



## Musical Clubs Give Inspiring Performance

### Large Crowd Attends Goodman Concert

More than 700 appreciative friends of Armour Tech heard the inspiring program rendered by the musical clubs at their second annual Goodman Theater Concert last Thursday night. This large audience received more delight in the way of musical entertainment in the three hours' duration of the concert than had been estimated or expected beforehand by anyone.

All critics and reviewers have agreed that this performance surpasses by far that of last year, and that all credit for the splendid musical performance goes to the Musical Clubs' most able director and guide, Mr. O. Gordon Erickson.

#### New Soloists Heard

Both the Orchestra and Glee Club have improved greatly since last year, having added a great many favorite selections to their repertoires. The incoming talent is also increasing rapidly. Among the new soloists who performed at the concert are the following: W. Mashinter brought from his violin the glorious tones of "Meditation" from Thaïs; M. Nyström, tenor, sang "Trees" with orchestral accompaniment, followed by an encore, "One Alone"; P. Woods, oboe, played the introduction to "Katinka" by Friml; A. Allegretti, violinist, surprised the audience by rising to sing the mournful interlude of the "Song of the Bayou."

#### Lighting Effects Prominent

Soloists of last year who have returned to give their well-liked selections are B. Heine, accordionist, and F. Hrachovsky, Czechoslovakian tenor, who sang several native folk songs. Negro spirituals by the Glee Club included the snappy "Ezekiel Saw de Wheel" and the softer, more gentle "Goin' Home." During the latter

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## Math Models Draw Praise

### Prof. Spencer Plans To Display Models at Columbia

As a result of the recent showing of his models at the Palmer House as a part of the mathematics exhibit of the National Council of Mathematics Teachers, Professor W. A. Spencer was invited to display them at a mathematics exhibition which is to be held at Columbia University soon.

Professor Spencer's models have been the subject of much favorable comment in the past, the latest of which has arisen from his exhibition of some sixty charts and fifteen solid analytic geometry models.

#### Praised by Mathematicians

The charts showed a large number of geometrical constructions as well as the graphical representation of many curves and equations. The solid analytic models, familiar to most Armour students, consisted mostly of hyperboloids, ellipsoids, paraboloids, many surfaces of revolution, and various self-explanatory string and sphere constructions.

Professor Spencer has been congratulated by many of the mathematicians who have viewed his work. In addition, the Council of Mathematics Teachers has expressed its appreciation for the loan of the exhibition, which was considered one of the main sections of the convention.

#### Construction Discussed

A lecture on the construction of the models and graphs was delivered to the convention by Professor Spencer in which discussion he told of his own contributions to the methods of making models. The processes of construction and the details of workmanship were part of the work which was considered the most important.

## School Quarterly to Appear on March 12

Circulation and size of the next issue of the *Armour Engineer and Alumnus* will reach the highest point in the history of the publication. The magazine will be issued to 12,000 students and alumni. Under a new policy copies will be sent to all the students who at any time attended the Institute.

The issue will be available March 12, and is to have several articles of technical interest. The Golden Gate Bridge is discussed by Mr. Paine of the engineering firm of Strauss and Paine, which has charge of construction of the bridge. An article on Armour's architectural department explains many interesting facts about that part of the school. Larson and Gétz, two Armour graduates, have written an article on feletype type setters.

The alumni news will contain excerpts of letters sent to the *Engineer and Alumnus*. Announcement is made of the annual banquet to be held May 25 at the Medinah Club.

## Freshmen To Choose Orchestra This Week

Bal Tabarin of the Sherman Hotel will be the scene of the first social attempt of the class of '40. This ballroom is considered a fitting setting for any dance, and social chairman Eugene Worcester announces that the music of an orchestra already in high favor with Armourites will be featured.

Under consideration are several orchestras that have played for past Armour dances, Corey Lynn, Lou Diamond, Emil Flindt, and Morrie Sherman. A definite decision will be made this week, and bids priced at \$1.50 will soon be placed on sale. The freshmen are looking forward to the same co-operation in putting this dance over that they have given for the upper class affairs. Bids may be obtained from the social committee consisting of L. D. Downing, E. H. Horn, W. I. Miller, E. H. Worcester, chairman, and W. F. Yeager.

## School Enrollment Shows Slight Gain

Enrollment figures for the current semester issued by the registrar's office show the largest registration in Armour's history. Day school enrollment now totals 846 students, as compared to last semester's total of 825.

The freshman class, as usual, has the greatest enrollment with a total of 283, while the sophomore class is second with 176. Leading all departments, the mechanicals have 151 in their ranks while the chemicals follow with 139. In comparison with last year's figures, all departments, with the exception of engineering science and fire protection, showed slight increases, the largest being in civil engineering.

The number of sophomore cooperative students in mechanical engineering is 38 while the total number of freshman co-ops is 52.

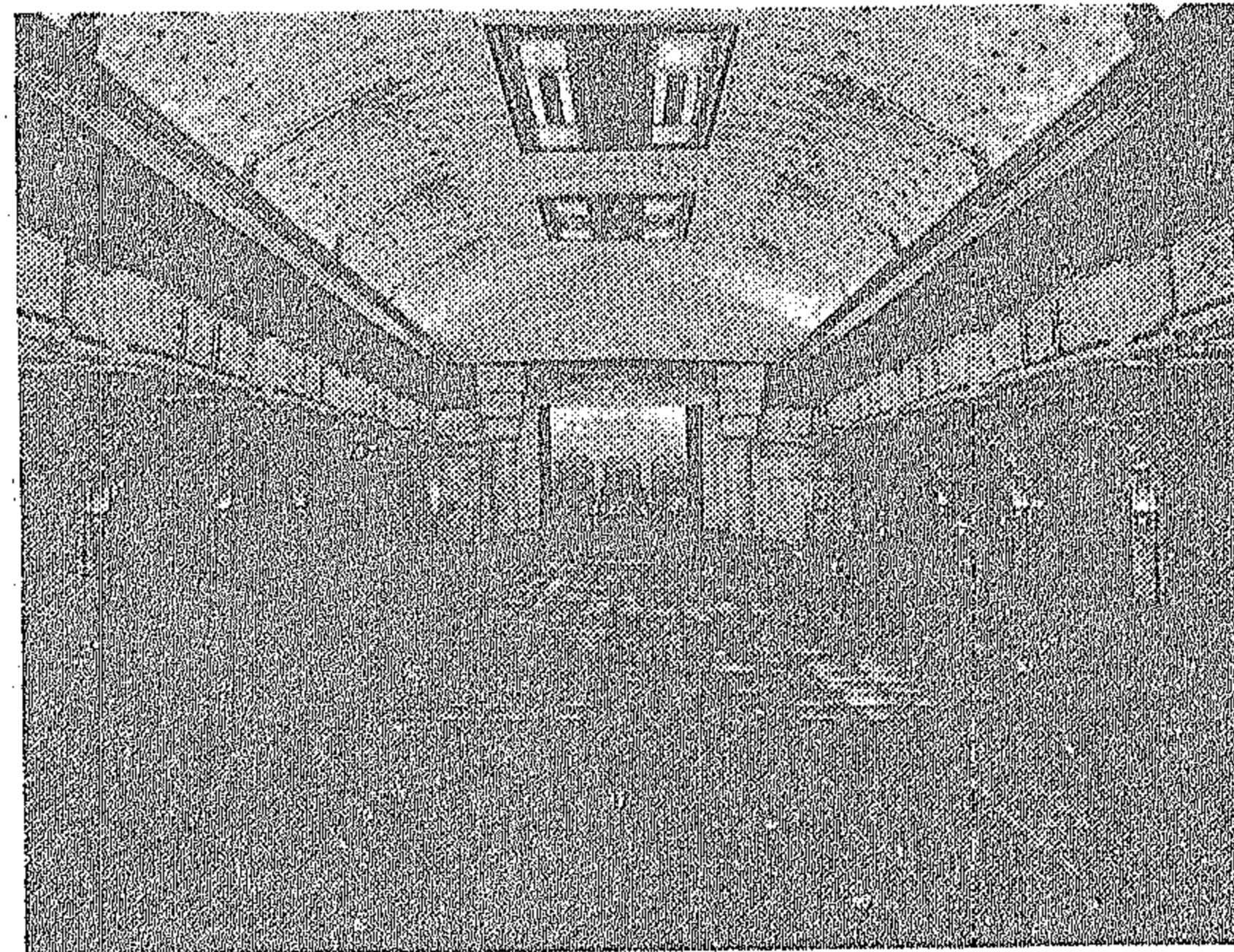
## Plant Executives Continue to Meet For Discussions

Continuing their meetings being held weekly at the LaSalle Hotel, the executives from the participating companies will meet next Friday evening at the eighth meeting of the conference course in plant engineering and maintenance. The meeting is part of a series of fifteen being sponsored by Armour Tech in order to bring industrialists into closer contact with each other and with the Institute.

Mr. Ralph G. Raymond, managing director of Chicago Lighting Institute, will cover the question of illumination at the meeting, and supplementary material will be presented on air conditioning, sanitation, and other phases affecting human occupancy. Following the speech, Professor H. P. Dutton, head of the social science department of Armour Institute and chairman of the meetings, will conduct the discussion.

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## Sophomore Informal Will Feature Knickerbocker's Oriental Ballroom



Oriental Room of Knickerbocker

## Discuss Production Savings at A.S.M.E.

At the last meeting of the Armour Branch of the A.S.M.E., Paul Reh, M.E. '37 and special student working under Prof. H. P. Dutton, head of the social science department, spoke on "Time and Motion Study."

#### Describes Motion Study

Describing time and motion study as a means of increasing production without raising production cost, he pointed out that problems in that field can be approached in several ways. The first, and almost obsolete method, is to check the motions of the best operators with a stop watch, noting the positions of the hands, etc., and the time necessary to carry out a specific operation. Using this data, a system eliminating the unnecessary motions is worked out. A more modern way, which is being introduced, is to take motion pictures of the more efficient operators at their work; by studying the finished picture, frame by frame, the analyst is enabled to study split second movements.

#### Two Methods Used

Reh used a problem solved by both methods to illustrate his point. The problem consisted of assembling a common wall plug and a length of wire. Motion pictures of the original motions of assembling previous to study, and the drawing of the jig which speeded up the assembly were shown.

At the next meeting V. J. Jandasek, M.E. '37 and A. M. Meyer, M.E. '37, will speak on "Hydraulic Drives" and "Railroad Signals", respectively.

Inspection trips for the A. S. M. E. Conference to be held April 19-20, will include the Crane Co. April 19, and the Western Electric Co., Monday, April 20.

## Dr. Oldenburger to Show Curve Analyzer

Dr. Rufus Oldenburger will conduct a demonstration of the harmonic analyzer at the University of Chicago Thursday evening, March 4, at 7 o'clock for the benefit of his evening school class in mathematical analysis and interested students.

The harmonic analyzer is an instrument which finds an equation for a given drawn curve when the curve is traced by the instrument. Specifically the harmonic analyzer gives the coefficients of a Fourier series. If the given curve represents a sound wave, the terms in the Fourier series correspond to harmonics so that the sound wave can be broken up into components. When musical instruments reproduce these components simultaneously, the sound represented by the given curve is reproduced.

Armour students not in Dr. Oldenburger's class, who are interested to see the analyzer are invited to join the class for Thursday night. The class will meet in room 401, Social Science Research Building, University of Chicago, where Dr. Oldenburger will demonstrate the instrument.

Site of Sophomore Informal next Friday night.

## Co-ops Meet, Discuss Position as a Class

Questions pertaining to their standing in school were discussed by section "A" of the co-ops at their meeting in the Mission building on last Friday. The questions which gained the most prominence were those relative to the standing of the third semester co-ops with respect to the other classes of the school, class jackets, fraternities, and membership in the professional societies.

As the present, third semester men in the co-operative course comprise the first group of their kind, their precise position has as yet not been ascertained. This group of third semester co-ops is scheduled to graduate with the class of '40 yet they entered with the class of '39. In an effort to coordinate the two divisions of the co-op department, the officers of group "B" were invited to the meeting. According to the co-ops, if it is impossible for them to make up their minds to which class they wish to belong, they can at least organize among themselves.

## Seniors Interviewed for Job Placement

Realizing that the best engineering graduates must be spoken for first, many large concerns are already interviewing members of the class of '37 in co-operation with Armour's personnel director, Mr. W. N. Setterberg.

Three General Electric Company representatives interviewed all of the electrical and mechanicals of the senior class on one day and selected five men to whom they offered positions. If these men accept they will be able to take advantage of a training schedule which places the men in each department of the entire shops for a short time.

#### Placement Files Inspected

The Container Corporation representative inspected the placement files of the class and selected twelve men for interviews at a later date.

The Prestolite Company man interviewed fourteen seniors, and the Westinghouse Elevator Company interviewed all the electrical and mechanical engineering senior students. Armour and Company requested applications from several senior chemicalists while the Texas Company asked for seven applications.

The Goodyear Company interviewed twenty-five men, and two representatives of United States Steel subsidiaries interviewed about seventy students.

#### Other Companies to Interview

Several other companies, among them the Commonwealth Edison Company, have stated their intention of sending representatives soon, and about a half dozen more large companies have been invited to send representatives.

## Class of '39 Invites All Professors As Guests

When the first strains of music sound the opening of the Sophomore Informal in the beautiful Oriental Room of the Knickerbocker Hotel next Friday night, one of the largest crowds to attend an Armour dance is expected to fall into step. Unique to this dance is the open invitation to the faculty members and administration officers to attend the affair as guests of the class of '39.

#### Feature Hollywood Singer

Adding to the enamourment of the melodies of Tweet Hogan's music, entertainment will be provided by Dorothy Skelly, as featured singer. Miss Skelly recently arrived in Chicago from Hollywood. She was employed by M-G-M and sang in several shorts. Although it isn't definite, social chairman B. G. Anderson, says that perhaps Tweet Hogan will sing some of his song novelties.

Arrangements have been made for the comfort and relaxation of the dancers. The balcony which circles the dance floor has been provided with chairs, and the cocktail bar at the end of the balcony will be open, providing refreshments.

#### Unique Lighting Effect

The Oriental Room is decorated in cream color and has a glass dance floor under which colored lights play. The effect of the floor lights when the top lights are dimmed is beautiful.

Bids for the dance may be obtained from B. G. Anderson and the members of his committee: W. A. Stühr, I. M. Footlik, E. C. Mitchell, R. R. Tullgren, R. I. Jaffee, W. E. Kruse, and H. S. Anthon.

## Faculty Attends Cottrell Banquet

Dean Heald in company with eight members of the Armour faculty paid respect to Dr. Frederick Gardner Cottrell by attending a banquet held in his honor last Tuesday at the Drake hotel. The annual Washington Award was presented to Dr. Cottrell by J. R. Van Peet, president of the Western Society of Engineers, in appreciation of Dr. Cottrell's work and "social vision in dedicating to the perpetuation of research the rewards of his achievements in science and engineering."

#### Famed by War Research

Dr. Cottrell will long be remembered as an American chemist, metallurgist, inventor, founder and head of Research Associates, Inc. During the war he was one of the principal directors of the research which resulted in perfecting a process to recover helium from oil well gases at a cost of about ten cents per cubic foot. Previous to that time, helium had been a laboratory curiosity costing \$1,700 a cubic foot.

He is best known as the inventor of the Cottrell precipitator, which, by electrostatic attraction, cleans gases of fine particles of dust and dirt, saving millions of dollars annually for chemical and metallurgical industries. He has also been one of the chief figures behind the commercial productions of fixed nitrogen from the air.

#### Armour Well Represented

Had Dr. Cottrell chosen to commercialize his patents, the precipitator alone would have made him wealthy. Instead he dedicated his work to the benefit of mankind by organizing Research Associates to acquire and administer the profits of his patents to further scientific research.

Armour was represented at the banquet by Dean Heald, assistant Dean C. A. Tibbals, and Professors Finnegan, Oldenburger, Penn. Foulter, Snow, Vagtborg, and Zigler.

## AT MATH CONVENTION



(Evening American Photo)

Miss Armelle Carlson looks over Professor W. A. Spencer's models at the Armour Tech exhibit shown recently at the annual convention of the National Council of Teachers of Mathematics in the Palmer House.

Professor Spencer's models are distinctive in that they are made of bright material as compared with the drab materials formerly employed.

#### Experimenting With Materials

Not content with his products, he is experimenting with many new materials. Cellulose acetate of many colors is being used as planes in the construction of the newer models.

Solids are now being made of plastics which may be moulded before hardening. Previously it was the custom to use any available spherical bodies. The flimsy cords formerly used in modeling have now been replaced by the stronger, more durable fishing cords. Professor Spencer has considered the use of many new materials in future models.