

# ARMOUR TECH NEWS

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## Why Not An Educated Engineer?

What is the magic formula for success in this age of miracles? Ask it of Henry Ford. Ask it of Charles M. Schwab. Ask it of Herbert Hoover. Ask it of any successful man of affairs today. Almost without exception you will receive as your answer, "Specialization." That one word comes nearest to containing the summary of our modern economic structure. It best accounts for the phenomenal achievements of men today, both as individuals, and as great organizations of men which we call corporations.

But when in a man's life should specialization begin? Can we take a child from the cradle and say to it, "You are to become an electrical engineer. From henceforth your training will be carried out with that aim in mind." Would we not, in our zeal to teach that individual more about electricity than anyone else knows, build up such an unbalanced brain that his knowledge of electricity would be utterly useless because it lacked the complement of knowledge about other men's affairs?

That is an extreme case. But where is the line of demarcation between the extreme case and the best interests of the individual? At present, prevailing practice among engineering schools seems to hold that the line exists between the freshman and the sophomore stages of the engineer. At that time the student begins certain studies which are very specialized, and apply more or less only to the branch of engineering work he has chosen. Unfortunately, already a year before he begins his specialization, he is required to name in which department he will specialize.

Dr. Harvey N. Davis, recently inaugurated to the presidency of Stevens Institute of Technology at Hoboken, believes that an embryo engineer should not begin to specialize until after he has finished college. He advocates a general engineering course which should include the fundamentals of all engineering, and which would emphasize the training of the mind in how to think, rather than in how to remember facts. He cites the many cases of men of his acquaintance who distinguished themselves in engineering fields other than that for which they supposedly trained. And he is of the opinion that part of their success was due to the fact that they had the advantage of broader training over the fellow who stuck to the line he began with in his undergraduate days.

A study of our own Institute's bulletin, which contains a list of graduates, their courses and their present positions, offers additional evidence on the same truth, namely, that many engineers win success in a branch other than that for which they tried to specialize in college.

We are of the opinion that Dr. Davis is absolutely right. We believe that there would be far fewer misfits in engineering if a student could defer his choice of a life's work at least till he is ready to graduate from college, and in the meantime equip himself with a thorough course in those principles of science, engineering, and the arts, which are necessary for a well-rounded life in any field of engineering endeavor. Along with a thorough and comprehensive training in mathematics, physics, chemistry, mechanics, thermodynamics, electro-dynamics, hydro and aero-dynamics should be given a parallel liberal training, such as in history, literature, economics, philosophy, psychology, and related subjects. Throughout the course the economic and the human sides of engineering would be consistently emphasized.

Dr. Davis summarizes the principle of his belief as

## THE SLIPSTICK

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

## Meditations

The breath of life is Calculus,  
The darn stuff's in my dreams.  
When I get thru, the room's a muss,  
And I'm a wreck it seems.

I'd like to know the guy who doped  
Out calc. for me to do;  
And should we meet (as I have hoped)  
Well, I'll leave the rest to you.

—F. F. S.

What's the shape of the earth?" asked Dean Penn of a sleepy civil.

"Round."

"How do you know it's round?"

"All right, it's square then. I don't want to start any argument about it."

Sign—

## Ladies' Ready-to-Wear Clothes

It's about time they were changing their minds.

—F. B. A.

### Fadeout

He: "Darling, I kissed the very stamps on your letters because I knew that they had been touched by your own sweet lips."

She: "Oh! I moistened them on dear old Fido's nose."

The Bulletin of the American Chemical Society ran this, and we take the liberty of reproducing it:

### A New Element

Symbol. Wo.

A member of the human family.

Occurrence. Can be found wherever man exists. Seldom occurs free or in the native state. Quality depends upon the state in which it was found. Usually the combined state is to be preferred.

Physical Properties. All colors and sizes. Always appears in disguised condition. Surface seldom unprotected by coating of paint or film of powder. Boils at nothing and freezes at any moment. Very bitter if not properly used.

Chemical Properties. Extremely active. Possesses a great affinity for gold, silver, and precious stones. Ability to absorb all kinds of expensive foods, but activity is greatly increased when saturated with spirit solution. Sometimes yields to pressure. Turns green when placed to a better looking sample. Ages rapidly. Highly dangerous, and explosive in inexperienced hands.

### A Little Heady

Why does a Scotchman marry a blonde?

I dunno, why?

Light overhead.

—Freddie.

Broke: Say, old pal, can you lend me five till Monday.  
Rich: I'm sorry, I'm deaf, and I can't hear a word you say.

Broke: Give me a pencil then; I'll write it.

Rich: It won't do you a bit of good, I can't read a word.

—F.B.A.

Friend K.K.K. claims that this is real courtesy:—  
Kindly Keep Your Hands Off. This Wire Carries 20,000 Volts. Thank You.

When the iceman came out of the house he found a small boy sitting on one of his blocks of ice. "Hey," he roared, wot are yer sittin' there fer. Git out!"

The small boy raised a tear-stained face. "Was you ever a boy?" he asked, faintly.

"Of course I was," yelled the iceman, fuming.

"And did you never play hooky?" broke in the lad.

"Of course I did," snarled the iceman, "Now then, you—"

"And when you got home did yer father take a stick—"

"Sit where you are, my little man," the iceman said, gulping, "I understand."

A parking space is where you pay to have those little dents made in the fenders.

—Freddie.

Man Alive! You Must Have the Dreaded "Water on the Brain!"

Dear Al,

On receiving my physics experiment back for correction, I noticed "Presence of Moisture" scrawled across the front. I immediately added a discussion that was all wet. Did I do the right thing?

—P.J.

We feel pretty low; last week a contrib sent in a joke that we ran in the column a month ago.

follows: "Why waste time in an engineering school learning details, descriptions of processes and of machines, tricks of technique of hand or brain, or even miscellaneous facts, all of which, in so far as one wants them at all, can be learned far more effectively on the job. Why not devote one's time in the school in learning what one may never have another chance to learn, namely, fundamental principles, and how to think?"

We believe the day is not far distant when this principle will be widely accepted and applied in all first class engineering schools. When that day comes, the engineering graduate will really be an educated man, and will take an even more important place in the leadership of human affairs.

## Head of Mechanical Engineering



George F. Gebhardt  
(A Biographical Sketch)

By T. J. LEARDI, '29

One of the outstanding faculty members is Professor Gebhardt, head of the department of Mechanical Engineering, who has been teaching at the Institute for nearly thirty years.

Professor Gebhardt was born in 1874 in Salt Lake City, Utah. His early education was obtained at the Collegiate Institute, a sectarian school. When sixteen years of age, he entered Knox College, taking the regular literary course, but two years later he left Knox, going to Cornell to study Mechanical Engineering. Four years later, at the age of twenty-two, he secured his M. E. from Cornell, and, by making up all his literary subjects, he also received his A. B. degree from Knox. Three years later, he received his M. S. from Knox College.

After his college days were over, a choice of professions was to be made. He decided to become a mining engineer, so he went back to Utah and worked in the mines in various capacities. Professor Gebhardt had an abhorrence for teaching, but when the hard times of 1897 came, he finally secured an appointment at Armour as the instructor in machine design, thus being forced by circumstances to take up teaching.

Although he thought to make teaching a temporary connection until something more to his liking turned up, he found that making competent engineers out of fifteen green freshmen was a fascinating study, and that repetition year after year did not bore him. It is no wonder then, that in the next five years, he was made assistant professor in machine design, then associate professor, and finally, in 1908, professor of Mechanical Engineering.

## REVIEWS

By JOEL M. JACOBSON, '29

### JARNEGAN

By Charles Beahan and Garrett Fort

Presented at the Woods Theatre by B. W. Sanger.

Undoubtedly the majority of Armour Students have heard many comments, good and bad, about this play. It is very necessary, however, that anyone thinking of seeing Jarnegan should not make up his mind as to its merits before seeing it. The plot is certainly morally disgusting, as a certain eminent Chicago lawyer said, "It reminds me of a dead corpse floating to shore by moonlight." The acting of the star, Richard Bennett as Jarnegan, is flawless. Though all the characters are exceptionally good, he outshines them all. The story is simple. Jack Jarnegan, ex-convict, becomes Hollywood's most famous movie director. He controls Hollywood's tragedies and comedies, pulling strings here and there to suit his fancy. The life the play portrays is rotten to the core but the portrayal is full of good humor and some deep philosophy, though it often tends to be rather morbid. At the close Jarnegan cries, "If I were the master electrician of the world I'd pull the switch and blow it out."

Go to the Woods for some excellent acting and for some good laughs, but see the play with an open and unbiased mind.

—J. E.

Power-plant engineering is Professor Gebhardt's specialty. He is an authority on the subject, his book being used as a standard text in every country in the world where engineering is taught. He has also done a great deal of research work, including the construction of testing machines. Among the subjects may be mentioned belt transmission, ball-bearing friction, tire-shock absorption and flow of fluids. He has designed the Gebhardt steam meter, and also numerous laboratory machines for testing engineering materials. In addition to the book already mentioned, he has prepared pamphlets for the school use on governors and the dynamics of steam engines. He is a member of the American Society of Mechanical Engineers, the Western Society of Engineers, and the National Association of Stationary Engineers. He is also chairman of the board of advisory engineers for the Smoke Abatement Bureau of Chicago. In fraternal life he belongs to the University Club, is a Phi Delta Theta, and a Tau Beta Pi.

Professor Gebhardt likes to fish and hunt. We have his word that he would rather sit out in a swamp and shiver shooting ducks than do anything in the educational line.

Professor Gebhardt was married in 1914 to Edith M. Jensen and he is the father of two daughters, Mildred and Sally.



## Where Safety Rules

Although passenger traffic on the railroads in recent years has suffered as a result of the inroads of competing means of transportation, both public and private, the traveler by rail is still assured of one advantage which he can obtain in no other way—and that is the utmost in safety.

No other form of passenger transportation even approximates the safety of the railroad. It has been well said that the average passenger is safer on the train than in his own home or anywhere else in the world. In 1927, the last year for which complete information is available, the number of passengers killed in railway accidents in this country averaged 1,047 per 10,000,000 passenger trips. Ten years before it was 2,711; twenty years before, 6,978. Only ten of the eighty-two passengers who lost their lives in 1927 were killed as the result of accidents to trains. The others met death at getting on and off cars or when struck by trains at stations.

The safety of railway employment has improved, the death rate from accidents declining from 2.710 per thousand persons employed in train operations, including shop work, in 1907 to 1.745 in 1917 and 0.880 in 1927.

Only in highway grade-crossing accidents, where the automobile primarily figures, has the total number of fatalities more or less steadily increased. A decrease was shown in 1927 as compared with 1926, however, and for several years the ratio of fatalities to the total number of automobiles has declined.

Millions of dollars have been invested by the railroads to insure the safety of their patrons, their employees and those who cross their tracks. Every safety device which human ingenuity has perfected has been utilized by them. The safety education of their employees is constantly in progress. "When in doubt pursue the safe course" is a railway maxim. Every railroad of any size has a safety department, and the work of these departments is correlated in the Safety Section of the American Railway Association and the Steam Railroad Section of the National Safety Council.

Constructive criticism and suggestions are invited.

L. A. DOWNS,  
President, Illinois Central System.

CHICAGO, March 15, 1929.

(Three hundred nine students in forty-six colleges and universities have submitted essays in the Illinois Central System's contest on "The Future of the Railroads," which closed February 28. The results should be ready for announcement some time in April.)