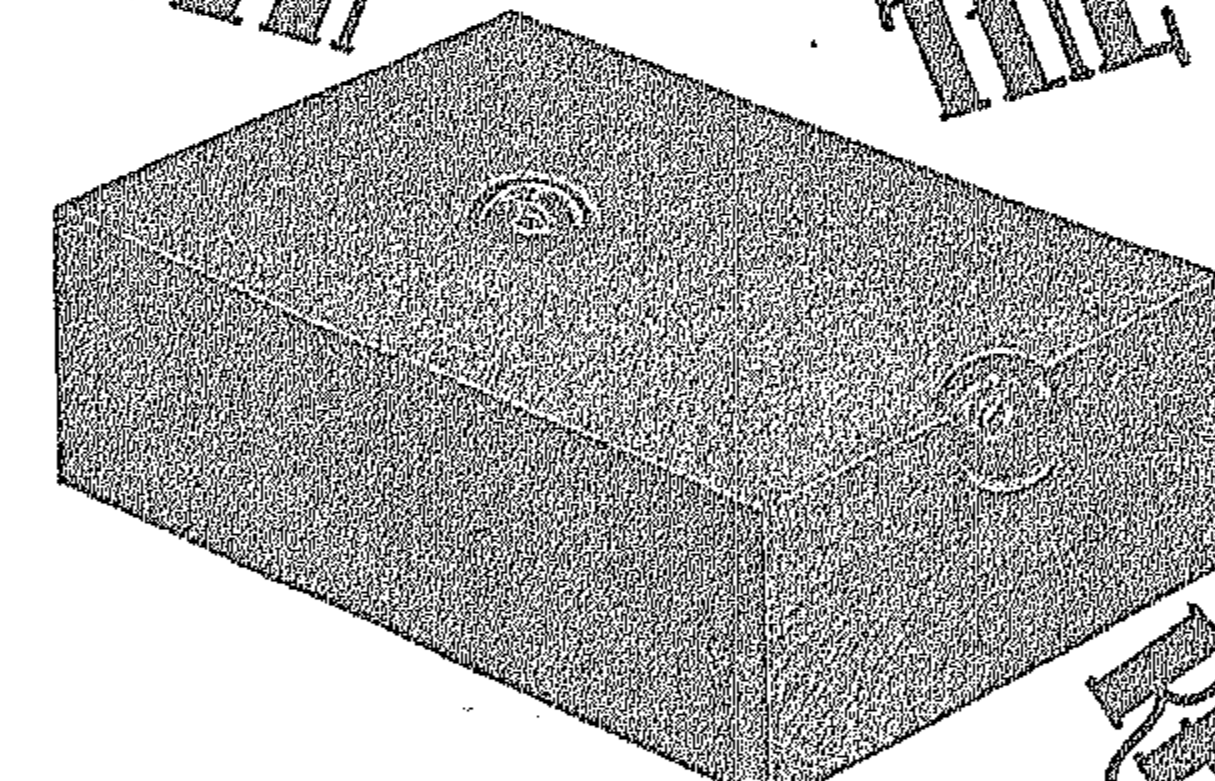
The team recently added a new rifle to their supply of armaments. To inaugurate the event William Dickey shot a ninety-nine prone. About ten seconds later his bearing face spread the news over the school. The men are practicing diligently for a meet scheduled with the Hyde Park Y. M. C. A. this week-end.

The sharp-shooters are also holding the third and last of their present series of meets with the New York Stock Exchange this week. The high Armour man of the series will be proclaimed the best shot in the Institute. The final results of these meets will be listed in the next issue of the paper.

The Schmier-Kemiker Medal, official award of the Armour Branch of the American Institute of Chemical Engineers, is now on display at the entrance to the Junior Chemical Engineering Lab. on Fourth Floor Main.

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TECH CAGERS SCRIMMAGE DAILY AT ARMORY TO GET IN SHAPE FOR FIRST GAME

First Practice Tilt Scheduled for December 1 With Bakelite Corporation Star Team

ASSIST. MANAGERS BUSY AT TRYOUTS

The varsity basketball practice is now on in full swing at the Eighth Regiment Armory. In order to round the squad into shape, Coach Krafft is giving a ten-minute scrimmage each night, following the usual drill on fundamentals. Although the conditioning of the men is the main object of these early practices, a slowly developing polish is also being applied. A combination of men who will work well together is being sought after.

Schedule Fifteen Games

Next week the really serious practice will begin, for the team must be rounded into shape with all possible speed. The floor at the Armory is almost the maximum size. This will necessitate a change in the style of play, although the same systems will be used. The home games, including those for practice, will all be played at the Armory. The first game will be on December 1, against the Bakelite Corporation Stars. Although this game is only for practice, it is desired to have the team in a semblance of its perfection.

The assistant managers, J. Owens and J. Jackson, are now hard at work. Each one is endeavoring to cinch the job for himself. Meanwhile Manager Erland is seeing that they have enough to do to keep them busy at the practices.

The complete schedule of games for the 1930-31 basketball season is as follows:

- December 1—Bakelite Corporation Stars at Armory.
- December 4—Chicago University at Chicago.
- December 9—Alumni at Armory.
- December 11—Chicago Tech at Armory.
- December 16—Wheaton at Armory.
- December 19—Western State Normal at Armory.
- January 8—Chicago Normal at Armory.
- January 12—"Y" College at "Y" College.
- January 15—Augustana at Rock Island.
- January 22—Wheaton at Wheaton.
- February 7—Western State Normal at Kalamazoo.
- February 9—St. Mary's at St. Mary's.
- February 13—Augustana at Armory.
- February 17—"Y" College at Armory.
- February 19—Chicago Tech at Armory.

Return Match Evens Score for F.P.E.'s

In a return match, last Wednesday, the Junior Fire Protects evened the score against the Junior Chemicals, defeating them, 42-25.

This decided victory gives the Fireos an eleven point margin in points scored against the challenging Chemicals. No real ability was especially prominent in this match and most of the scores were made by individuals, and not by teamwork.

Although Hodgson usually took the jump from Dirkers, the Chemicals seldom kept the ball long enough to score. Again Stalzer and Tilt distinguished themselves, for most of the scoring centered around these fast, snappy forwards.

Scanlon and Arends are also due their share of the spoils, for they foiled many an attempted shot and usually kept the ball out of the danger zone. The Chemicals probably owe the loss of the game due to the fact that their "ace" of the former clash was not active in the return match. Stanley Lind was mainly responsible for the victory of his squad in the initial clash. From this fact it is rumored that the games are almost purely individual clashes.

Gridiron Queries

By Professor John J. Schommer

Editor's Note: Professor John J. Schommer, star player, conference umpire, and leading football authority, will answer through this column, any questions on football which are puzzling our readers. Questions may be submitted to the Sports Editor, H. P. Richter, or they may be placed in the Armour Tech News box, which is located in the main building adjacent to the elevator on the first floor.

Question 27. Team A fumbles ball. While members of opposing teams attempt to pick it up, the ball is kicked unintentionally by one of the players. When ball is recovered is it brought back to the point from which it was kicked or is it put in play at the point of recovery?

Answer—As the play is described the ball is dead at the point of recovery. When a ball is intentionally kicked it goes to the opponents on the spot.

Question 28. There is some doubt by the referee as to whether the ball was carried over the 10 yard line for a first down. The head-linesman is called to measure and finds that the stick just touches the outer edge of the ball, evidencing that only part of the ball has been carried beyond the 10 yard line. Is a first down awarded the offensive team?

Answer—Yes.

Question 29. Offensive team fumbles ball. Man of defensive team recovers it, but again fumbles it when he attempts to advance it. If team A recovers the fumble will they be allowed to advance it as the case would have been if they fumbled and recovered before the defensive team had the ball in its possession?

Answer—As the play is described the defensive man should not attempt to advance the ball as it is only legal for him to advance it when ball is caught before it touches ground. When a fumbled ball hits the ground it is dead at point of recovery for the defensive team. Fumbles can be advanced only by the offensive team. However, if they kick the ball they cannot advance it if they make recovery after the defensive team touches it first or errors. The ball for the kicking team is dead at the point of recovery. The receiving team may always advance the ball on any fumble after a kick.

Question 30. Guard of offensive team is called back to kick the ball on a punt formation play. The ball is fumbled, depriving him of an opportunity to kick it. Will he be permitted to advance it if conditions permit?

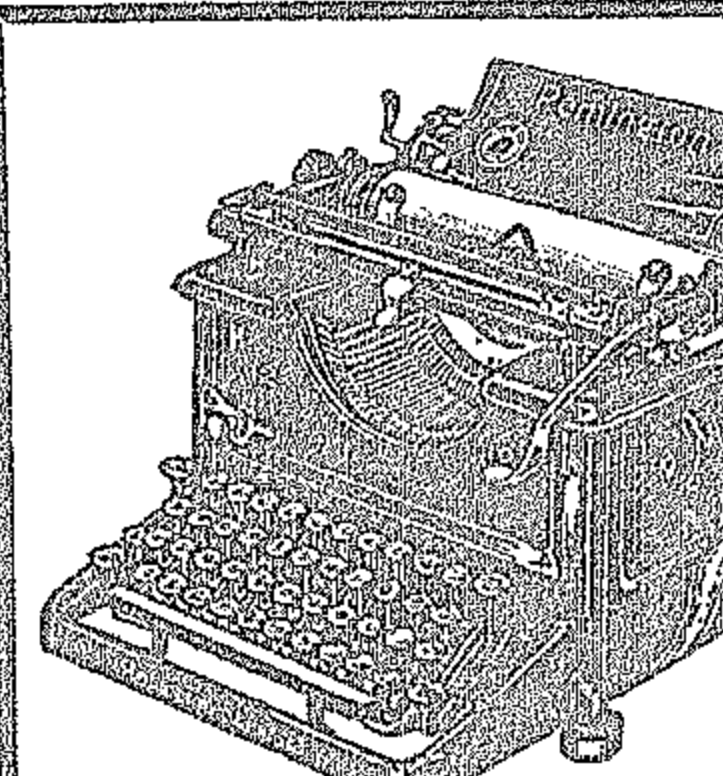
Answer—Yes, if he was at least 5 yards back of the line of scrimmage when the ball was snapped. When a guard is called back to kick, he automatically becomes a backfield man and may receive or throw passes, kick the ball or carry it.

Question 31. Quarterback of offensive team stands 15 yards back of the ball. He makes a forward pass to one of his halfbacks who stands 5 yards ahead of him. Will the halfback be allowed to make another forward pass inasmuch as he is at least five yards behind the line of scrimmage.

Answer—No, only one forward pass is allowed in one play.

Travelling under the name of Peter Busch of the Princeton Germanic Society, a swindler has succeeded in gaining numerous sums of money from Princeton alumni throughout the country.

Last year there were more college students in the United States than in all the rest of the world combined. There were 1,237,000 students enrolled in colleges and universities in this country.



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SWIMMING SQUAD HAS ABLE COACH IN MCGILLIVRAY

Coach Garnered Many Records While a Swimmer

MERMEN FORTUNATE

In awarding our mermen due credit for their fine record, a goodly portion must be given Coach E. W. McGillivray, Armour's swimming tutor, who has gained national wide recognition for his swimming activities, both as a record making competitor and as a producer of consistent championship teams at the University of Chicago and other institutions. Although inadequate facilities necessitate the use of the University of Chicago pool, the Tech squad may be thankful indeed for the availability of such expert, experienced instruction.

A study of the archives of past athletic records will reveal the swimming mentor's name frequently and in positions of prominence. It seems that the ability runs in the family as we discover Coach McGillivray's brother's name as a close competitor in similar events.

Represented I. A. C.

Coach McGillivray began his athletic career under the auspices of the Illinois Athletic Club and under these colors garnered his records. He was one of the prominent sponsors of interscholastic swimming which partly owes its existence to his efforts in this regard. His work merited him a position on the team which established a national record for the breast relay. At this time he was also a member of the championship free relay squad, swimming the 100, 40, and 220 yard distances.

His keen sense of humor gained for him the title of "clown" of the team. Going back about 20 years we find that Coach McGillivray's brilliant performances manifested themselves in records in the 40 and 100 yard swims. Shortly after this he became interested in coaching and was occupied in this line for some time in Omaha, Neb.

Coaches Teams to Championships

Coach McGillivray was not content, however, with his already admirable record, but set about carrying off all records and championships in the grueling mile swim. He traveled considerably during the course of these athletic endeavors until ultimately landing in Chicago where he succeeded Joe White as swimming instructor on the Midway campus. He has enjoyed considerable success both as the University coach and the developer of the Armour team. His relay team at Chicago succeeded in setting a national record in the 160 yard swim. During his stay on the Midway, the Maroons have won the water polo championship twice, the conference championship two times, and have placed second all other times.

Although his teams as a whole have been brilliant, Coach McGillivray has been the source of development of many individual swimmers, notable among them being one candidate who lacked a knowledge of swimming but who succeeded in winning a letter.

With a background of instruction such as Coach McGillivray makes possible, the Armour Tech squad cannot help but continue its creditable showing.

California has one student to every 236 population; Wisconsin is second with one to 330; Michigan has one to 462; Ohio, one to 518; Illinois, one to 524; Indiana, one to 545; Missouri, one to 640; Texas, one to 973.

Hendricks Takes Net Championship

Howard S. Hendricks, junior fire protect, is the victor and champion of the 1930 annual school championship tennis tournament. His victory is the result of a series of well played matches which he took with comparative ease until he reached the finals. Here his opponent was Graham, whom he downed by a score of 7-5, 6-4 and 6-3.

Play Hard Matches

Both Graham and Hendricks had some interesting competition before they succeeded in getting as far as the final round; the schedule was planned with a good proportion of even matches scattered all along the line.

The men should be congratulated on the spirit which prevailed throughout, there being more than the usual enthusiasm, pep and all round interest in the proceedings.

The interest was more general at the beginning, when the match was still anybody's and many of the players were usually seen frequenting the courts and sizing up the competition. As the contest went along, these dropped off and the last few volleys over the championship net were witnessed by only a small handful of the fraternity partisans, whose enthusiasm was constantly subjected to chills from the icy northern blasts which prevailed that afternoon.

Tennis Courts Soft

In this connection it should be said that the courts were in very poor condition, being still soft as a result of a steady morning drizzle which constantly threatened to turn into a snow.

The consolations have been held up by the inevitable delays and have been officially declared as being closed, honorable mention in this part of the tournament belonging to Berglund and Golden, who got farther than any of the others in the schedule.

The semi-final was possibly the hardest contested part of the tournament, where Graham and Richter fought a hard battle which finally went to Graham by a 6-4, 6-4, 8-6 score.

Hendricks fought Drause and downed him by a score of 6-1, 6-0, 6-0.

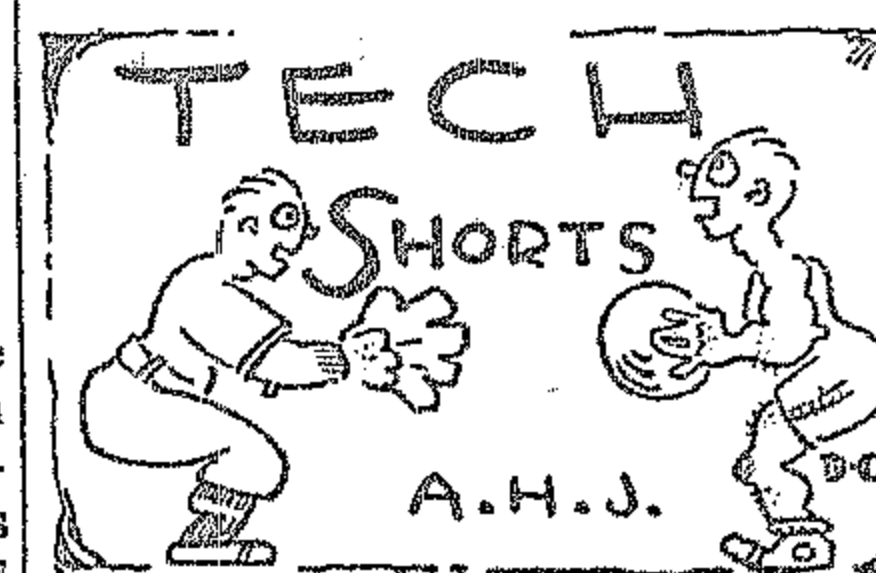
Dase was looked upon as being a possible champion, but he did not succeed in coming through, being defeated by Drause in the fifth round by a 6-4, 2-6, 8-6 score.

Wins Four Matches

A list of the men whom Hendricks downed in getting to the top reads as follows: Hammond, 6-2, 6-4; Wierzbowski, 6-3, 6-4; Drause, 6-1, 6-0, 6-0, and at the last, Graham, 7-5, 6-4, 6-3.

"Professors should endeavor to make their students wise; students should do all they can to keep their professors young," said a professor in an address to the sophs at McGill university.

Teachers in rural schools of Haiti earn salaries of four to five dollars a month.



Heap Big Sports

Athletics are beginning to pick up again at Tech. The varsity squad in basketball is rapidly rounding into shape for the annual encounter with the Alumni. Enthusiasm in inter-fraternity sport seems to be more active than ever before. An Institute tennis champion has been announced. Another championship swimming team seems to be developing. At this early date members of the track team are spending several nights each week in practice. Boxing, too, promises a season of victories. All of these things point to an active year in sports.

Look Out for Hefer

When the varsity meets the Alumni on December ninth in their annual basketball game, they will meet such old time stars as Vic Hofer, Bill Downes, Otto Kuehn, Wil Kuffel, Wittie, Shoemaker, Brockman and Augustine. All of these names are famous in Armour athletic history. Each year a group of former athletes is gathered together to meet the varsity. The outcome of the game is usually in favor of the varsity. However, as was evident last year, the alumni have more than a Chinaman's chance to defeat the undergraduates. The old fellows did the trick in baseball and are likely to repeat in basketball.

This Here and That Thar

About this here inter-fraternity basketball that them thar fellows from Michigan Avenue are talking about we have little to say. A new champion is likely to be determined next month for each and every fraternity on the eastern front is determined to uncrown the twelve time champion Phi Pi Phi outfit.

Swimming

Captain Eddie Knox of the swimming team tells us that the varsity is as strong as last year in every branch of the sport. As will be remembered two men were awarded major letters in swimming last year.

Tennis Champ

The continued warm weather of the last month enabled the completion of the tennis tournament. Walt Hendricks went through the entire bracket without defeat, thereby winning the school championship and the gold medal award.

Coach Lonnie Stagg visited school last Wednesday. He plans on holding an organization meeting of the track team just after the Thanksgiving holidays.

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