

## Basic Sciences In Physics Lab

Open House wouldn't be complete without the interesting and instructive exhibits of the Physics Department. The exhibits will show the simple principals and their application to modern safety, convenience and sanitation. The experiments will generally be of a more spectacular nature tending to explain simple physical phenomena. The demonstrations will include the following interesting innovations to the subject matter of physics.

**Liquid Air Demonstration**—Liquid air expands or changes from liquid to the gaseous state when in a hot atmosphere.

**Gyroscopic Demonstration** — The gyroscope when attached to a rigid body will tend to keep that body in an upright position.

**Discharge Tube Demonstration**—Electronic tubes display many interesting phenomena when in the various stages of evacuation.

**Polarized Light Demonstration**—Light upon passage through certain substances leaves the surface in only one place.

**Grating Spectra Demonstration** — Finely ruled metal or glass has the property of breaking light up into its characteristic spectra.

**Bernoulli's Principle** — A demonstration of the principle that allows ballplayers to throw curves. The interesting phases will be demonstrated with a ball on a jet, Flettner Rotor Ship and Venturi Tubes.

**Photo-Electric Cell**—Will include applications such as the Photo-Thyratron relay and the Photo-Electric organ.

**Electromagnetism** — Instrumental principal which governs the operation of many modern electrical pieces of apparatus.

**Brownian Movement**—A demonstration to include visible movements of the action of molecules upon particles in solution.

**Radium Exhibit**—Demonstrations of the Geiger Counter, Radium Apparatus and samples. These are but a few of the entertaining exhibits which will greet the visitor to the Physics Department.

## Display Electrochemistry in Theoretical Chem Lab

The physical chemistry laboratory will tonight offer Open House Night visitors a cross-section view of the P Chem laboratory course at Armour Tech. Emphasis will be placed upon the electrochemical determinations performed during the second semester of the junior year although some of the first semester projects will be performed, and an illustrated student's lecture presented.

Electrochemical determinations to be presented are single electrode potentials, hydrogen ion titration, indicator constants, differential electro-metric titration, and conductivity. Electrochemistry of vital importance in the chemical industries and is a major subdivision of physical chemistry. The experiments performed illustrate the fundamentals of the science.

Time reactions, series distillation, surface tension, and the electrolytic principal of freezing by evaporation comprise the second phase of the physical chemistry exhibits.

The properties of solids, a part of the physical chemistry laboratory program, will be illustrated by a student lecturer and demonstration in classroom "A" on the fourth floor.

### JUNIOR WEEK PROGRAM

**Wednesday—May 11**  
3:00-10:00—Open House.  
9:45—Dancing in the Gym.

**Thursday—May 12**  
9:00—Interclass Baseball Finals.

10:30—Interclass Relays.  
11:00—Frosh-Soph Events.  
1:00—Senior-Faculty Baseball Game.  
2:30—Pentathlon.  
8:30—Annual Spring Concert of Musical Clubs and Interfraternity Sing.

**Friday, May 13**  
9:00—Interfraternity Baseball Finals.

10:00—Junior-Senior Events.  
1:00—Interfraternity Pageant and Presentation of Awards.  
3:00—Class Rush.  
Evening—Junior Dance.

## Moreton Delivers Talk over WCFL On Open House

A special broadcast relative to the annual Open House at Armour Institute of Technology was presented over station WCFL Saturday, May 7, in place of the regular applied science educational broadcasts sponsored by Armour at 6:15 P. M.

Professor David Penn Moreton, Director of Public Relations, member of the Institute faculty in the electrical engineering department, alumnus of the Institute in the class of '06, and with the faculty since his graduation, was guest scientist. His combined experiences with industry in the design, manufacturing and executive branches enabled him to discuss thoroughly with Alexander Schreiber the topic for the broadcast, "What Is An Engineer?"

To Prof. Moreton, the engineer is a person who works with the forces and products of nature in order to serve man and to advance civilization. In order to render this service, the engineer must be versed, not only in the theory of a particular study, but he must also be versed in the methods of practical application of that study so that mankind may profit thereby. Fundamentally, the training of a student engineer, is to the end that he may be able to successfully apply theory to practice.

"The visitor at Open House," he said "will see displays calculated to give an insight into the fundamentals of the engineering profession," what he termed the backbone of modern civilization. The exhibits illustrate step by step, the manner in which this technical knowledge is gained. In the basic sciences, such as mathematics, from elementary algebra to integral calculus and differential equations, and physics from Newton's three laws of motion."

Next Saturday, at 6:15 o'clock, Alexander Schreiber will present another broadcast, relating to the field of civil engineering. M. B. Wells, Professor of Civil Engineering at the Institute, will be guest scientist. The subject under discussion will be "Lighter Than Air Craft."

## Freshman Students' Exhibit Stresses Molecular Theory

Students in the freshman laboratories, under the direction of Dr. Van Atta, will present an interest exhibit on the molecular theory—tonight. Experiments on diffusion, effusion, and osmosis will be performed to show their significance to the molecular theory. An attempt is being made to demonstrate the Brownian movement of the molecules on a scale which will permit visitors to see this interesting phenomena.

Augmenting these experiments will be a novel exhibit comparing the alchemist shop and a modern chemical laboratory. Equipment used in the alchemist shop will be contrasted to that used in our modern laboratories.

Freshman students will also perform various experiments from the regular first year chemistry work. A large number of these will be devoted to quantitative and qualitative analysis.

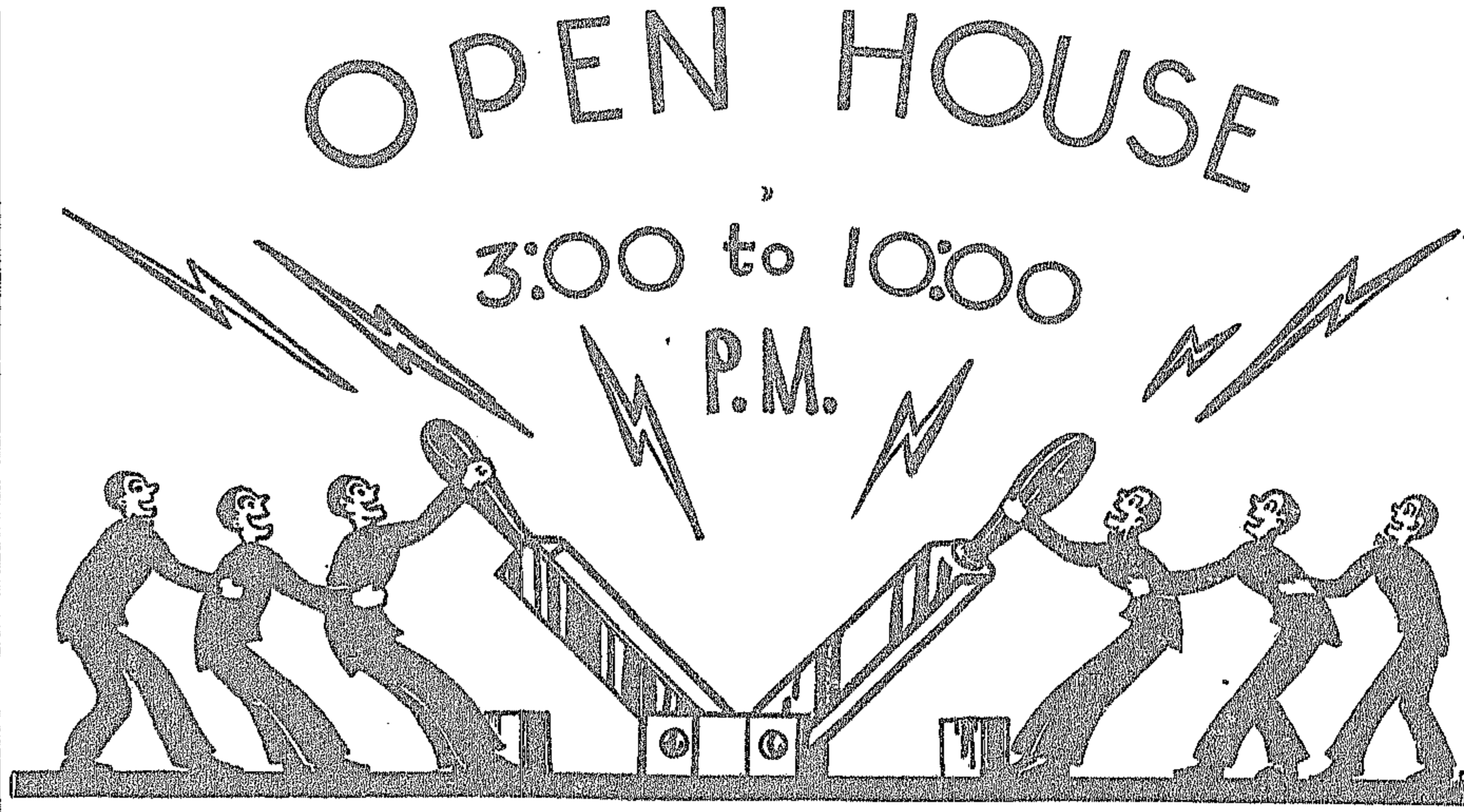
A large part of the display will be devoted to chemical reagents in co-operation with many chemical supply houses. These reagents will vary from the most common type to some of the rare products.

## Time Motion Study Exhibit By Social Science Students

Time and motion study will form the basis of the social science exhibits in C mission tonight. The feature of the exhibit will be a movie illustrating time study methods but this will be supplanted by charts and diagrams relating to social science and economics.

The motion picture of time study was made in part by students taking the course and gives an idea of how a problem in motion study is solved.

With the movies will go a running explanation of the work being done. The charts and models that will be exhibited together with the movies will serve to round out the picture of the type work being done in this field of social science, and will also give some idea of the work that is being done in accounting, economics, and in the special courses offered in the department.



## Radio Club Members Show Student Work for Visitors

Opening their rooms to the public today, the Radio Club will present an extensive display of their equipment. The outstanding feature will be the exhibition of their two way radio transmitting system. In this manner they will communicate with the electrical laboratory in the main building throughout the day. The club's rooms are located on the third floor, second entrance, in the Physics Building.

The radio system operates on the five meter amateur band and enables the club to contact points about the country. Because of electrical disturbances about the school, however, the transmission will be confined within the campus.

## Civil Engineers Have Extensive Open House

The main exhibits of the Civil Department are located in the south end of Chapin Hall. This department has as its branches structural, railway and highway, and sanitary engineering. Each of these branches features displays.

Sanitary engineering has the filtration laboratory at the extreme south end of Chapin Hall. This laboratory occupies three floors and the basement. It is completely equipped to treat every type of raw water on a large scale. The water when coming from the source is first treated with chemicals and passed into large tanks in order to give time for the reaction to take place. When the impurities have coagulated, the water is passed through the sand and gravel filter and kept in the storage tanks in the basement. This plant is capable of handling 10,000 gallons of water a day, which is sufficient to care for a fair sized town.

The structural division features a series of models and drawings of various structural members and bridges. The soil mechanics laboratory which is connected with this division is designed to make tests on every type of soil.

## JUNIOR DANCE—

(Continued from page one)

den rapidly springing into bloom and a spacious vine-covered veranda. With a spring moon in the skies, these should prove excellent hunting grounds for Dan Cupid. Should weather permit the outdoor dance floor adjoining the garden will also be used.

The Olympia Fields Club is located on Western avenue near Lincoln Highway, 3.6 miles south of Homewood. The club may also be reached conveniently by means of the Illinois Central Railroad, the station being located some three hundred feet from the club entrance. To avoid all confusion the committee has had a map drawn showing the location of the club and the various routes by which it may be reached. Copies may be obtained from the Registrar's office.

## SCHOLARSHIP EXAMS—

(Continued from page one)

Chicago and suburbs, examinations will be given by the high school principal, and interviews by a representative of Armour, (alumnus) in their vicinity.

Approximately 120 students have been interviewed and have presented their applications. Judging from this, there will probably be about 200 competing for the scholarships.

## Organic Lab Again Has Unified Show

The organic chemistry laboratory on the 4th floor, Main building, as in previous years, will present an elaborate demonstration on Open House Night under the supervision of Drs. B. B. Freud and R. H. Manley. This exhibit has gained wide prominence in previous years for the manner of presentation is unique in that preparations for its showing are made many months in advance. A central theme is chosen around which the motif of the exhibit is planned. This theme represents a particular portion or branch of modern chemistry and its application to industry.

A formal organization is formed by the organic chemistry students who perform their duties under the guidance of a student director, J. R. Meyer. Each student has been responsible for the successful completion of one experiment. These factors, coordinated with the central theme, permit a well balanced and interesting presentation.

Color in chemistry, which was the theme last year will be augmented this year by a new and modern subject, "Man Made Molecules." Molecules not found in nature are "built" to man's specifications. Color, odor and physical and chemical properties may be imparted to the molecules by the chemist in the laboratory.

## Electricals' Lab Has Varied Show

At least a million volts of high frequency electrical energy will leap across the seven foot spark gap in Armour Mission tomorrow as visitors look on.

The "electrical engineer" type of person will of course never tire of the stream of sparks in Mission at all, but if he does, he can come into the Electric Laboratory on the second floor and watch Jacob's Ladder, a 50,000 volt arc between salt water streams, or "red hot" wires sizzling under water and yet continuing to glow.

To the Romeo type: Don't fail to bring your girl friend. In a quiet romantic corner of the laboratory the Kiss-O-Meter will be set up.

The "safe cracker" type will be especially interested in modern vault protecting systems. A grid glow tube relay detects the mere presence of a person due to his "body capacity," and rings a warning bell.

For surgeons and medical students the electric knife and the high frequency "fever machine" will be demonstrated.

Lawyers and liars will enjoy the Emotional Stability Detector, a variation of the well known Lie Detector.

Marksmen can test their skill on a rifle that does not shoot bullets. Only a beam of light is used; a photoelectric cell concealed in the bulls-eye tells when a hit is made.

The television laboratory will feature a pair of television telephones. This is the type that is now being used in foreign countries and should illustrate the great possibilities open in the television field.

Among the other exhibits of the electrical department are: operation of dial telephones, stroboscopes, electrical cost meters, the electric candle, the photo-chemical switch, magnetic field experiments, etc. The dynamo laboratory on the first floor will be running full blast. Amateur radio station, W9YW, will carry on two way communication with transmitters in the electrical laboratory.

## F. P. E. Students Show New Inventions

According to chairman Howard Downing, the Open House exhibit sponsored by the Fire Protection Engineering department will be one of the most interesting that has ever been presented. The apparatus displayed will cover almost every phase of Fire Protection Engineering from the problems concerning exposure of buildings to putting out fires.

The small model village that was set up for Open House last year will be on display again tonight. This toy town has in it all of the things that are taken into account when a building is given its rating for the insurance companies. There are small structures situated on several different streets, all completely equipped with curbstones and fire hydrants. The use of the village is a graphical means of demonstrating the fire hazards that exist from exposures, communicating bridges, and types of building construction. This village makes it possible for the uninitiated visitor to understand with ease the rating principles.

In addition to the model village there will also be a complete assortment of fire extinguishers on exhibition. The standard soda-acid type will be shown in several of the approved sizes and their construction and action will be explained by the men on duty. Along with the soda-acid extinguishers will be the carbon dioxide pressure type, used where gasoline, electrical, or oil fires are a hazard, and the pyrene hand extinguisher for home use. Finally there will be the foaming type such as is used at the present time in the chemical laboratories.

Along the line of public protective measures there will be several pieces of equipment that are used by the Chicago fire department. These will include an alarm recording device, one of the most ingenious inventions of our time, and one of the swinging radiator lights that have been placed on all of the regular fire department vehicles. Finally, there will be the usual siren, one of the big noises of Open House night.

The private fire protection devices of automatic sprinklers will be prominently displayed.

grinding, boring and shaping machines. In the welding and heat treating shop, flame hardening of gear teeth and all types of electric arc and gas welding will be shown. Many special welding machines will also be shown. Among these are a pipe cutting and welding machines, radial and straight line cutting machines and a special alloy surface welding device for coating hard wearing edges and surfaces with a special hard rod.

Foundry work will include sand testing, mold and core making. Aluminum castings will be poured frequently during the afternoon. Over two thousand pounds of cast iron will be poured during the evening.

## Mechs Exhibit Students' Work

Prominent among the exhibits in the open house program are the demonstrations offered by the various laboratories and shops of the Mechanical Engineering Department. In the Material Testing Laboratory, which is located in the basement of the Main Building, various testing machines will be shown subjecting concrete and steel test pieces to compressive tension, hardness and torsional tests. A testing machine of 200,000 pounds capacity will be featured. The hydraulics laboratory will demonstrate hydraulic motors, liquid flow measurements and air circulation equipment.

### Steam Turbines and Pumps

Steam laboratory exhibits will include steam turbines, air compressors, a Corliss engine, injectors, surface condensers, a Marsh type pump and a Wack engine. In the oil testing laboratory frictional and "oiliness" tests will be made. Problems arising from heat transfers through pipe coverings and insulation materials will be shown in the heat transfer laboratory. These are located in the Research Laboratory Buildings.

North of Machinery hall on Federal Street, the Automotive laboratory will operate many recent models of famous Diesel motors. A horsepower test will be run using a 1937 Chrysler Royal engine on a Midwest Potential dynamometer. Featured will be an R.C.A. Cathode compression pressure indicator which will be mounted on a Fairbanks Morse "packaged" power plant. This device receives the pressure changes from a variable quartz pressure crystal which is then amplified 100,000 times. A cutaway automobile chassis, lubricant testing machines, and various orifice tests will be shown.

### Shops in Operation

Machinery Hall will have most of its shops in operation. The machine shop will illustrate the use of the lathe, milling machine, gear cutting,

**MAJ. GEORGE  
MASON**

GRADUATED FROM THE UNIVERSITY OF MICHIGAN AT THE AGE OF 93! AT 21 HE WAS WITHIN A FEW WEEKS OF RECEIVING HIS DEGREE WHEN HE ENLISTED IN THE CIVIL WAR. HE WAS PRESENTED WITH HIS SHEEPSKIN 72 YEARS LATER!



**ALEXANDER WOLLCOTT**

WAS NEARLY VOTED OUT OF HIS FRATERNITY BECAUSE HE INSISTED ON WEARING A RED FEZ AROUND THE HOUSE. GOX - HAMILTON COLLEGE.



**DE-PANTSING —**

AT ARMOUR TECH (CHICAGO) ALL FRESHMEN REFUSING TO WEAR GREEN CAPS ARE STRIPPED OF THEIR PANTS AND REQUIRED TO WALK IN SUCH A STATE TO ALL CLASSES DURING THE DAY!

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