



## REVISION IN E. E. COURSE TO MEET NEWER PRACTICE

### Advanced Theory Given In Circuit Analysis Course

#### LABS IMPROVED

Due to the modern trend in electrical engineering practice, it has been found advisable to digress somewhat from the electrical course which has been pursued at the Institute for the last few years.

The efficiency and strength of the department have been increased to quite an appreciable extent by the recent improvements in the laboratory and by the acquisition of new equipment. The changes in the electrical curriculum which are anticipated will insure Armour's reputation of having one of the finest and most comprehensive courses in the country.

According to the present plans, it is intended to cover, during the sophomore year, certain subjects which have been given in the junior year, and to take some of the senior subjects in the junior year, and so to have part of the time in the last year to present additional studies.

#### Subject Matter Improved

A few branches of electricity which have been found to be of minor importance will be dispensed with, in order to allow these new subjects to be taught. For example, detailed treatises on magnetic measurements and ballistic galvanometers will give way to courses, the current importance of which is greater.

Professor Richardson is giving, as an experiment, an elective course in "Circuit Analysis" to senior electricals. If this is received with enthusiasm by the men who take it, and if it is considered to be of sufficient importance, it and other similar courses may be included eventually in the regular curriculum.

## Ask Seniors to Order Announcements Early

One week from today the sales campaign for Senior graduation announcements will begin and will last until May 1. The announcements will come in two styles: one with leather engraved covers at 50c each, and the other, with paper engraved covers at 25c each. Samples of these will be carried by members of the Announcement Committee and may be inspected at any time. There will also be a display in the lobby of the main building. The committee is composed of the following men:

- Art Jens, Chairman,
- M. J. Lanka,
- F. F. Strassberg,
- C. M. Westerman,
- R. H. Windbigler.

Any one of these will be glad to take an order.

This plan gives two months in which to order announcements. However, the committee requests that orders be placed as soon as possible. The work will be lighter, and mistakes fewer, if all orders are in early.

## Conditions Must Be Removed This Week

Condition exams start this afternoon at 2:00 o'clock. The civils, under assistant Professor Grafton, will tackle Graphics Problems along with Railway and Highway Location in the civil drafting room. Professor Freud will test out his doubtful chemistry students in Room C, Main.

When conditions have been received in subjects not listed in the following schedule, they can be removed only by special arrangement with the instructor.

## PROGRAM CARDS DUE

There are still a few students who have not placed their program cards on file.

The office of Deans requests that these be turned in immediately.

## RADIO OPERATORS PLAN TO REBUILD ARMOUR STATION

Changes in the operation of the Institute radio station, W9NV, were made at a meeting of the Armour Radio Association last Friday. The manner of conducting meetings and the time of election of officers was also altered.

The radio transmitting station, now in working order, will be employed to maintain regular schedules with similar units in other colleges and universities. After a definite system is arranged, the transmitter will be rebuilt as a modern, crystal-controlled arrangement, conforming with the best of present day practice. E. G. Squires, the chief operator, will supervise this work.

Meetings of the Association will be held regularly at 10:30 on the second and fourth Fridays of each month. At these meetings it is planned to have round-table discussions of radio problems or a speaker from the general field. In this way, those members who are not too deeply concerned with the subject will find as much to interest them as will the licensed operators.

R. Van Osdol and M. Fagen will have charge of these programs. Code lessons for beginners may possibly be presented if enough individuals desire them.

The constitution of the Association was altered to provide for election of officers at the end of the school year rather than at the beginning.

## Bridges, Subject Of Lecture To Civils

A talk on the "Aesthetics of Bridge Design" was given last Friday before the Armour Branch of the Western Society of Engineers by Professor M. B. Wells. Many valuable suggestions as to methods of beautifying steel bridge structures were pointed out for the benefit of the competitors in the nation-wide bridge design contest sponsored by the American Institute of Steel Construction. Slides and projections from book illustrations were used extensively to show the unnecessary clumsiness and lack of pleasing lines in structures put up during the early days of this country. Good looking bridges are so few in number because it is so difficult to duplicate ancient standards of beauty with modern materials and methods of construction. Symmetry of design, use of contrasting materials, adaptation to the site and the carrying out of a general motif were also discussed.

In this contest all the data concerning the bridge is furnished the student. This limits the competition considerably since the structural development will be about the same in every case.

## Seniors Now Exhibit Jewelry on Campus

Last Friday afternoon the Seniors received their jewelry from members of the committee. It was previously announced that delivery would be made by last Tuesday.

Backgrounds of both the ring and charm are in black or red onyx on which is mounted the A. I. T. monogram.

A majority of the Seniors are securing rings or charms with the staid black background, possibly to be more in keeping with the Armour colors of black and yellow.

Those who still wish to may order jewelry now and be reasonably sure of delivery before graduation.

## Armour Journalists Enjoy Informal Talk By Woodruff

In an intimate informal talk last Thursday evening at the Sigma Kappa Delta house, Harvey T. Woodruff of the Chicago Tribune told the members of the Armour Press Club about his experiences as a sports writer and column conductor.

Right from the beginning the group was put at ease by the homely wit with which Mr. Woodruff responded to Professor Schommer's introduction. From then on the boys were held too interested to smoke the expensive cigars provided for the occasion, which, since this meeting was essentially a smoker, pays great tribute to Mr. Woodruff's knack of making himself interesting to everybody.

With the humble mien so characteristic of all professional men when pressed to outline the opportunities of their calling, he advised against taking up with the newspaper game. Yet this did not prevent him from offering some inside information to those who might do so in spite of the dissuasion.

"The secret of survival as a columnist" he said, "is to let your readers think you're a boob; nobody likes a Smart Aleck, and if

you're a boob they'll say: 'aw, he's one of us,' and read your stuff."

In response to the question as to how his column first found a place in print he explained that it was a successor to "By Heck," a sports feature at the time. His amusing recollections of the vicissitudes of nursing an infant column almost brought down the house, and incidentally brought up such subjects as what the public wants, what the editor will take, and what the writer gets.

Keeping up the theme of reminiscing, Professor Schommer, to whom the credit must be given for obtaining Mr. Woodruff's services as speaker, recounted many lively episodes of his life.

"Jawn," with commendable self-repression and super-human will-power, omitted all references to "the big one that got away," or "the bigger one that didn't."

After the light refreshments, a large group collected about Mr. Woodruff and Professor Schommer and the talk continued. Only the late hour finally brought the evening's entertainment to a close as all present still seemed inclined to listen to Mr. Woodruff's anecdotes.

## Engineers Hold Joint Meeting

Production and distribution of electric power from the financial angle was the theme of Mr. Bailey's address at a joint meeting of the A. I. E. E. and the A. S. M. E. which was held last Friday morning in the Assembly Hall.

As Mr. Bailey pointed out, there are many problems which confront those who invest their money in the power production game and not the least important is that presented by the interest on the sum invested in equipment. This charge is what is called a fixed charge and as such is present whether the plant operates at full load or stands idle for hours at a time.

In addition to this type of fixed charge is that imposed by replacements of obsolete or worn out equipment and the cost of projecting lines into territory which gives only a light load and consequently little revenue.

The speaker pointed out that it was desirable to keep the apparatus operating on an evenly distributed power factor because this cuts down the unit cost and in this connection he gave a hypothetical resume of the development of the load in a small city as industry begins to creep in.

Particularly interesting was Mr. Bailey's explanation of the operation of so-called mergers in which the houses sell power back and forth among themselves when the load on one of their number becomes higher than capacity. On this topic he gave many illustrations of such co-operation taken from his experience, among those being the explanation of the Chicago-Boston Power hook-up which was headlined in the newspapers some time ago.

## Four Are Initiated At Scarab Banquet

Four new members were initiated into Scarab Fraternity, Friday night, February twenty-seventh, at the Delta Tau Delta house.

The formal initiation was held at seven o'clock with a banquet in honor of the new men following.

Those initiated are: Donald Braun, '32. Emil Minx, '31. Raymond Peterson, '32. Charles Schock, '31.

The banquet was then followed by talks and speeches.

Ralph H. Hammett and W. Lindsey Suter, instructors at the Art Institute, as well as a number of alumni were among those present.

## Favor Riflemen To Win Big Meet

Leading by 186 points the Tech sharpshooters are now in the fifth week of a six-week meet for the Illinois championship. McHenry, Des Plaines and Downers Grove follow Armour in the order named. According to the members of the squad victory is certain. In the individual standings Armour is in possession of 1st, 2nd and 4th place, and is tied for third. Last week the squad beat the strong Fairport Rifle Club of Perry, Ohio, 1800-1727, in a postal match. Tonight the men will engage in a shoulder-to-shoulder match with the Morgan Park Military Academy at Morgan Park. Next week the club will shoot against Sunburst, Montana, by way of telegraph.

Any one interested in marksmanship is invited to the club headquarters in the basement below the second entrance to Chapin Hall.

## Chance To Earn Tidy Sum Offered Smokers

Fifty thousand dollars, in prizes, is being offered by the Reynolds Tobacco Company, makers of Camel cigarettes, for the best answers to the question: "What significant change has recently been made in the wrapping of the Camel package and what are its advantages to the smoker?"

The contest closes tomorrow, so hurry home now, all you cigarette inhalers and get your answer in the mail tonight.

## Calendar

- Tuesday, March 3
  - 5:00 P. M.—Orchestra Rehearsal.
  - 2:00 P. M.—Condition Ex a m s—March 3-5-6.
- Wednesday, March 4
  - 4:00 P. M.—Swimming — Armour vs. Loyola at Loyola.
- Thursday, March 5
  - 4:00 P. M.—Freshman Orchestra practice.
  - 5:00 P. M.—Glee Club rehearsal.
- Friday, March 6
  - 10:30 A. M.—Cycle Pictures. Gymnasium and Assembly Hall.
  - E. E. E. meeting, Room D, Mission, talk on "Talking Motion Pictures" by H. Merrill Smith.
- Saturday, March 7
  - 8:30 P. M.—Boxing — Armour vs. Bloomington at Bloomington, Ill.

## SENIORS TO CHECK CREDITS

Seniors have been requested by the office to see Mr. Kelly about checking credits as soon as convenient. There is still time to see that all credits are properly listed so that in case of some error the student will not be barred from graduation at the last minute.

## TALKING MOVIES SUBJECT OF NEXT A. I. E. E. MEETING

Mr. H. Merrill Smith of Electrical Research Products, Inc., the Sound Projection division of the Western Electric Company, will address the student branch of the A. I. E. E. on "Talking Motion Pictures" next Friday at 10:30 in Room D, Mission.

He will present a general discussion of the operation of recording and projection apparatus as used in the commercial field. The problems with which the sound engineer is confronted will be indicated.

Mr. Smith is Technical Inspector for Western Electric systems in the Chicago area, having for some time been engaged in the survey of numerous theaters throughout the Middle West, supervision of equipment installation, and maintenance work. His wide knowledge of the subject and broad experience in its application should provide background for an instructive lecture.

All who are interested in this subject are welcome to attend the meeting.

## Glee Club Practices Home Concert Songs

More men are needed by Dr. Daniel E. Protheroe for the Glee Club. To repeat what appeared in last week's article: it is really an opportunity to be able to receive vocal training from such a noted director as Dr. Protheroe and every student who has the time should jump at the chance.

The Glee Club is holding practice every Thursday night at five o'clock in the Assembly Hall. New selections are being chosen and learned in preparation for the Annual Home Concert, which is to be held about May 21 during Junior Week.

Among the selections which will comprise the Glee Club's part in the Spring Concert are "A Little Close Harmony" by Geoffrey O'Hara and "Italian Salad" by Richard Genee.

The former is a take-off on the quaint American invention commonly known as the "swipe" or barber-shop harmony. The consecutive fifths and other "grammatical" errors in this piece are not composed, but are as they sounded to Mr. O'Hara, and which he jotted down at various times.

The latter is a musical jest in the form of the finale to an Italian opera. It is composed of most all the musical terms in use which makes it very instructive as well as amusing to the listener.

## Annual H. K. N. Essay Contest Announced

Eta Kappa Nu, honorary electrical engineering fraternity, is conducting an essay contest open to sophomore electricals. The papers, of from 2,000 to 4,000 words in length, are to be written on some electrical topic. Either a copy of the Standard Handbook for Electrical Engineers or its equivalent will be given to the author of the winning essay.

The essays are to be given to Professor Richardson not later than April 1, 1931. They will be merited on subject matter, quality of presentation, and form. The judges are: R. Patzelt, '31. W. Drigot, '31. W. E. Penfold, '31. T. B. O'Connor, '31. M. Fagen, '32.

## EDITOR OF CYCLE GIVES SCHEDULE OF TEAM PHOTOS

### Pictures to Be Taken in Assembly Hall and In Gym

#### PROGRAM COMPLETE

A. H. Jens, editor-in-chief of the 1931 Cycle, has arranged a schedule for the taking of the first Cycle pictures on March 6, 1931, both in the gymnasium and the Assembly Hall. He has worked out a definite schedule of times that must be rigidly adhered to in order that the program may be complete.

Formal group and individual pictures of the basketball, boxing, golf, and swimming teams will be taken in the gymnasium while the pictures of the orchestra, Glee Club, and Stresses and Strains will be taken in the Assembly Hall.

#### To Snap Team Captains

In addition to the group pictures the following individual pictures will be taken: boxing captain, boxing manager, swimming captain, swimming manager, golf captain, golf manager, orchestra conductor, Glee Club conductor, the director of Stresses and Strains, and individual pictures of the basketball players. Athletic teams must appear in their uniforms while the musical organizations must appear in their regular formal dress.

#### Schedule

The schedule of time for these pictures is given below:

- Gymnasium
- 2:45—1931 Basketball Team.
- 2:15—1931 Boxing Team.
- 2:25—1930 Golf Team.
- 2:35—1931 Swimming Team.

#### Assembly Hall

- 1:30—Orchestra and conductor.
- 1:40—Glee Club and conductor.
- 1:50—Stresses and Strains and director.

## Fire Protects Learn Details of Life Work

Mr. R. E. Vernon described the fire work and organization of the fire prevention associations to the Fire Protects at the meeting of the F. P. E. S. held Friday, February 27.

Of all the deaths in the home from accidents, thirty-three per cent of them are caused by fire. Most of these fires are started by the occupants trying to use gasoline or kerosene to start fires quickly, or for cleaning purposes.

The industrial corporations, etc., are also working hard to cut down fire losses. For instance the Youngstown Steel and Tube Company cut their fire alarms from 2,274 to 500 in three years.

According to Mr. Vernon the whole country is now vitally interested in preventing fires and are everywhere extending their efforts to reduce the loss per capita.

Some very interesting pictures of scenes of fires were passed around at the close of the meeting.

President Wilde reminded the Sophomore fire protectors that they must hand in their names in order to get their shingles.

## Freshman Smoker To Be Held March 13

In order to successfully promote the plans for the freshman smoker, the date of this event has been postponed from March 6th to March 13th. This was necessary because members of an orchestra, recently formed among freshmen for the purpose of offering entertainment at the affair, wanted more time for practice.

L. A. Callen, social chairman, has announced that tickets are now on sale and may be procured from him. Architects may purchase theirs from W. Krol.

The price of tickets is twenty-five cents.

# Armour Tech News

Student Publication of the  
ARMOUR INSTITUTE OF TECHNOLOGY  
CHICAGO, ILLINOIS  
Published Weekly During the College Year



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"Like it, I will not build: better, I cannot."  
—Michael Angelo.  
Born, March 6, 1474.

### A Word A Day

An engineer, although he may have a splendid working knowledge of engineering, will find himself distinctly at a disadvantage if he hasn't a command of the English language and a suitable vocabulary. In his work he will be finding himself repeatedly required and called upon to voice his plans and opinions, either by spoken or written word, to people expecting clear, concise, and unified language.

The organization of our civilization is such that ideas can only be expressed materially by mouth or pen and the engineer must take this into consideration. If he finds himself incapable of expressing himself in this manner, what chance has he to expect advancement or promotion from his employers, who will be probable hearers?

The world, it appears, judges not only upon the front and appearance that is put up, but also upon what is said and how it is said. These things and deeds are character criterion. Deficiencies in the foregoing attributes make the engineer decidedly inferior to the man who, although he may not be as intelligent, has the ability of expressing himself properly.

Of the two self expression constituents: a command of the English language and a vocabulary, the latter is more important, for it must be acquired by initiative, while the former is a matter of instruction. Before our book knowledge can be put into play a vocabulary is necessary.

An excellent method of increasing the stock of usable words is to look one up each day, study its definition and derivation and be sure as to its accepted use and pronunciation. Five minutes spent in this way each day will work wonders with a mediocre vocabulary. Continuance of this habit will soon give a certain pleasure or fun in finding and using these new found words.

Looking up a word a day will in time give an understanding of the correct use of long words, and the method of avoiding trite, meaningless ones in addition to knowing how to use common words. This does not mean, however, that one should develop an unwelcome egotistical attitude.

Consistency, perseverance, and patience are necessary to establish this or any other good habit. Being inconsistent, giving up with the end in view of becoming impatient will never make the reward attainable. Discouragement may enter when your acquaintances say, "Aw cut out the two-bit words"; but then you can smile and say, "It's much easier for these fellows to be critical than correct or encouraging."  
E. W. C.

## "The Slipstick"

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

### We Were There Too

Well, Harve got pussional and told us all about his courses in Roman Law and Botany. . . . He even let on as to the significance of the oft-talked-about but little-known-of middle initial "T." . . . He does all of his columning, except for contributors. . . . Does not believe in stereotyped, well prepared speeches, but rather rambles along. . . . Says newspaper work is a great game, but don't get in it. Y'only get \$28 a week. . . . Likes to kill the copy reader who "cuts" the best part of his colyume. . . . Told us the story of the "Wake" and "Help, Help." . . . His wife used to call him the "Athletics Editor" of the Trib. . . . Engaged in a wit and wisdom contest with Jawn Schommer. . . . Relived his student daze with us. . . . Was extremely informal. . . . A great fella, Harve.

### FOR THE BACKWARD READER

Eht tseggib stun, ti smees ot em  
Era ton ni deddap sillec ro esrow.  
Tub esocht, ekil uoy, ohw yllufepoh  
Tcartxe emos esnes morf siht loof esrev.

Bob: "What's the difference between Cootville and Chicago?"

"Rob: "Well, in Chicago the crowd follows the fire engines to see where the fire is, but in Cootville the fire engines follows the crowd to see where the fire is."

"Oh, Ruth, I met Katherine the other day; hadn't seen her for years."

"Has she kept her girlish figure?"

"Kept it? She's doubled it!" —REM(not an ad.)

The Boninger says that the successful man is one who knows what he wants, and leaves it alone.

### No Standing Room

Landlady: "Why have you put your tea on a chair?"  
Boarder: "It was so weak I thought it had better sit down." —Sliv.

### UP TO MABEL'S

"Yes, sir, what can I do for you?" "Oh yes, from Armour. Graduating this year?" "That's nice. I suppose you've endured a hard grind these last four years, but it will pay in the end." "Now do you like these photos at \$75 the dozen, or do you prefer these at \$80?" "Yes, we have some at \$7.50." "Your name and address, please?" "All right, you will find the artist on the second floor."

"Yes sir, sit down right there, head up, chest out, chin in, smile." "No, not like that, wipe off that grin. Now, steady. Can't you be still?" "Now we'll have to take that one over. Steady, steady. Now turn around. Fine, you're through. Next gentleman!"

Co-ed: "But, father, what am I to do without a riding habit?"  
Father: "Get into the walking habit."

### Under Ether

Joe: "I'm going to the hospital tomorrow for an operation."

Pete: "Good luck to you; I hope everything comes out all right."

Dollar Bill Says:—  
The Russians are trying to Americanize their railroads, just as Americans have about decided to motor-bussize their own.

The only reason some families don't own a green elephant is that they have never been offered for a dollar down and seventy-five cents a week.

The w.k. Joe Collitch had to give away his automatic lighter. He couldn't break himself of scratching it on the leg of his pants.

After all, golf is nothing more than a game of banker's croquet. Designed to reduce the abdomen and enlarge the vocabulary.

### LIFE'S REAL MYSTERY

Instead of wasting time trying to discover where we came from and where we're going, why don't the scientists find out where we are—which is more important. —A1.

Advice is the most worthless commodity in the world. Those who might profit by it don't need it, and those who do need it won't profit by it—if they could, they would not need it.

### YOU WOODEN THINK SO

"Anyhow, there's one advantage in having a wooden leg," said the veteran.

"What's that?" asked his friend.  
"You can hold your socks up with thumbtacks."  
—Bloney.

### A SQUARE MILE WAS A SQUARE MEAL

"Crop failures?" asked the old timer, "Yes, I've seen a few in my day. In 1860 the corn crop was almost nothing. We cooked some for dinner and my paw ate fifteen acres of it."

Confucius might well have said—"Every normal man has two ambitions. First, to own a home. Second, to own a car to get away from his home."

Well, that's that and who cares? —Phil J.

### LAZZARO

By Luigi Pirandello

Presented by the Goodman Repertory Co. "Lazzaro," one of the later of Pirandello's numerous plays, is a thought-provoking presentation of life as a most dismal deception. With bitter compassion, Pirandello creates in his characters unreal presumptions of the truth only that they may be forced to discard these beliefs as vain and illusory. His outlook is all the more despairing when we realize that the need for self-deception arises from intangible forces of destiny. The performers in "Lazzaro" are servants of the theme, subjecting, at all times, their own personalities to the idea.

Enjoyment of this play lies in the power of the observer to project himself into its conditions and to analyze his consequent reactions. Fortunately, these processes are not as studied nor as difficult as their description makes them appear. In fact, most of our interpretations of experience are formed by exactly such mental operations. So despite the instinctive suspicion and dread of the "heavy drama" in any sense, "Lazzaro" would be pleasurable fare for most of us.

There is appeal in its universality. What takes place in a small Italian village might just as well be transferred to the most American of communities. The characters would necessarily differ in outward appearance and station, but similar stimuli could well occur. Though of the reactions we can not be certain, it is highly probable that the basic sameness in human nature would result in similar response. Further, the dozen individuals concerned in portraying Pirandello's philosophy of life could be found in any group of humans.

With an abstract theme such as is found in this play, the utmost care must be exercised by the performers. Over-acting might easily turn it into a ghastly farce, while lack of sincerity would result in a miserable flattening. The performance of "Lazzaro" by the Goodman Repertory Company seemed, on the whole, to remain well-balanced; restrained, where undue heroics might be easy, and strengthened at most points where interest might lag. Mervis did

### NEW BOOKS

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William Vernon Lovitt

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Edwin E. Slosson

An Introduction to the Geometry of N Dimensions  
D. M. J. Sommerville

much to maintain this condition. His handling of a highly emotional part was convincing without being "stagey"; sincere without the sacrifice of appeal. At no time did he step out of character. Robert Goldbraith was creditable though traces of inexperience were evident early in the play, his conduct as the height of his lines was reached more than compensated. Gladys Fervis, a recent importation of the company, worked hard and well. She perhaps overstepped a bit at the high spots but women are expected to do just that, on the stage or off. In general, considering the nature of the subject, the performance was better than a good one.

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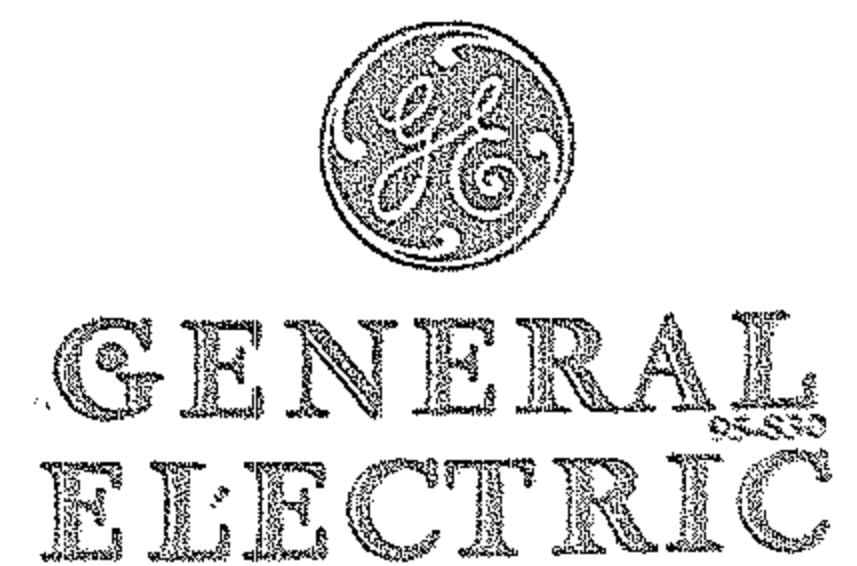
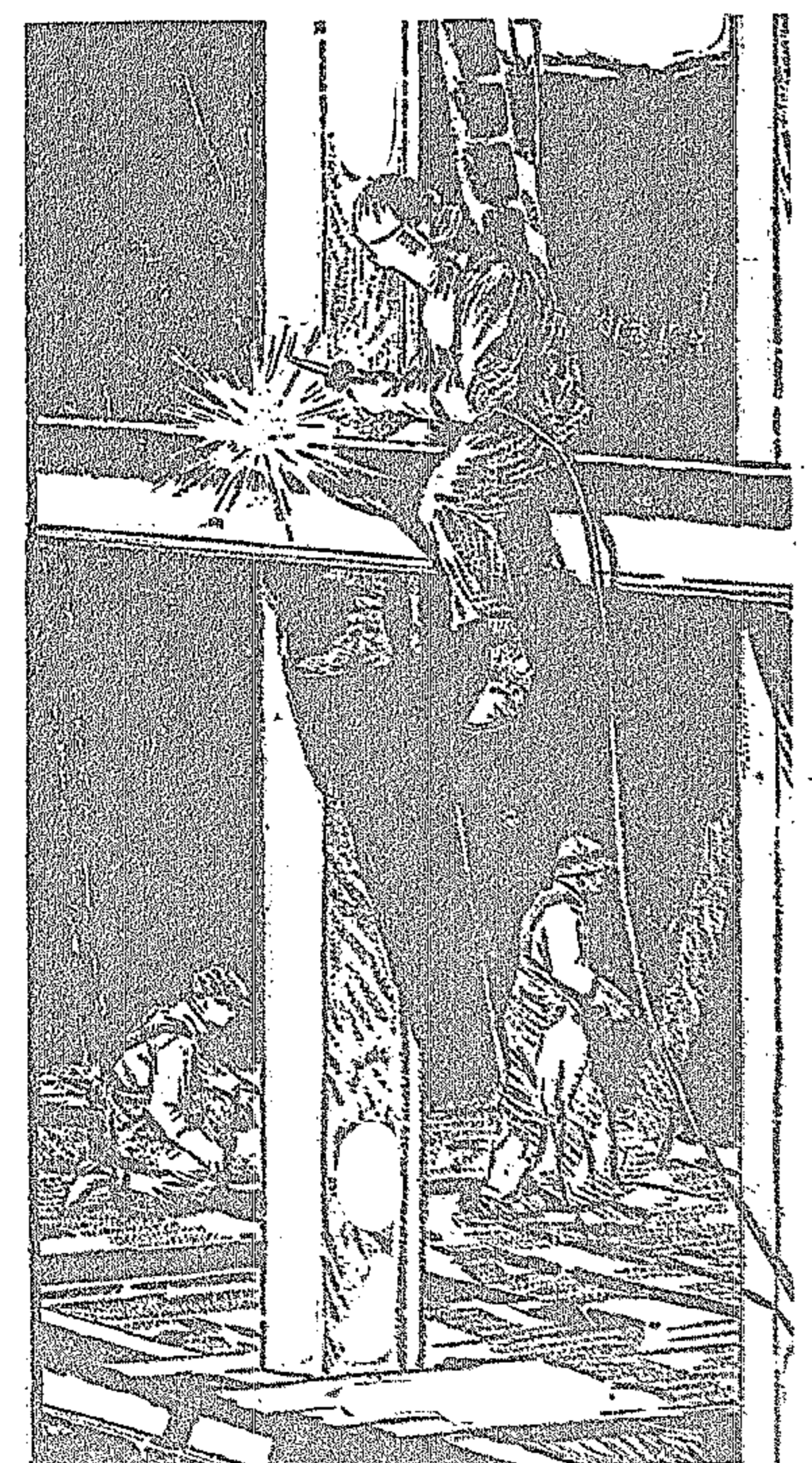
IN Boston—Dallas—Los Angeles—and in other cities, lofty buildings are going up so quietly that the passerby all but stops and strains an ear for the old familiar clangor.

Silently, swiftly, rigidly, economically, arc welding knits steel with joints as strong as the metal itself.

Arc welding is being used more and more in the fabrication of buildings and machinery, the construction of pipe lines and tanks, and as a repair tool of universal utility.

Development of General Electric arc welding has largely been the work of college-trained men. Others of the college men at General Electric are largely responsible for the high reputation won by hundreds of G-E products used in industry and in the home during the last thirty-seven years.

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



**Arx News**

The Annual Traveling Exhibition of the Scarab Fraternity, which was at the Art Institute last week proved to be very interesting to the students. Scarab is the architectural honorary fraternity. To become a member, one must have a good scholastic standing and be exceptionally good in architectural design. And if you could have seen these drawings you would not have doubted in the least that the boys all earned their membership. Armour's sketches were above the average with the rest, but it was in water color that it showed its superiority. Schock, Schlager, DeLong, Mell, Minx, Rosen and others were represented. The exhibition is a traveling one and it is too bad that all Armourites could not have seen it.

The business depression has been beneficial to the architects in that one of their profession has found a new and able method of spending spare time. George C. Nimmons of the nationally known architectural firm of Nimmons, Carr and Wright, Chicago, decided he'd take advantage of the building lull and do something different. And now he kills time by building models of Yankee Clippers. He has a workshop out in the country and he builds boats, to a scale of one-twelfth inch equals a foot from his own working drawings. The model of his first clipper is now in Mr. Nimmon's private office.

**Lecture Given On Molecules**

Several Armour students took advantage of an opportunity to attend a lecture on molecular structure illustrated with an array of models when they went to the A. C. S. meeting Friday evening, February 20.

The talk was presented by Dr. Donald H. Andrews of the Johns Hopkins University, who, with his facile manipulation of the models, was able to show vividly just what his theories were regarding the inner form of the molecule. Dr. Andrews explained that the models were not constructed from mere theory, but from careful observations of the various molecular properties: ionic, thermionic, and spectroscopic.

He stated that the knowledge of molecular structure has altered or confirmed many theories associated with the other sciences, and has opened up new fields for future investigation.

He ended by urging a greater interest in the subject on the part of the research chemist. The meeting adjourned to the group gatherings, which had many items to offer to their members.

**Newly Invented Gas Is Ideal Refrigerant**

A new cooling gas for refrigerators may make the tropics a better place for white men to live. In northern homes, it offers an ideal refrigerant for household ice boxes of the mechanical or electric type, say engineers.

All such refrigerators now on the market use some gas that can be compressed and liquefied to abstract heat from the refrigerator chambers. Several of the gases that have been in current use are poisonous or at least irritating should they escape from the pipe coils that imprison them.

The new gas, described before the American Chemical Society, is non-poisonous. Quantities of it, demonstrations show, may be breathed without the slightest ill effects. It is also noninflammable. These properties are the result of the peculiar chemical composition of the gas, which is a compound of three familiar elements—carbon, chlorine, and fluorine. Its technical name is "fluoro-chloro-methane."

Besides its household use, it may have other important applications because of its highly desirable engineering qualities. It may be used to cool sleeping rooms in the tropics, deep shafts in mines, and the cramped quarters of submarines.

**EXAMINATIONS FOR REMOVAL OF CONDITIONS**

Tuesday, March 3rd, 2:00 P. M.  
 Railway & Highway Locations (C. E. 5), Assist. Prof. Grafton ..... C. E. Drafting Room  
 Graphics Problems (C. E. 14), Assist. Prof. Grafton ..... C. E. Drafting Room  
 Organic Chemistry (Ch. E. 13), Prof. Freud ..... C. Main Building  
 Organic Chemistry (Ch. E. 17), Prof. Freud ..... C. Main Building  
 Organic Chemistry (Ch. E. 20), Prof. Freud ..... C. Main Building  
 Physical Chemistry (Ch. E. 30), Prof. Freud ..... C. Main Building

Thursday, March 5th, 2:00 P. M.  
 Applied Mechanics (Mech. 5), Prof. Paul ..... F. Chaplin Hall  
 Engineering Mechanics (Mech. 1 & 2), Prof. Paul ..... F. Chaplin Hall  
 Mach. of Mat. & Graphics (Mech. 3), Prof. Paul ..... F. Chaplin Hall

Friday, March 6th, 2:00 P. M.  
 Physics (Phys. 1 & 2), Prof. Wilcox ..... Elect. Lect. Room  
 Physics (Phys. 3), Prof. Wilcox ..... Elect. Lect. Room

Wednesday, March 11th, 2:30 P. M.  
 Precision—Physics Laboratory, Prof. Doubt ..... C. Chaplin Hall  
 Where an examination is not scheduled the student is advised to see the instructor in the subject at once so that private arrangements can be made.

**ALPHA CHI SIGMA PLEDGE**  
 Alpha Chi Sigma takes pleasure in announcing the pledging of Paul Bestler, '33. This makes a total of six pledges.

The first automobile was unknowingly built in 1804 when Oliver Evans put wheels on a steam dredge and drove it two miles under its own power.

**FRATERNITY NOTES**

**TRIANGLE**

March 1 witnessed eleven pledges being formally initiated into Triangle and at this time Armour Chapter announces the initiation of Vernon C. Alexander, '33, C. E.; William L. Bengtson, '32, M. E.; Judson F. Bonnell, '34, M. E.; Arthur M. Cohrs, '34, Ch. E.; Roy A. Ekroth, '34, Arch.; Stephen M. Lillis, '34, Ch. E.; William A. Molloy, '34, C. E.; George B. McBrady, '34, Ch. E.; John E. Schreiner, '34, C. E.; Eric H. Smith, '34, C. E.; Roy A. Young, '32, F. P. E.

Following initiation, the new brothers, alumni, and actives attended an Initiation Banquet at the Chicago Beach Hotel where the remaining part of the evening was spent informally with the telling of

stories. Roy Young gave an address in behalf of the new actives. The neophytes will be in charge of the Initiates' Dance that is to be at the Chapter house Saturday, March 14. Invitations have been extended to the other chapters.

**DELTA TAU DELTA**

Delta Tau Delta announces the pledging of Philip O. Schuster, '34, M. E.

The annual Delit Prom will be March 6 at the Bal Tabarin of Hotel Sherman.

M. R. Beal has returned to school following his attendance at the Western Division conference at Minneapolis on February 26, 27 and 28.

**BETA PSI**

Following dinner on Monday, March 2, 1931, E. A. Wegner, '32, M. E., was initiated to active member-

ship in Beta chapter of Beta Psi. E. W. Johnson, '33, M. E., was recently pledged.

**PHI PI PHI**

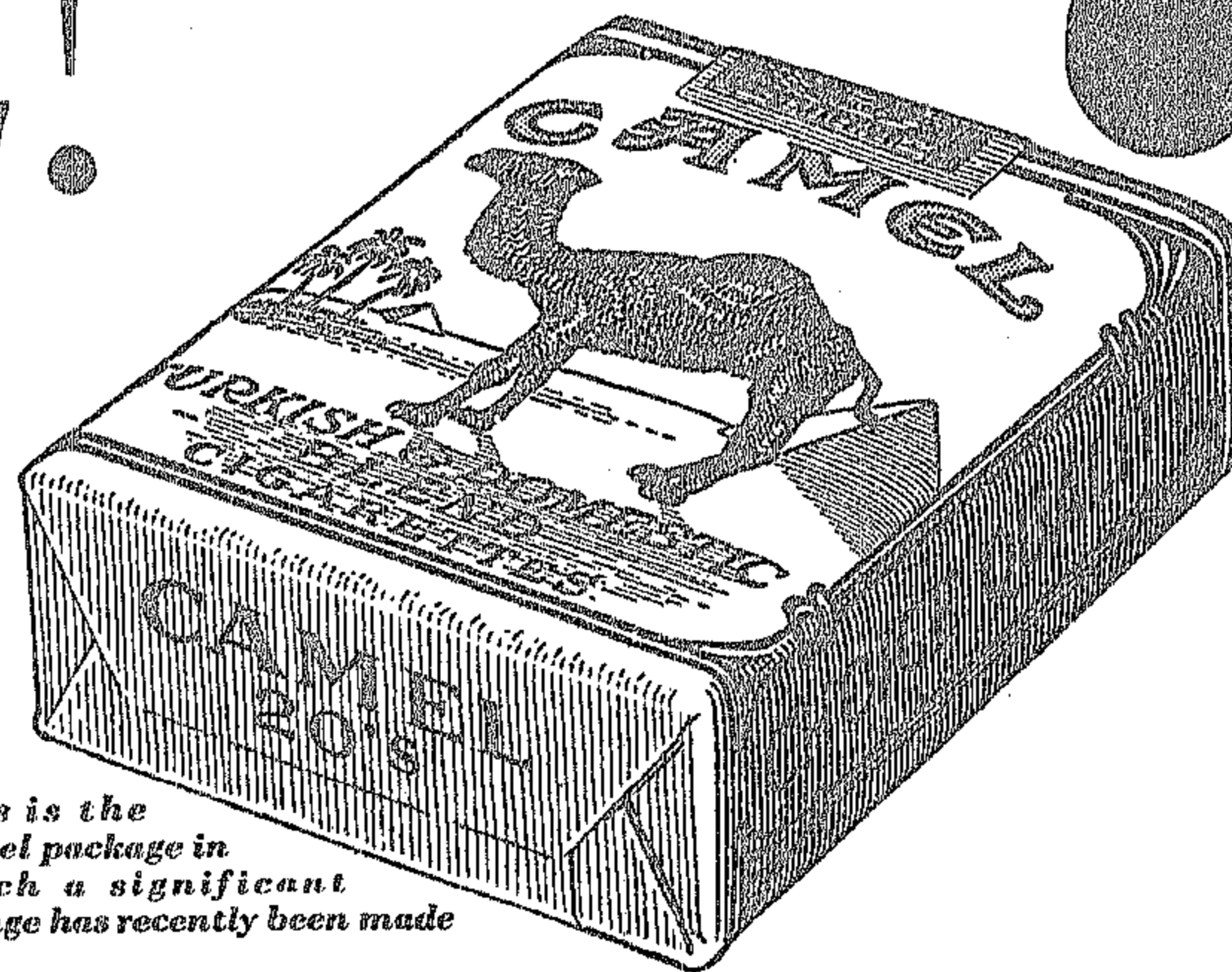
Gamma chapter wishes to announce the pledging of R. J. Pfum, '34, C. E.

An election of officers for the coming year took place February 17 and resulted in the following men taking office: A. J. Mueller, president; H. F. Leichtenberg, vice-president; C. R. Mitchell, treasurer; H. J. Cameron, secretary; S. A. Carlson, chaplain; and V. J. Novak, sentinel.

**KAPPA DELTA TAU**

Hell week is scheduled to begin on March 9 and will be followed by an informal initiation at the Indiana sand dunes on March 15 and 16.

**The CAMELS!  
are coming!**



This is the Camel package in which a significant change has recently been made

**\$50,000 REWARD**

for the best answers to this question:

**What significant change has recently been made in the wrapping of the CAMEL package containing 20 cigarettes and what are its advantages to the smoker?**

First Prize, \$25,000

Second Prize, \$10,000 Third Prize, \$5,000

For the five next best answers . \$1,000 each

For the five next best answers . \$500 each

For the 25 next best answers . \$100 each

**Conditions Governing Contest:**

- 1 Answers limited to 200 words.
- 2 Write on one side of the paper only.
- 3 No entries accepted that bear a postmark later than midnight, March 4, 1931.
- 4 Contest open to everybody except employes and executives of R. J. Reynolds Tobacco Company and their families.
- 5 In case of ties, the full amount of award will be paid to each of the tying parties.
- 6 It is not necessary to buy a package of Camel cigarettes in order to compete. Any store that sells cigarettes will permit you to examine the Camel package containing 20 cigarettes.

All communications must be addressed to Contest Editor—R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C.

**Judges:**

CHARLES DANA GIBSON  
Famous Illustrator and  
Publisher of "Life"

ROY W. HOWARD  
Chairman of the Board,  
Scripps Howard Newspapers

RAY LONG  
President, International  
Magazine Company,  
and Editor of "Cosmopolitan"

AND STAFF

**Wednesday Night**  
 Tune in the Camel Hour  
 on N.B.C. Network

9.30 to 10.30 . . . Eastern Time  
 8.30 to 9.30 . . . Central Time  
 7.30 to 8.30 . . . Mountain Time  
 6.30 to 7.30 . . . Pacific Time

**Over Stations**  
 WJZ, WBZA, WBZ, WHAM, KDKA, WJR,  
 WGAR, KYW, WLW, WRVA, WFSJ, KWK,  
 WJAX, WFLA, WIOD, WREN.

11.15 to 12.15 . . . Eastern Time  
 10.15 to 11.15 . . . Central Time  
 9.15 to 10.15 . . . Mountain Time  
 8.15 to 9.15 . . . Pacific Time

**Over Stations**  
 WHAS, WSM, WSB, WMC, WAPI, WJDX,  
 WSNB, KYIS, WENJ, KSTP, WERC,  
 WKY, WRAP, KPCA, WOAI, KOA, KSL,  
 KTAH, KGO, KECA, KFSB, KGW, KOMO,  
 KHQ, KFAB.

**Contest open only until MIDNIGHT, MARCH 4, 1931**  
 (Winners will be announced as soon as possible after contest closes)

### NAPERVILLE WINS TRIANGULAR MEET WITH 47 POINTS

#### Loyola Places Second, Winning 5 First Places

### NELSON WINS HURDLES

#### Table of Points

|               |        |
|---------------|--------|
| North Central | 47 1-3 |
| Loyola        | 45 1-3 |
| Armour        | 14 1-3 |

North Central won the triangular track meet between Loyola, Armour, and North Central, last Friday night, scoring 47 1/2 points, at the new Naperville field house.

Loyola was second with 45 1/2 points, while Armour placed a poor third with 14 1/2 points. The lead saw-sawed back and forth after each event, until the final event, the 12-lap relay. Stroebel of Loyola slipped and failed to finish the race. North Central took second place to win the meet by two points.

#### Armour Wins Relay

Nelson starred for Armour by winning the 60-yard low hurdles and tying for second place in the high jump. He also ran as anchor man on the 12-lap relay team, coming from behind on the last two laps to win the event for Armour by twenty yards. This is the first meet he has been in since the Interclass Meet as he has been ill with the mumps.

#### Hinders Wins Three Firsts

Hinders of North Central was high point man of the meet with 15 points, winning first place in the shot put, the pole vault, and the running broad jump.

Nineteen Armour men made the trip to Naperville. About sixty athletes competed in the meet from the three colleges, and about four hundred spectators, including coaches, were present.

James, C. Jens, and Oberbeck, placed third in the two mile, shot put, and high hurdles respectively.

#### Walsh Jumps Six Feet

Walsh of Loyola made the best performance of the meet. After winning the high jump at 5 feet, 8 inches, he made successive jumps for exhibition until he finally cleared the bar at six feet.

#### Summaries

60-yard dash—1st heat, won by Siebert, (N. C.); second, Francisco, (L.); third, Helmick, (A). Time: 6.5.

60-yard dash—2nd heat, won by Chapman, (L.); second, Baumgartner, (N. C.); third, A. Jens (A). Time: 6.4.

60-yard dash—Finals, won by Chapman, (L.); second, Siebert, (N. C.); third, Francisco, (L). Time: 6.3.

One mile run—Won by O'Neill, (L.); second, Lemke, (N. C.); third, Heally, (L). Time: 4:39.

440-yard dash—Won by Siebert, (N. C.); second, Baumgartner, (N. C.); third, Mann, (L). Time: 54.3.

60-yard high hurdles—Won by Lebbberman, (L.); second, Schafer, (N. C.); third, Oberbeck, (A). Time: 8.2.

Two-mile run—Won by Hornbeck, (N. C.); second, Murtaugh, (L); third, James, (A). Time: 10:53.

60-yard low hurdles—Finals, won by Nelson, (A); second, Francisco, (L); third, Lebbberman, (L). Time: 7.4.

880-yard run—Won by O'Neill, (L); second, Heally, (L); third, Compton, (N. C.). Time: 2:7.8.

Shot put—Won by Hinders, (N. C.); second, Schaffer, (N. C.); third, C. Jens, (A). Distance: 40 feet, 1-2 inch.

Pole vault—Won by Hinders, (N. C.); St. Clair, (L) and Frank, N. C.) tied for second. Height: 11 feet, 0 inches.

Running broad jump—Won by Hinders, (N. C.); second, Francisco, (L); third, Crank, (L). Distance: 20 feet, 9 1-4 inches.

High jump—Won by Walsh, (L); Nelson, (A), Heinhorst, (N. C.) and Canterbury, (L), tied for second. Height: 5 feet, 8 inches.

12 lap relay—Won by Armour, (H. L. Fox, Hirsch, Helmick, Nelson); second, North Central. Time: 4:15.4.

### Boxers To Fight At Bloomington

Armour Tech's hardy band of ring warriors will pack up their paraphernalia next Saturday and again take the road to tackle out of town glove vendors, their prey this time being the Bloomington Y. M. C. A. state champions. It was previously announced that this meet was cancelled because injuries had raised havoc with the Tech squad, but in view of the fact that considerable expenses had been incurred in preparation for the meet, it was deemed advisable in fairness to the down-staters, to go through with the fights.

#### Judges Show Partiality

Although the Tech leather-pushers have not chalked up a victory in three encounters with rival aggregations, the individual accomplishments have been very encouraging and commendable. Furthermore, it must be remembered that all these fights were held in hostile rings, where, as has been stated before, partiality, on the part of the judges, is prevalent. On one occasion an Armour fighter floored his opponent three times and yet was not awarded the decision. For these reasons the student body should not misinterpret the significance of the scores.

#### Eight Men to Make Trip

The victorious maneuvers of the Bloomington team are well known, but an upset may result when they tangle with the hard hitting Tech squad. Practically all of Armour's representatives will be in the middle-weight class, with only Montesano, fly-weight and Sandstrom, bantam-weight, representing the lighter classes. The middle-weights are Capt. Ustryki, Mago, a new comer, who, fighting his first fight at Culver, showed that he could give and take in good measure, Rush, Campione, and Heckmiller.

The team will embark at the Union station at 3 o'clock Saturday afternoon and will arrive at Bloomington at about 6:30. The fights will be fought at 8:30, after which the pugs will either explore the town or lodge at the hotel for the night, leaving Bloomington Sunday noon.

### Tech Tankmen Meet Loyola U

The swimming team will meet Loyola University tomorrow afternoon at 4 P. M. at the Loyola pool, Sheridan road and Devon st.

This is the first time that Loyola has had a swimming team for nine years and it is rumored that a good many star swimmers are on the Loyola squad.

The swimming season is rapidly drawing to a close. In a few weeks the remaining meets will probably be a thing of the past.

The season has been fairly successful. Not once has the relay team, composed of Byanskas, Giovan, Carlstrom and Captain Knox been beaten. This is quite a record remembering that in the Crane meet a new record of 1:22 for the 160 yard event was hung up.

Jack Cavanaugh has added more fame to his swimming name this season by beating the Culver boys in the century breast-stroke event in 1:15.

Due to the wonderful work of manager Davidson, meets with two new schools have been secured. These schools are Loyola, whom Armour will meet tomorrow at 4 P. M., and Illinois Wesleyan College, which Armour met last Saturday at Bloomington, Ill.

### Forgotten Your Mathematics GET A TUTOR

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### KRAFT WORKING TO DEVELOP GOOD BATTERS FOR 1931

#### Departure of Veterans Cripples Team, Says Coach

### CANDIDATES CALLED

The regulars who will be back to bolster up the baseball team this season are: Stehno, pitcher; Link, catcher; Robin, first base; and Mago at third base. Mago will probably join the pitching staff, third base being left for a new man to fill. Coach Krafft believes that the lack of a veteran infield will greatly cripple the '31 team. The infield must be able to handle the ball swiftly with a minimum amount of errors. In order to accomplish this feat, a great deal of practice is needed, one season being too short a period of time.

#### Relief Battery Needed

The outfielders, although they do not work together as much as the infielders, must cooperate to some extent and the outfield this year will be entirely new. A new catcher must also be broken in for the regular catcher is the only one left from last year.

A number of new bats have been purchased. They will probably see action by the end of March for the batteries will have then had about a month of practice, being prepared to give the boys some batting practice.

#### Fourteen Games Scheduled

Fourteen games have been signed up for the season with the possible addition of another one before the schedule will be complete. A glance at the roster of the teams to be played will show that the team will have no easy sledding. The opening game of the season will be played with Morton at Ogden Field.

### Winning Tennis Team Is Forecast for 1931

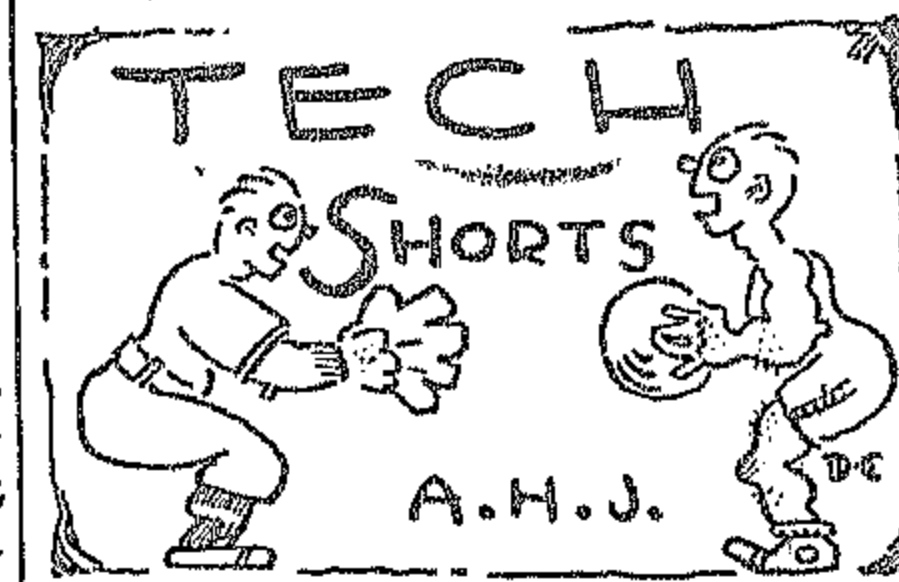
Organization of Armour's 1931 tennis team is expected to be completed within the next two weeks, according to Manager Krause. Although this year's team will not bring a luminary of Jennings caliber to the fore, the prospects for a winning aggregation are looked upon from an optimistic viewpoint.

The return of Captain Eddy and Schirmer, last year's regulars in the sport, warrant a pair of able and well qualified men about whom this year's team will be built. The addition of several other participants in the 1930 season, namely Timmermans, Lind, Hendricks and Richter together with one or two freshman candidates, serves to brighten the prospects. If these men show only a slight improvement in their playing ability, it is quite safe to predict that a successful season is in store.

The schedule for the coming season is not fully completed. Several good matches are already on the list while others now tentative are expected to be added officially to the schedule as soon as Manager Krause is able to complete his negotiations.

#### Tentative Baseball Schedule

- April 10—Morton at Armour.
- April 14—Chicago at Chicago.
- April 17—North Central at Armour.
- April 20—Lake Forest at Armour.
- April 24—Western State Normal at Armour.
- May 2—North Central at Naperville.
- May 5—Wheaton at Armour.
- May 8—Michigan State Normal at Ypsilanti.
- May 9—Western State Normal at Kalamazoo.
- May 13—Wheaton at Wheaton.
- May 15—Michigan State Normal at Armour.
- May 20—DeKalb at Armour.
- May 23—DeKalb at DeKalb.
- May 28—Lake Forest at Lake Forest.



#### Calcium Light

Basketball must now recline into the background for another year. Other indoor sports, track, swimming and boxing are attracting the interested eye with baseball as the new comer into the athletic limelight.

#### Relays and Invitational

Swimming and boxing are about to conclude rather uninteresting seasons while the indoor track team is unsuccessfully defending the championship record of last year. However, with the Illinois Relays, Bankers Relays, and Armour Invitational meets the team has time to round into shape.

#### Penn Invitation to Tech

An invitation has been extended to Armour to compete in the annual Pennsylvania Relay Carnival. Should Tech enter a team, competition would be met from the following schools: Northeastern College, Brooklyn Polytech, Colorado School of Mines, Stevens Institute, Case and Rose Polytech.

#### A Sure Winner?

Had Don Paul entered this meet last year he would have won the shot-put by a wide margin. The

### LATE SPORTS

Armour's swimming team defeated Illinois Wesleyan College 49-27 last Saturday night at Bloomington.

Tech won seven out of a possible eight first places. The 160-yard relay team composed of Byanskas, Giovan, Carlstrom and Knox, made a new school record of 1:21.

winning distance was 47 feet and Paul was approaching 48 feet at that time.

#### Far Away From Home

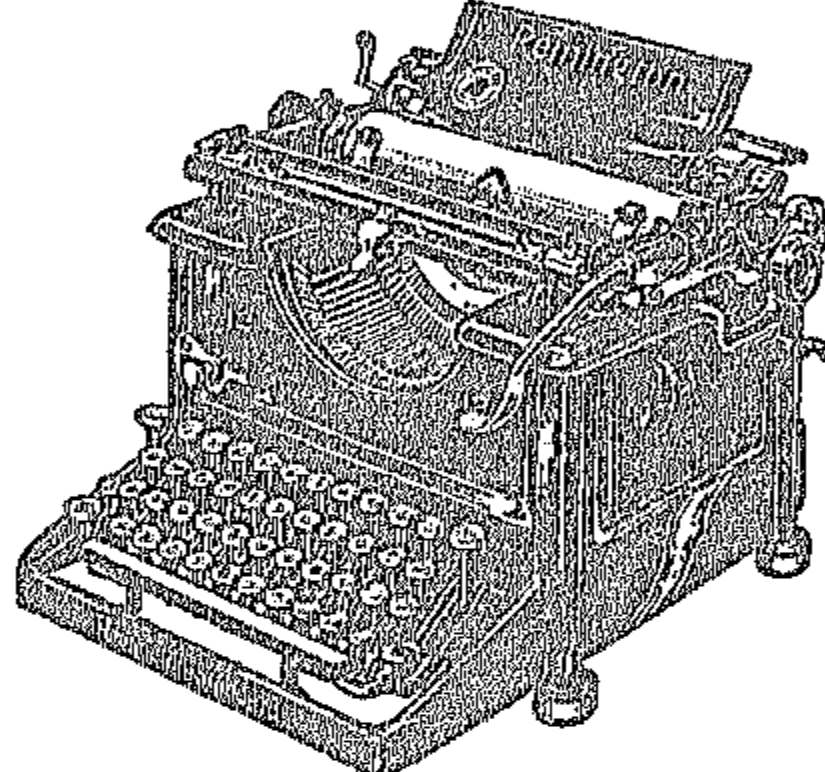
Out of town meets cause considerable loss of time to athletic teams, both in traveling and in class work. These usually mean the loss of at least one day in school and the consequent missing of classes and laboratories. Although the Institute does not advocate out of town contests, a large number are permitted.

#### Pretty Now

On Friday afternoon members of the basketball, boxing, golf and swimming teams will smile for the birdie. Pictures of the athletes are to be taken for the 1931 Cycle. Won't it be nice to show little Willie many years from now just how papa looked in his athletic regalia when he played for dear old Tech.

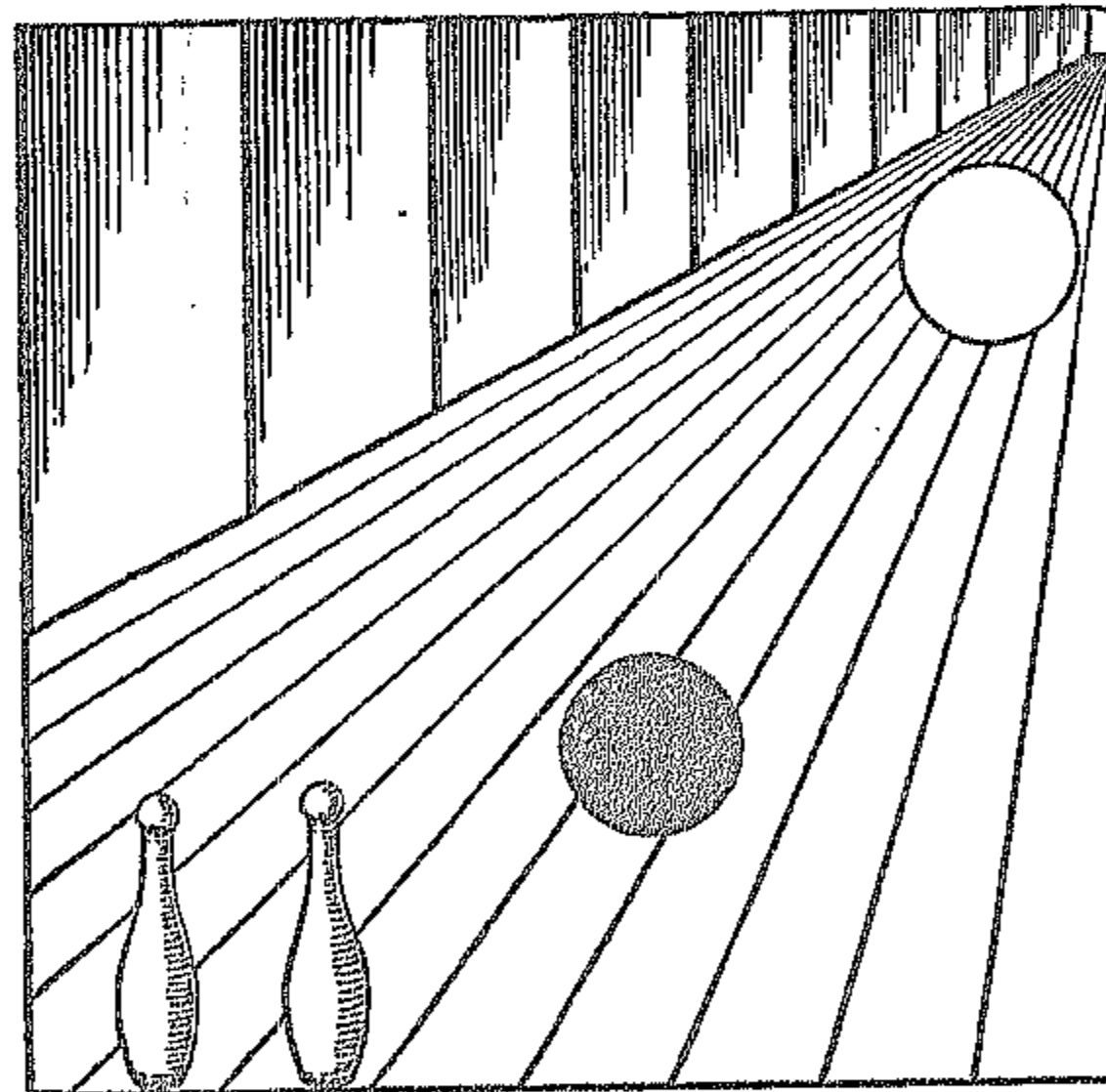
#### Useful Implements

About this time each year the baseball squad journeys to the bat factory of A. G. Spaulding & Co., and select the style bats that are to be used during the coming season.



**SPECIAL STUDENT RATE**  
**4 MONTHS for \$7.50**  
 for all standard makes.  
 Remington No. 6 Noiseless 3 mo. \$7.50  
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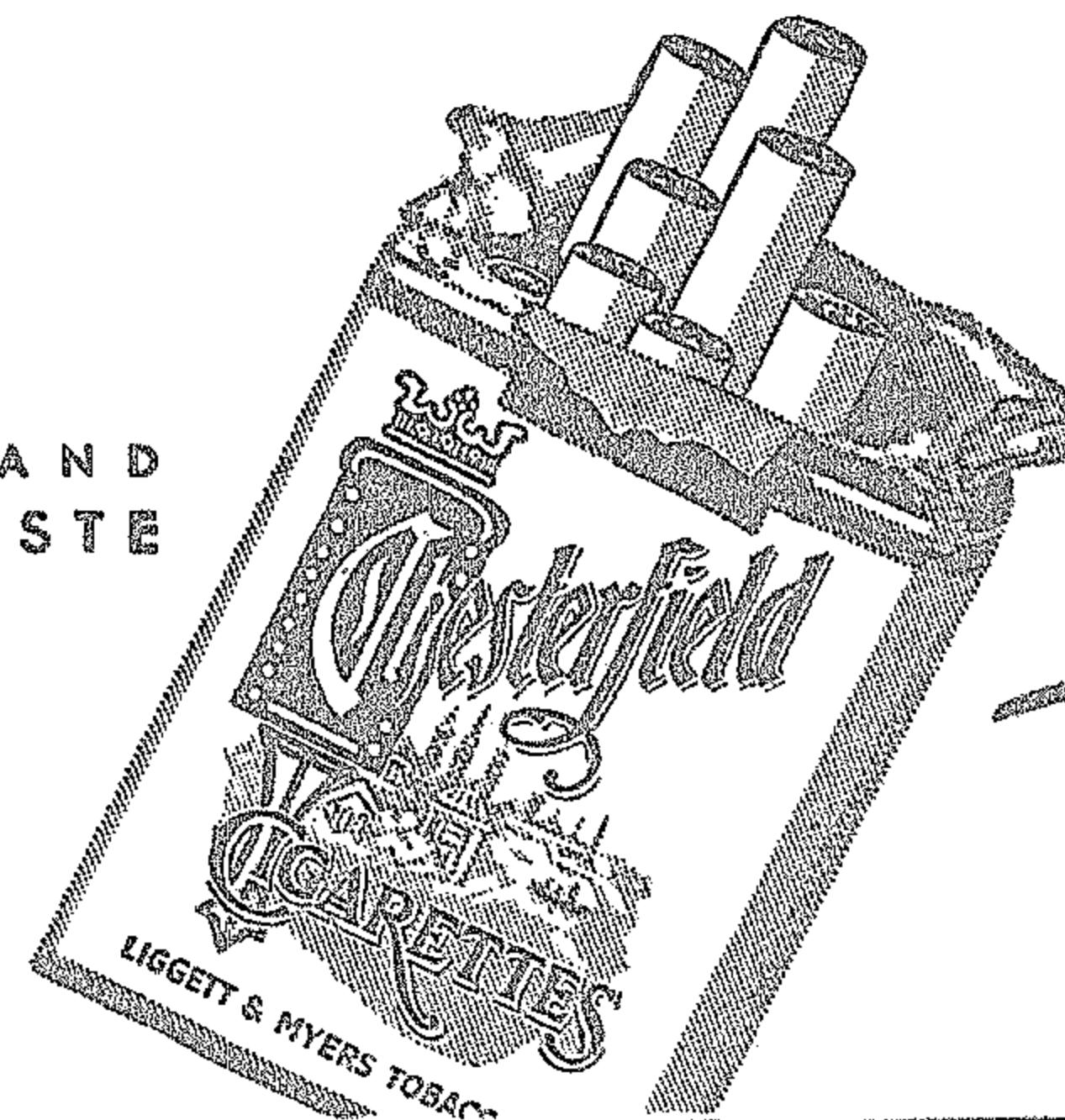


Which is larger—the white ball or the black? Don't answer too quickly.

## YOUR EYES MAY FOOL YOU BUT

## YOUR TASTE tells the Truth!

MILDER... AND BETTER TASTE



*They Satisfy*