



Freshmen to Select by Ballot Today

Last Week's Campaign Talks to Influence Vote

Candidates for class offices were presented to the freshmen last Friday morning at their class meeting in the Mission. The primary election was held yesterday, and today the runoff election is to be conducted.

Candidates for president are: R. Graham, D. Long, and P. Shaffer; for vice-president: K. Myers, F. Reh, G. Gardes, and S. Shapiro. Students seeking the secretarial post are: J. McElean and R. Zoellner; for treasurer are D. Crego, D. Graf, C. Kramer, and J. Waber; and for the A.T.S.A. representative the following men are running: G. Hamilton, R. Jacobson, and R. Sweeney.

The final group of candidates who are seeking the office of social chairman, and all promising a super-colossal freshman dance are: F. DeMoney, H. Leave, R. McMahon, and J. Smith.

The candidates for all six offices presented campaign speeches at the assembly last Friday, and because of the large number of men running for office the voting promises to be spirited.

Worcester, Brown Speak Before A.I.E.E.; Plan to Hold Joint Meeting Soon

Initial student speakers of the winter program were heard at the last A.I.E.E. meeting. R. E. Worcester spoke on "Highway Lighting," and E. Brown discussed "The Sperry Method of Determining Rail Faults."

Worcester pointed out that the installation of lights on the main highways would avert 35 per cent of the nation's accident cost. Sodium lamps seem to be best suited for highway lighting. Worcester cited the San Francisco Bay Bridge as an example of the efficiency of sodium lighting. If tungsten lamps had been installed it is estimated that the operating costs would be twice the present figure.

Brown explained the Sperry method of discovering hidden flaws in rails, and told how it was developed. The Sperry apparatus is mounted in a car which moves along the track, marking the bad rails and recording their position.

It was decided that a joint meeting of the Chicago A.I.E.E. section and the electricals of Lewis, Northwestern and Armour would be held in the near future. Plans for the meeting have been left to the committees.

Junior W.S.E. to Hear about Aluminum Uses

Dr. Paul V. Faragher of the research department of the Aluminum Company of America will give a talk before the downtown Junior W.S.E. next Thursday evening, dealing with the engineering application of aluminum and its alloys and will discuss the cooperative program of research. The aluminum industry, young by comparison with the industries built around the older base materials, has from its very beginning followed a policy of cooperating with manufacturers in the development or redesign of their products. Continuous research work has pioneered in the field of the aluminum alloys. The talk, which will be illustrated by lantern slides, should be of interest to all members engaged in design in every branch of engineering.

This evening Professor W. M. Wilson of the University of Illinois will speak on "The Current Status of Structural Welding" in which he will show that progress in structural welding is proceeding along a number of lines. New methods of welding are being developed, old methods are being perfected, and welding is being extended into new fields. The development of types of structures which have resulted from additional research is causing the more extended use of welding as a means of fabricating structures in general.

Formal Junior Dinner Dance Date March 5

In a meeting of the junior class Wednesday, plans for the annual junior formal were discussed. The dance is set for March 5 at the Grand Ballroom of the Palmer House. It was decided to make the affair a dinner dance rather than a supper dance. The social committee, led by B. G. Anderson, has already made arrangements for the ballroom and is busy auditioning orchestras at the present time. Others on the committee are I. M. Footlik, D. W. Jacobson, and W. A. Stuh.

Dr. Kintner Talks on Chemistry of Cloth over WCFL

The fifth broadcast of educational topics sponsored by Armour, was given last Saturday night at 7:30 p.m. over station WCFL with Dr. Robert C. Kintner, Associate Professor of Chemical engineering as the guest speaker. A. P. Schreiber, publicity director, assisted Dr. Kintner as interpreter.

The subject of Dr. Kintner's broadcast was "Clothing Industries." The object of the talk was to demonstrate the part chemistry and chemical engineers play in the improvement of this industry.

Use High Speed Rotary Knives
Dr. Kintner started his talk by describing the fibers used in the production of the various kinds of materials. The dye and the artificial silk or rayon industries were the two main topics of the talk.

The viscose process used in the manufacture of rayon was described. In this process, small spruce logs are chipped by high speed rotary knives. These chips are digested by a solution of bisulphite of lime under high pressure. The digested chips are washed in water and the fibers separated.

Used in Paper and Rayon
This pulp is used in making paper as well as making rayon. This pulp is treated with a strong lye solution and then with carbon bisulphide. The product thus obtained is dissolved in a dilute lye solution to form a thick liquid called viscose. This thick liquid is then filtered and forced through tiny holes of a spinneret to form the fibers that are finally woven into rayon cloth.

Krathwohl Advocates Use of Simple Models

Dr. Krathwohl advocated the use of color and single models for more effective teaching in an address before junior college mathematics instructors of northern Illinois, held at Wright Junior College on November 20.

In furthering the cause of simple models, Dr. Krathwohl explained that a model is much more effective if it is simple and can be constructed before the class, than if it is perfectly constructed beforehand. The effectiveness lies in the fact that the class can see every step in its construction, and thus the underlying principles upon which the model is based can be brought home.

The chief advantage of color is that like parts, such as algebraic equations, similar figures, and others can be represented by the same colors in order to emphasize their equality or similarity. The use of color can eliminate the use of letters to identify a triangle or some other figure, and thus the student will be able to follow the lecture without the trouble of finding letters in a diagram while listening to the speaker.

Soon the students in our institutions of learning may be treated to something like this: "The relations between this pink parabola, lavender triangle, ultramarine square, vermilion hyperbola, and orchid circle are as follows." Perhaps a question might be raised as to whether a blue circle added to a yellow circle will give a green area or blue and yellow sectors.

Pre-holiday Dance Offered by Seniors

Suitable to the occasion the Seniors are celebrating the last day of the school year, Friday, December 17, with an outstanding dance of the year. Realizing that former dances have always been crowded because of too small a ballroom the committee this year has arranged for the spacious Cedar Room on the fourteenth floor of the Oriental Building downtown.

For the music Johnny Mullaney and his Collegians have been obtained. The orchestra has been very popular around town playing for college proms, and will help to make this dance a high spot of the social calendar. All classes of the school are invited, and to the freshman in particular it offers a chance to meet the upperclassmen of Armour. Bids, priced at one-seventy-five each, can be obtained from any of the social chairmen and their committees. The dance is informal and is timed for 9:30 till 1:00.

Engineering Shop Assistant Sets Statisticians Working

Armour statisticians should find interest in the work being done by Mr. E. R. Gatley, assistant in the engineering shops since 1921.

Mr. Gatley has sharpened an average of fifteen tools a day, six days a week, since he began work here. This means that he has ground about 131,000 tools so far—and he is still going strong.

In order to further impress the magnitude of the task—if all the tools sharpened were set one on top of the other, they would reach to a height of about 20,000 feet or nearly seventeen times the height of the tallest building in the world.

Perfect Patlogan Dunked Dog Test; Armour Dogless for Several Weeks

By R. Perry

Yawning, he gazed at the blackboard, and disdainfully sniffing, turned his attention to the ceiling, the while pondering upon the things that make professors drone that way. His head nodded, and sighing mournfully he slumped forward until his chin rested easily on the floor and, with an academic flourish, scratched his left ear with his right foot. Perhaps it was while reclining in this singular position that some distinctly disparaging conclusion was reached which, after being noised about the far reaches of the city, has had the effect of rendering Armour dogless for these several weeks. Needless to say, this condition cannot be too strongly deplored; a school without dogs earnestly attending an occasional lecture is only to be likened to a school without dogs earnestly attending every lecture.

Finds Chem Lab Interesting

The discouraging part about the whole thing is that no dog has ever been able to complain of ill-treatment; the utmost courtesy has always been extended to man's canine comrade. To cite an example: a small white animal passed this way last summer and, being irresistibly fascinated, as dogs are, by the aroma of the chemistry laboratory, he wandered in. Now to this wee animal's inexpressible joy and delight he was overwhelmed with attentions. After being placed in a carefully regulated bath of precisely ten degrees centigrade and tenderly washed with soap which as determined by previous analysis contained not less than ten percent free alkali. (The analyser afterwards changed his estimate since the dog still had some fur left at the completion of the immersion; in honor of the inventor this test, not previously covered in the texts on the subject, is now known as the Patlogan "Dunked Dog" test for free alkali.) The happy little beast was gently singed dry next to the oven and then,

no end refreshed, staggered out of the door.

Aside from the common humanities the presence of the animals inspires they boost the morale of the faculty decidedly since some dogs have been known to listen to lectures occasionally. If the whole thing were carried to a logical conclusion by means of a suitable publicity campaign there is no doubt but that eventually the distracting human element could be displaced. There is also no doubt that a class of mutts could master slide-rules better than a number of students who, after owning Log-Log Polyphases Duplex Vectors for several semesters have finally succeeded in mastering the intricacies of the C and D scales.

Potter Lectures on 'Contact Potentials'

Professor J. G. Potter spoke last week before the Physics Club of the University of Chicago on the "Contact Potential of Tungsten." He was the first of several members of the Physics Department who will speak before various outside groups, the basis of the talks being the work that they have carried on in their researches.

The work discussed by Prof. Potter is important in determining the efficiency of tungsten for use in photoelectric or radio tubes. All of the work in this connection must be carried on in a high vacuum. In order to eliminate any external effects, all of the bearing points and systems of levers must be constructed of glass. Besides this all of the metal, both magnetic and non-magnetic except the tungsten being tested, is covered with glass. Adjustments and measurements are made by means of outside magnets exerting their effect upon the metal parts within the tube. The talk was illustrated with lantern slides.

Soph Dance Offers Emil Flindt's Music in Medinah Ballroom

Medinah Athletic Club's grand ballroom has been chosen as the site for the annual sophomore dance to be held on Friday, January 14. Although not definitely contracted as yet, Emil Flindt, the popular maestro of Oh Henry Park, and his superb orchestra will probably provide the Techawks with their smooth, distinctive rhythm. The bids will be priced at the customary low figure of \$1.50.

The grand ballroom has a capacity of fifteen hundred people which will be more than ample for this occasion. It has been recently redecorated, and boasts a large balcony which will be furnished as a lounge. A spring floor of recent construction coupled with the pleasant atmosphere will be most conducive to prolonged dancing. A large foyer, equipped with lounges, private elevators, and ample parking facilities are the crowning factors of a perfect selection.

Emil Flindt has played to capacity crowds at Oh Henry Park for the past two years indicating his unusual popularity. His widely known orchestra has arrangements of all the Armour songs, besides his characteristic selections of soft, sweet harmony.

E. H. Worcester is the guiding hand in the affair with a year of past experience to his credit. With these two selections he expects this dance to be the biggest affair on the Armour social calendar.

Spears to Show Pictures for Faculty Club Members

Prof. S. M. Spears of the civil engineering department will show the motion picture which he took at Camp Armour before the Armour Faculty Club next Friday morning at 10:30 o'clock. The films consist of two reels of pictures taken at the civil summer camp at Trout Lake, Wisconsin in 1936 and 1937.

A. I. Ch. E. to Hold Combined Meeting Here Tomorrow

Heat Insulation Laboratory New Scene of Experiments

Under the direction of Professors Anderson and Peebles various tests with insulation are being conducted in the heat insulation laboratory. The tests are made primarily in the constant temperature room which is insulated all around with four inches of cork. This room can be cooled to 20 degrees Fahrenheit and heated to about 100 degrees Fahrenheit.

Tests are being made on heat conductivity of different types of heat insulation, moisture capacity of insulation, room coolers, radiators, pipe insulations, and cabinet stoves. Equipment is being constructed to test the flow of heat through insulation at high temperatures.

Dr. Copeland to Talk on Electron Emission

Dr. Paul L. Copeland has been invited to speak before the Physics Colloquium of Northwestern University, on next Thursday. His talk will be "The Secondary Emission of Electrons from Solids." All solids when bombarded by electrons give off secondary emissions. In many cases the emissions are six or seven times as great as the electron bombarding the sample. This secondary emission in the case of common radio tubes is undesirable. Two types of tubes, however, have been developed that make use of this phenomenon. The dynatron tube invented by A. W. Hull is used in radio work. This type of tube is similar to the old type of screen grid radio tube. The other type called "the electron multiplier," invented by P. T. Farnsworth, is used for the amplification of currents in photoelectric and television work.

Dr. J. S. Thompson will give a series of three lectures at the Wilson Junior College this week on the subject of "Radium and Radioactivity." These talks which are a repetition of a series given for several years will cover the properties of radio-active substances and their radiations, methods of extracting and handling radium, and practical applications of radium and artificial radioactivity.

Social Science Dept. Transfers Quarters

Pi Tau Sigma Also Leaves First Floor of Flats

The everexpanding needs of the Research Foundation have required the few remaining organizations in the Research Building to move. Pi Tau Sigma, the honorary mechanical fraternity, will move, according to present plans, to the fourth floor of the first entrance, Chapin Hall. Part of the remodeling necessary to make these rooms presentable will be done by the school and the balance will be done by members of the fraternity.

The Social Science office will be moved to the third floor of the same building in which it is now situated. Extensive remodeling will take place before the move. The space occupied by the Social Science office will be taken by Professor D. P. Moreton and his staff for the use of the ARMOUR ENGINEER AND ALUMNUS. The rooms to be vacated by Pi Tau Sigma are to be occupied by the Publicity Department which is now situated in Chapin Hall.

With this move all of the vacant space in Chapin Hall will be occupied with the exception of a group of flats on the fourth floor, which are being held in reserve as tentative drafting rooms. As yet, no definite plans have been made as to the dates, or the manner of making the proposed changes.

There will be a meeting of the NEWS staff tomorrow at 12:20 o'clock in the NEWS office. All reporters should be present.

Armour Branch to be Host to Chicago Section

Acting as hosts to the Chicago section of the A.I.Ch.E. for the third successive year, the Armour student chapter tomorrow night, will conduct with them a joint meeting. The local chapter, under the direction of W. R. Marshall, chairman, will present a program made up of dinner, presentation of student papers, speeches, and inspection of the Armour Tech chemical engineering laboratories while in operation.

Chemical engineering students and practicing chemical engineers meet each other at this sort of meeting on a common footing where they may exchange and discuss ideas and experiences. The practice of conducting these combined meetings was begun two years ago under the leadership of H. P. Milleville who was then chairman. Last year's was as successful as the first; the local chapter hope this year to equal or surpass the two preceding joint meetings.

Guests Received by Faculty Club
The guests from the Chicago section will be received in the Faculty Club. H. J. Bodnar and E. F. Wagner, senior chemicals, will be in charge of the reception. From there, they will proceed to the Student Union where dinner will be served.

At the conclusion of the dinner, student talks are to be presented. Six student papers based on studies made in the Armour chemical engineering laboratories will be given by both graduate and undergraduate students.

First S. M. Osri, a senior chemical, will talk on "High Frequency Induction Furnace"; N. Gerber, research student with Dr. Komarewsky, will present "Gas Absorption"; T. M. Gilkison, assistant in chemical engineering, will give "Condensing Organic Vapors"; senior chemical B. W. Gamson will talk on "Heat Transfer Coefficients"; A. P. Schreiber, graduate student, will present "Cross-Tube Evaporator"; and last R. M. Levy will talk on "Binary Liquid Systems."

Berger and Kruse in Charge
Most of the equipment used in the Armour chemical engineering laboratory course will be in operation by teams of junior and senior chemicals. Inspection of the laboratory by the group will start about 9:00 o'clock. E. C. Berger will be in charge of the senior laboratory, and W. E. Kruse will be in charge of the junior laboratory.

Operating in the senior laboratory will be distillation apparatus, dies, vibrators, steam jacketed kettles, a gas fired furnace, horizontal condenser tubes, evaporators, vacuum leaf and industrial filters, gas absorption, vertical condensers, an extractor, and an agitator.

In the junior laboratory there will be operating sanitary water treatment experiments, industrial water treatment experiments, an optical pyrometer, a radiation pyrometer, thermocouples, a resistance thermometer, an adiabatic calorimeter, orsat gas analysis, and various pumps.

Professor Dutton Travels to Management Convention

Professor H. P. Dutton, head of the social science department, left yesterday for the annual convention of the Society for the Advancement of Management to be held in New York City during this week. He will preside at a group meeting on collective bargaining. The membership of the society is composed mainly of consulting engineers, teachers, executives of companies, and others interested in the development of plant efficiency and in personnel management.

Professor Dutton also will be present at a meeting of the American Society of Mechanical Engineers. The proceedings of the A.S.M.E. usually include papers on new processes and on management methods.