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# GRADS IN INDUSTRY

By Roger Scott, I.E. 3

*This is another in a series of articles, designed to acquaint the students of the College of Engineering with a few of the more prominent graduate engineers, their experiences, their career and their accomplishments.*

*With this purpose in mind, the author has asked and received generous cooperation from Mr. Worstell and Mr. Cooper in supplying information vitally necessary for this writing.*

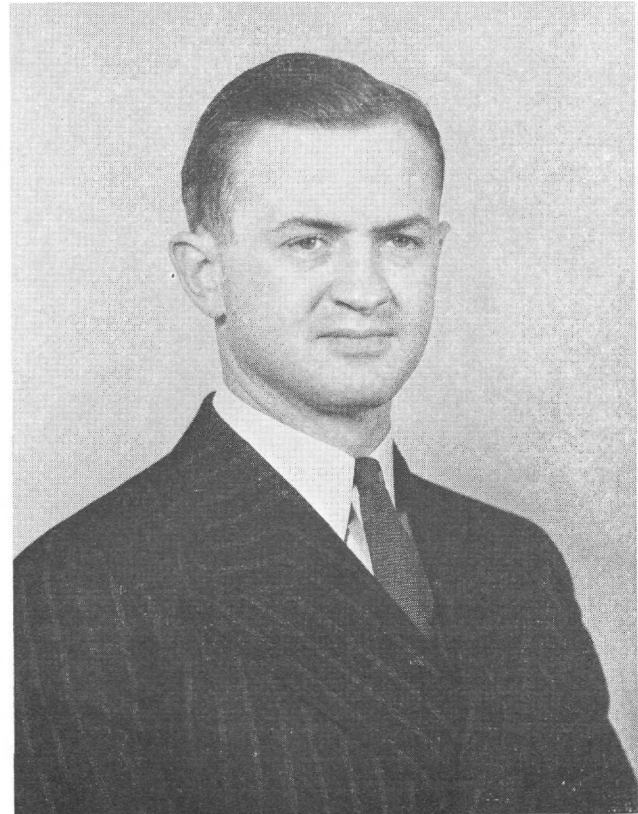
**HILLIS M. WORSTELL** graduated from the Ohio State University in June, 1934. In the earlier days he attended Bloomdale High School, Bloomdale, Ohio and also attended Elgin Academy at Elgin, Illinois. He entered Ohio State University in the fall of 1928 and majored in Industrial Engineering. As a student, he was secretary of the Student Society of Industrial Engineers in 1930 and he was a member of the Triangle Fraternity.

Hillis does not feel that he has reached his mark in his career yet, as he has spent only six years in industry, but I believe some of the things that he has learned and experienced will be of interest to many.

Mr. Worstell states that "Chief" John Younger prepared him, as well as others, to fill jobs in industry with the most excellent of backgrounds. One of the outstanding incidents that Hillis always remembered is one that occurred when the Chief was taking a walk through the machine shop. Jokingly one of his fellow students dared him to offer to shake hands with the Chief. At that moment, his hands were covered with cast iron dust and were very black from turning a pulley for a bench grinder on his lathe. The dare was accepted and just before taking his hand, Hillis tried to back out, but the Chief in his commanding way insisted. After shaking hands and getting his own hand dirty, Mr. Younger said, "My hands will wash just the same as yours; I never want to hear of you refusing to shake hands with any one regardless of how dirty his hands are." Hillis later said, "At the moment of the incident I could not foresee the full meaning, but today I have many friends in shops that are friends because the practical joke has been turned into a good applicable lesson."

The Warner and Swasey Company, turret lathe builders, selected Hillis after his graduation together with three others for their special apprentice course. This course consisted of eighteen months training in the various departments of their factory. In this period emphasis was placed on learning the various applications of machine tools rather than becoming proficient on any particular one.

During the factory course there were several in-



Mr. Hillis M. Worstell

structive meetings with the officers of the company at which time they found out many of the details pertaining to their particular duties. The officers gladly answered all questions and impressed upon them that they should feel free at any time to come to them with their problems. These meetings were designed to give an insight into principles that make a successful business. They also were taught that there is always a chance for advancement; that advancements are effected through ability to "deliver the goods" and that this country grows as we, the young people grow.

With this background then, in January, 1936, Mr. Worstell was sent to Pittsburgh, Pennsylvania to be the Warner and Swasey Company Sales Engineer. In March, 1940 he was transferred to the New York territory again as a Sales Engineer but in a more productive territory as far as turret lathes go.

**Sales Experience**, learned by Mr. Worstell during the six and one-half years since graduating from Ohio State University, stands out as an important factor in one's career. He stated: "Everything resolves itself into a form of selling. In school we sold our knowledge for grades. The graduate sells his ability, knowledge and personality for a place in his profes-

sion. The apprentice sells his ability to those for whom he works for an opportunity to advance. All of the work we do and the efforts we put forth are forms of selling to our superiors the idea that we deserve advancements. Everyone has reached his particular station in life and will stay there or advance, depending on the type and amount of effort spent in selling himself. A person who is satisfied to operate a drill press and to produce one dollar's worth of work for one dollar in wages isn't selling for an advancement but for the chance to stay where he is.

"In connection with this phase of selling, memory recalls an incident that contains its lesson. Only once have I ever requested a raise in pay. At that time my superior informed me that whenever I decided I was not being advanced fast enough or whenever I did not have faith in the company, I should start looking for a job with a company in which I did have that faith. In other words, if you 'deliver the goods' worth more than you're paid, the advancement you've been trying to sell will be forthcoming.

"A man must make fundamental decisions in purchasing anything. In our selling, therefore, we must keep these eight points in mind. Some of these decisions are made easily—others with more difficulty and there are many ways of approaching each decision. Here are the decisions:

1. I will **see** this man.
2. I will **listen** to this man.
3. I **want the results** this man offers.
4. This is the **brand** I want.
5. The **price and terms** are right.
6. This is the **man** from whom I'll buy.
7. This is the **company** from which I'll buy.
8. Now is the **time** I wish to buy.

If there is a negative decision on any one of the above mentioned points the automobile will not be sold, the turret lathe will not be sold, the drill press operator will not get his raise, the engineering student will not get his job in industry and YOU will not be advanced."

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## CHARLES P. COOPER

CHARLES P. COOPER, Vice President of The American Telephone and Telegraph Company was born August 23, 1884 at Caldwell, Ohio. After attending Caldwell High School, he entered Ohio State University and graduated in 1907 with the degree of M. E. in Electrical Engineering. While in college, he supported himself largely by his own efforts, attained scholastic honors, was president of the senior class, and a member of Sigma Xi, national honorary scientific fraternity. He received honorary degree of Doctor of Science from Ohio State University in June, 1939.

Mr. Cooper taught electrical engineering and mathematics at New Hampshire State College for one year, and in 1908 he entered the Bell System as junior engineer for The New York Telephone Company at Newark, New Jersey. Three months after entering this service he was promoted to District Plant Engineer. In July, 1909 he was assigned to special engineering work and later became division plant engineer. In 1911, Mr. Cooper was transferred to Long Island where he obtained considerable practical experience in construction and equipment of telephone lines. The appraisal of telephone properties engaged Mr. Cooper's attention during 1914. Two years later, he was appointed Division Plant Superintendent of New York Telephone Company at Albany, New York and then transferred to Washington, D. C., April 1918, to assist the Chesapeake and Potomac Telephone Company in meeting urgent needs for wartime expansion of telephone facilities at the National Capital, and was promoted to General Plant Supt. of C. and P. Company.

In April 1920, he returned to his native Ohio as General Manager of the Cleveland Telephone Company. When the company became the Ohio Bell Telephone Company in 1921, Mr. Cooper was retained as General Manager. Upon consolidation of The Ohio Bell and Ohio State Telephone companies later that year, he became Vice President and General Manager. On November 27, 1923, he was elected President of

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Mr. Charles P. Cooper

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the Ohio Bell Telephone Company, at the age of 39, and in 1926 was elected Vice President of The American Telephone and Telegraph Company, New York City, in charge of certain branches of operating administration.

Here are Mr. Cooper's other activities: Director of American Telephone and Telegraph Company, and

the Guaranty Trust Company of New York; Trustee of the Mutual Life Insurance Company of New York; Board of Managers, Neurological Institute of New York, The Presbyterian Hospital in the City of New York, The Babies Hospital of the City of New York; member of The American Institute E. E., Sigma Xi, Tau Beta Pi, Ohio State University Faculty Club, Ohio Society of New York, The Links, University Club, Sleepy Hollow Country Club, Garden City Golf Club and Woods Hole Golf Club.