

### ROESCH TRACES AUTO GROWTH IN RADIO ADDRESS

Lectures were delivered by Professor Daniel Roesch on November 17 and November 20, from station WJJD on the subject of automotive engineering. A resume of his address follows.

At the present time there are more than 25,000,000 automotive vehicles in the United States; this number being greater than the number of telephones, and twice as great as the number of radios in the United States.

#### Industry Has Wide Effects

The automobile industry has caused activity in more fields than can be appreciated. Moreover, automobiles pay their own way. The taxes on gasoline alone often amount to the wholesale price of gasoline.

Cugnot developed the first self-propelled vehicle in France in 1770. This machine was driven by steam.

The patent for the first internal combustion engine was issued in England in 1794 to Robert Street.

After this a great many inventions and developments were made. In 1867 the Otto engine was invented, and it dominated the market for about 25 years because of its superiority.

In 1885 the first gasoline engine automobile was developed by Benz of Germany, and a Benz car exhibited at the World's Fair in 1893 was the first car imported to America.

#### Gas Surpass Steam Driven

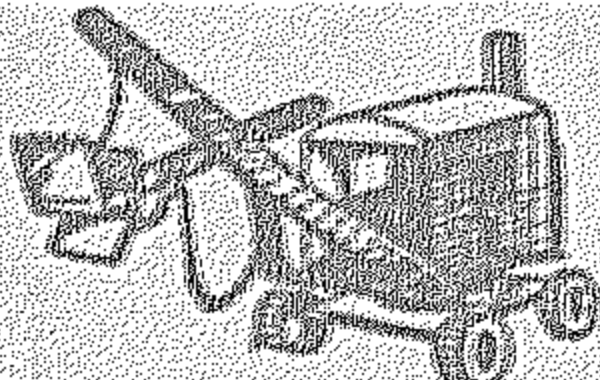
After that date a number of American manufacturers began to produce cars, and among them was Henry Ford. A few steam driven cars were produced, but they have been superseded by the gasoline automobile.

The efforts of modern automotive engineers have been almost totally directed towards the attainment of performance in automobiles. This also implies a car that has been built with consideration to safety, reliability, first cost and maintenance costs.

One of the most important problems today is the lowering of wind resistance. At 40 miles per hour the wind resistance is about equal to all of the other power requirements of the car, and at 64 miles per hour this loss is quadrupled.

Another important point is the development of adequate brakes. The braking power of a car represents negative power, and under extreme conditions the negative power developed by a heavy car may be ten times the engine power. A modern

### THE STEAM SHOVEL



Rumor has it that M. J. Winegrand is now experimenting with high vacuum lines. He says the results will not be known until early in February.

Boleslaus Job was relieved of what Ernest Tapes is wont to call a bird-sute adornment. The would-be moustahe was removed with clippers instead of the usual razor.

#### Barnett:

All is forgiven. Please return the watch.

#### Carpenter:

Question of the week—name the three junctions who insist on wearing ties of the same pattern. It is said that they are all cut from the same wormed pajamas.

The junior civils went in for interior decorating last Tuesday. H. Chapin was trimmed with beautiful white tissue paper that is so familiar to all of us.

The bulging melodies of the Glee Club rehearsals overpowered Frank Sorenson to such an extent that it took Mr. Erickson some time to bring him back to reality.

It has been reported that A. Cohen and W. Gundersen were practicing ballet dancing in Physics lab last Monday. Long may they live and not damage their socks.

car operated at a speed of 60 miles per hour has enough energy of motion to raise itself vertically 120 feet. This shows the importance of good brakes.

The automobile industries have caused a great many developments in the processes of refining, and one of the important processes is the hydrogenation of crude oils. Automobiles in the United States use an amount of gasoline yearly equal to the flow of water over Niagara Falls for an hour and a half.

In concluding Professor Roesch pointed out the developments in the alloy steel industry and the rubber industry caused by the automobile industry, and also commented on the quality of the various grades of gasoline on sale today.

### Fraternity Notes

#### PHI KAPPA SIGMA

The annual Pledge Dance will be held at the house Saturday, December 10th.

Each year this dance is planned and given by the pledges for the active chapter and their friends. The pledges assure us that everything points to a dance that will be both unusual and entertaining.

Brother Jack Herby '30, Ensign of the United States Naval Air Corps, and member of the High Hat Squadron, is in the city now, working for Hertz and Company.

#### SIGMA KAPPA DELTA

Brother Babcock has returned from the Mercy Hospital after recovering from an injury suffered during wrestling practice. The finals in the singles ping pong match resulted in G. Reed defeating R. Larson in three straight matches.

Edward "Red" Anderson, x-29 visited the house last Wednesday noon. He says that marriage is treating him fine.

#### THETA XI

Plans are underway for a Formal Dinner Dance to be held in the Chapter house on Friday evening, December 16.

Many of the fellows spent the Thanksgiving vacation at their respective homes. Brother Willis was a guest of Brother Ellis at his home in Petoskey, Michigan. Brother Belmont spent Thanksgiving day at Joliet with Brother Larson. Those who stayed at the Chapter house made

good use of the vacation by catching up on sleep.

#### BETA PSI

Probation Week started last Saturday at noon for Pledges Bristol and Searl. Brother Kubicka has been appointed pledge captain to replace Brother Anderson who resigned because of lack of time.

A practice basketball game was held last Wednesday with the Salem Evangelical team. The final score was 18-14 in our favor.

The Christmas dance is planned for Saturday, December 17.

#### DELTA TAU DELTA

The annual pledge dance was held Saturday, November 26. We wish to take this opportunity to compliment this year's class on the success with which their effort was rewarded. The house was nicely decorated and music was furnished by a good band.

Brother George Bills spent last Tuesday at the house. Brothers Bills, Tucker, and Mel were present at the dance.

Sunday, December 11, marks the date of the December Mothers' Club Tea. After the success of the last meeting it seems that the function will be very successful. The mothers seem to be looking forward to the event with the same degree of anticipation as the chapter and it looks very promising.

### Electricals Hear Talk on Relays

Last Friday morning, the A. I. E. E. held a meeting in which it was addressed by Mr. Levy of the sales promotional department of the Automatic Electrical Company.

Mr. Levy consumed most of his time in explaining in detail the uses and operations of the relay, especially in connection with the automatic telephone systems which are gradually becoming more and more commonly used. This method does away with the operator at the switch board, automatically selects the desired number, and by the intricate system of relays, even rings the person called, not to mention the fact that it can, if occasion demands, return a busy signal to the caller. The talk was accompanied by a series of slides, which enabled the members present to get a clarified idea of what was meant, and to simplify the explanation. Mr. Levy went on to point out that these relays were not merely confined to use in telephone systems, but that they had a thousand and one uses in the commercial field, and showed this to be true by giving (as an example) a certain race track in England. It

### F. P. E. S. to Hear Adjuster's Talk

Mr. Frank L. Erion, insurance adjuster, will talk on the principles of fire loss adjustment and the influence of present business conditions, at the next meeting of the F. P. E. S. The meeting is to be held Friday, December 9, in room D Mission.

This phase of the insurance business should be of great interest to all fire protection engineering students as it is closely associated with their line of work.

has a large, electrically controlled board, on which appears the names of the horses entered, the total amount of money bet on each horse, the odds given, and is so constructed that it has an electric press, printing the tickets for the race which is just about to be run. It is made possible thereby, for a person at the controls, to shut off the power, stop the presses, and so making it impossible for tickets to be sold after the race has begun.

The attention given to Mr. Levy's talk, was the best indication of the interest of the members, and of a well-presented speech.

## ALICE RESTAURANT

3117 Wentworth Avenue

Special Student Plate Lunches - - 25c

including

BREAD, BUTTER, COFFEE or TEA, DESSERT

Home Cooking



*"You're telling ME they're Milder?"*

EVERYWHERE I go, I have to listen to the same thing. "Try Chesterfields. Honestly, they are milder, and you simply must try them!"

"Me . . . try Chesterfields! Why, I haven't smoked anything else. That's how important mildness and better taste are to me!"

"No wonder Chesterfield smokers are so enthusiastic."

THEY'RE Milder —  
THEY TASTE BETTER

CHESTERFIELD RADIO PROGRAM  
Every night except Sunday, Columbia  
Coast-to-Coast Network.



### Entrance Examinations to Decide Awarding of Freshman Scholarships

Previous to the 1932-33 college year, it has been the custom to grant scholarships in the Freshman year to one student from each of the Chicago public high schools. Candidates were chosen by the principals and faculties of the schools represented. These scholarships have been discontinued.

For the college year 1933-34, ten scholarships will be awarded for the Freshman year in behalf of male students from any accredited preparatory school or high school. The scholarships provide for free tuition for the Freshman year, at present \$250.00. The selection of these scholarships will be based on the ratings of competitive examinations to be held in May of each year, and also on the personality, extra curricular activities, and general fitness of the candidates. The next examination will be held at Armour Institute of Technology, beginning on Monday, May 22, 1933. A detailed schedule will be sent to all applicants previous to that date. These examinations will be in the following subjects:

English: The entrance examination in English will require the writing of an acceptable short article on an assigned topic, and the answering of such questions as are treated in Woolley's "Handbook of Good English," or a text of similar scope.

Mathematics: The examination in Algebra will be based on such topics as are found in "Modern Algebra," Wells and Hart, pages 1 to 161, or in similar text books.

History or Civics: History of the United States: The student should be familiar with the salient facts given in such a text as Bogart's "An Economic History of the United States," or Muzey's "History of the American People." Special emphasis will be placed on industrial development.

Civil Government: S. H. Freeman's "The American Democracy," or W. E. Gannett's "Government and Politics in the United States," represent the work that should be covered for preparation in this subject.

Physics or Chemistry: Physics: Satisfactory preparation for the examination in Physics may be obtained from any of the well-known text books on Physics used in accredited high schools, such as "New Practical Physics," by Black and Davis.

Chemistry: Preparation for the examination in Chemistry may be obtained from Holmen and Matheson's "Elements of Chemistry," or Smith's "Fundamentals of Modern Chemistry," or their equivalent. Emphasis should be placed upon the fundamentals of the science, such as, clear definition of the terms peculiar to chemistry, the laws of chemical combination, atomic theory, modern ideas of valence and ionization, practice in the derivation and use of chemical formulas, writing of equations, and solving of simple problems to determine quantities involved in a chemical reaction. These principles should be developed from a study of the more common non-metallic elements, but some study should be made of the metals and their more important compounds.

Scholarships will be awarded only to students who qualify in the requirements for entrance as outlined on pages 16 to 19, inclusive, of the General Information Number, Bulletin of Armour Institute of Technology, May, 1932.

Advance registration for these examinations must be made previous to May 15, 1933. Address Office of Deans, Armour Institute of Technology, Chicago.