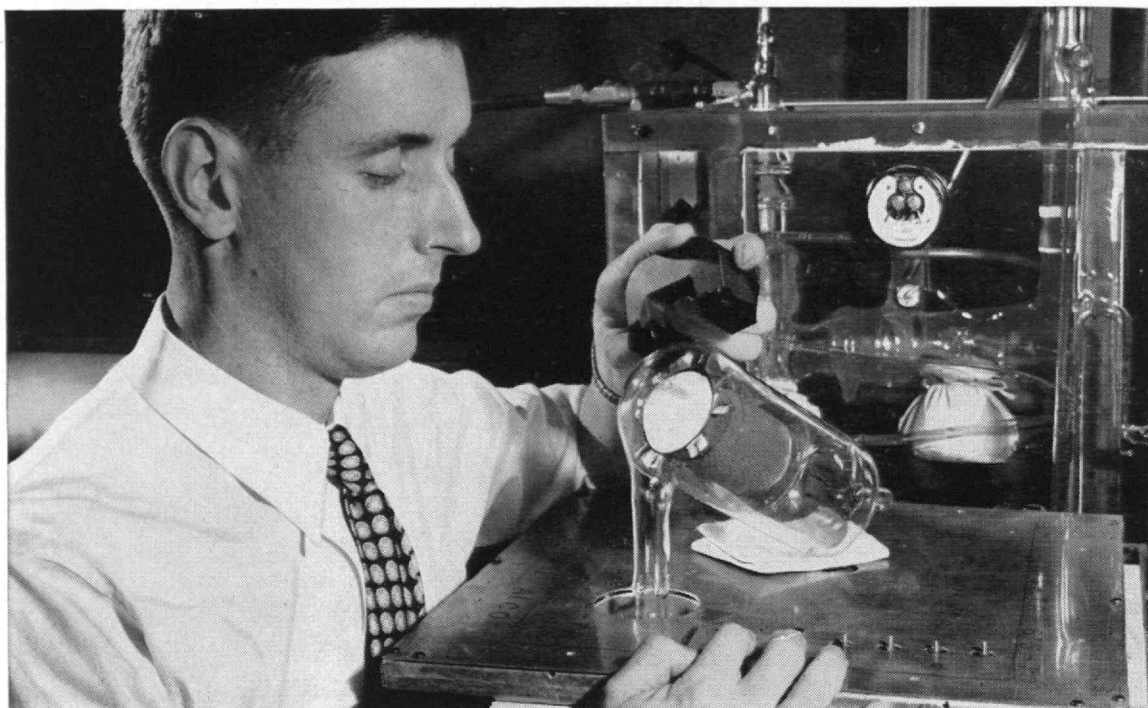


TECHNOLOGY

REVIEW *April* 1951





Arthur E. Anderson, Professor of Electrical Engineering at the University of Connecticut, was one of the 21 college professors who spent the summer months last year working with the men who design and build electrical equipment for the Westinghouse Electric Corporation. The program is designed to provide college instructors with practical experience in industry. Here, as part of a research project, Mr. Anderson is using a small magnet to change the position of a metal disc enclosed in a glass tube.

Westinghouse Plan Enables Professors to Deal with Actual Industrial Problems...

Through a "lend-lease" program with leading engineering colleges, Westinghouse hopes to enable professors of those schools to get a greater understanding of industrial research, design and manufacturing problems.

Here's the way the plan works: professors from co-operating engineering schools spend their summer months at Westinghouse—actually helping to design and build electrical equipment they discuss in their classrooms. They work side by side with Westinghouse men who design and build electrical apparatus.

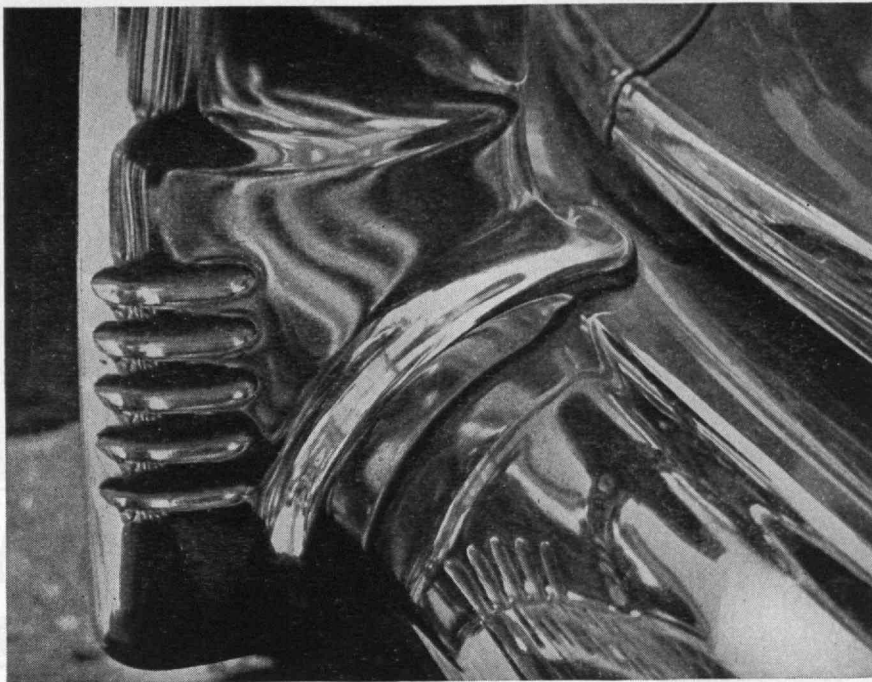
In this way, Westinghouse hopes to contribute to the flow of well-trained and competent engineers coming from America's educational institutions.

Other Westinghouse co-operation with colleges is by supporting 42 fellowships, 149 scholarships, 5 professorships, and a graduate study program through which Westinghouse employees may work toward advanced degrees at seven co-operating universities.

These activities indicate the breadth of Westinghouse interest in furthering scientific development. Westinghouse Electric Corporation, Pittsburgh 30, Pa.

G-10135

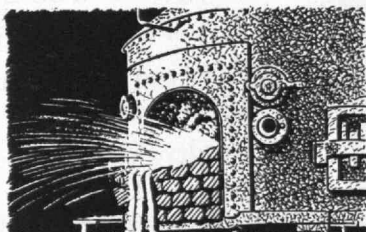
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☐ bumper guard ☐ radar component ☐ lighthouse reflector



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DID YOU RECOGNIZE IT? It's a bumper guard. But radar components, lighthouse reflectors and endless other products are also made with the aid of Norton. For, besides the world's largest output of abrasives and abrasive products, the wide scope of Norton's manufacture includes refractories and many other products vital to industrial processes.

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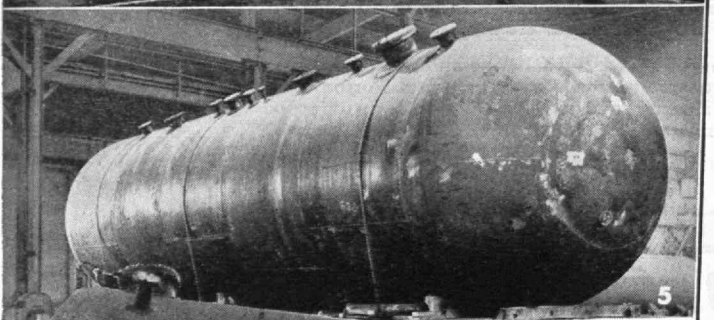
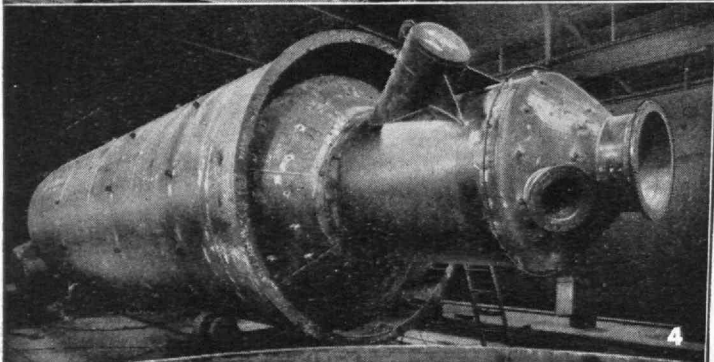
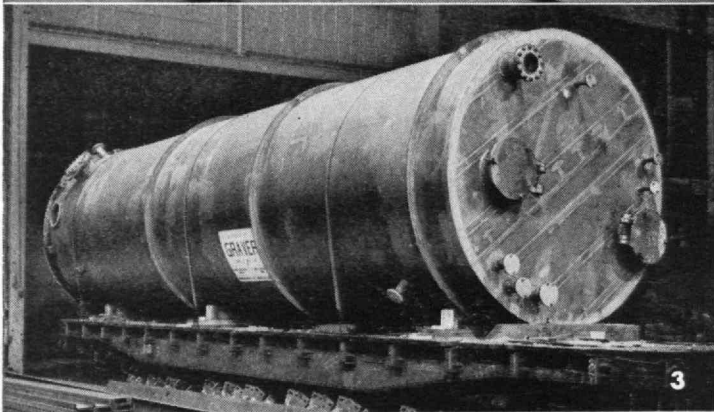
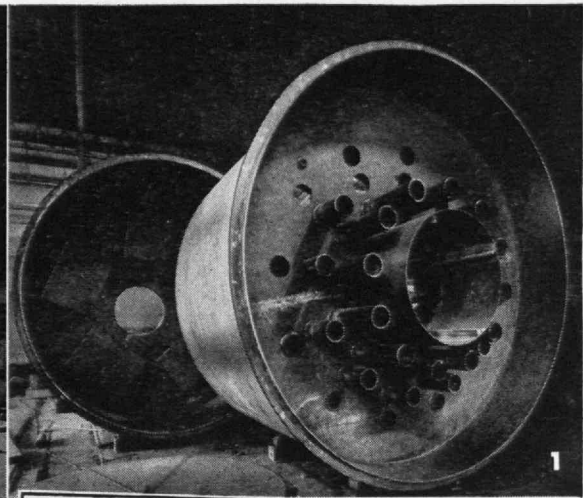
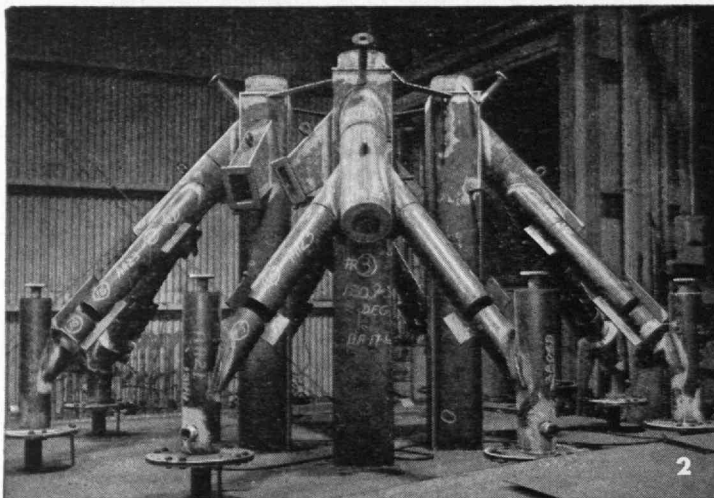
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RECENT REFINERY VESSELS FROM GRAVER SHOPS

These pictures show the significant part Graver is taking in the modernization and expansion of the nation's refinery facilities.

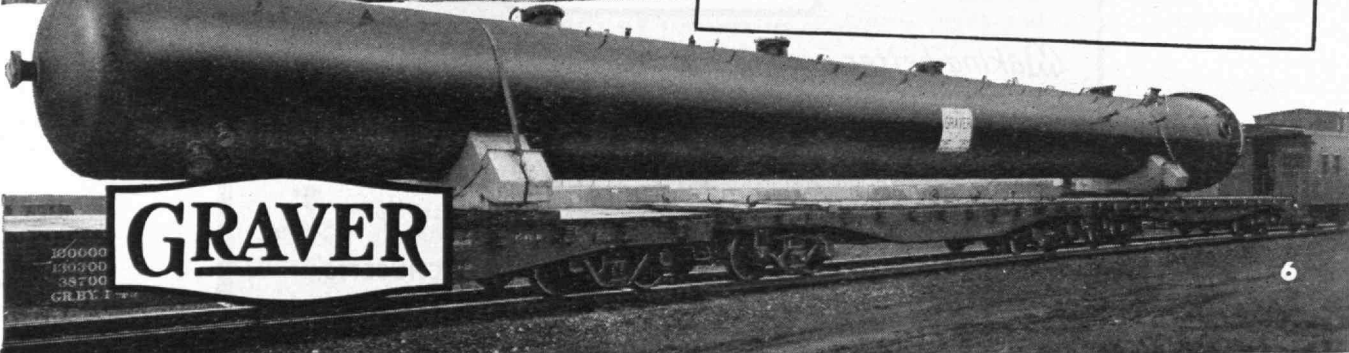
1. Two sections of a Separator Surge Tank, 14'0" x 35'2"
2. Part of a Catalyst Airlift
3. Fines and Fresh Catalyst Storage Bin, 12'0" x 48'3"
4. Houdry Process Vessel of molybdenum steel, 12'0" x 50'0"
5. Desalting Tank, 12'0" x 40'0"
6. Refinery Tower, 7'0" x 102'11"

These fabrications are exhibits of Graver versatility and indicate the extent of Graver Services to the petroleum industry.

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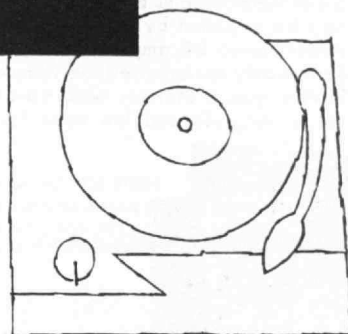
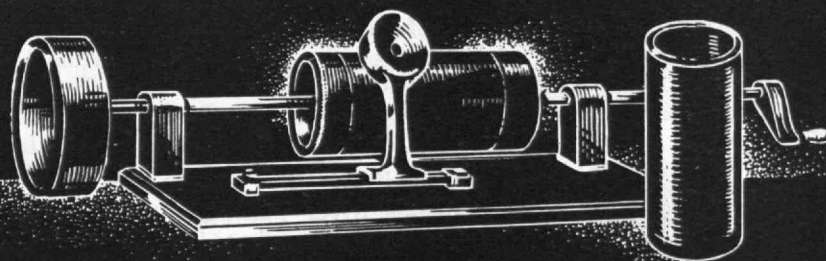
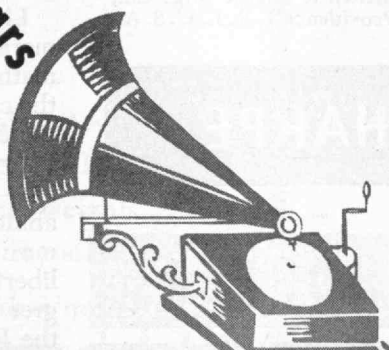
Carbon black brings music to your ears

Carbon black has always had a definite place in the manufacture of phonograph records.

Its use dates back to the time when records looked like dictaphone cylinders and there was music only on one side.

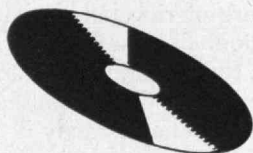
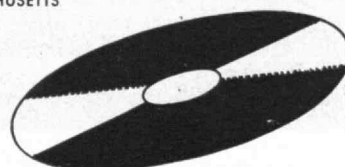
All carbon blacks used in the industry are added primarily for their coloring power, and possible lubricant value.

CABOT carbon black makes it easy to recognize the best quality record. It gives that shiny, jet-black appearance music lovers accept as the hallmark of an excellent record.



GODFREY L. CABOT, INC.

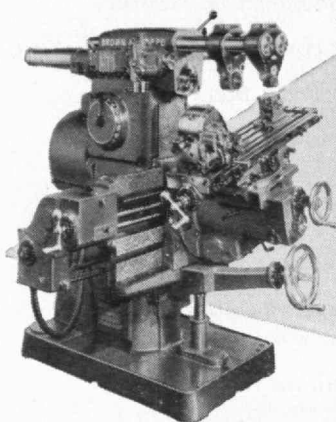
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Here's the ultimate in milling machine versatility! The new Brown & Sharpe No. O Omniversal Milling Machine mills compound angles, bores multiple holes from different directions, cuts teeth in tapered cutters—and many other operations—without special at-

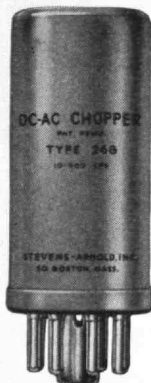
tachments, jigs, fixtures, or resetting work on the table. Saves set-up and machining time. Ideal for toolrooms, experimental laboratories, and small-quantity production plants. Write for complete information. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

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A model for every use — 60 and 400 cycles
Single pole and double pole — Make-before-break contacts — Contacts in air or in liquid

These Choppers convert low level DC into pulsating DC or AC, so that servo-mechanism error voltages and the output of thermocouples and strain gauges may be amplified by means of an AC rather than a DC amplifier. They are hermetically sealed, precision vibrators having special features which contribute to long life and low noise level.



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#246B, 60 cycles, AC
#280, 400 cycles, AC



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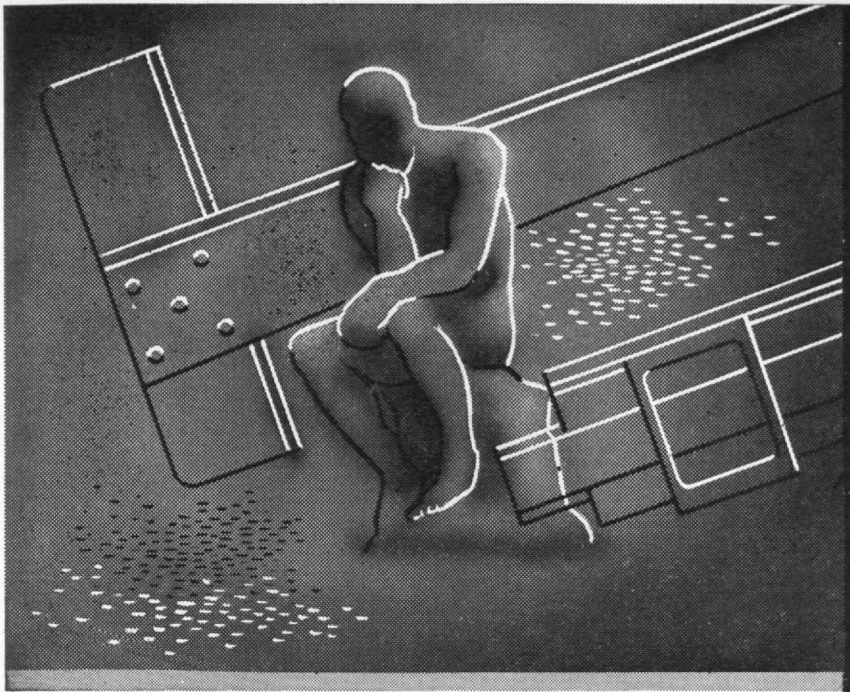
22 ELKINS STREET, SOUTH BOSTON 27, MASS.

THE TABULAR VIEW

Great Dream. — For centuries, while the geographical areas of the world's known land masses were being gradually expanded, men feared the Great Unknown Southland as an obstruction to land travel; later *Terra Australis* was looked upon as a vast expanse of rich land awaiting exploitation and colonization. But the hardy, fearsome sailors of an earlier era found that no matter how far their travels carried them, the Great Southland always receded out of reach. What comedy of errors led to the age-old belief that such a region ever existed is discussed in the first installment of a two-part article (page 292) by **WILLY LEY**. Like other articles Mr. Ley has written for *The Review* as one of its editorial associates, "The Great Dream" echoes his special interest in history and science. Mr. Ley was one of the founders of the German Rocket Society and later became coeditor of its journal. He was science editor of *PM* during the heyday of that New York daily, and spent the years of World War II in research at the Washington Institute of Technology.

Life's Objective. — Normally one wouldn't expect morals to be influenced by mathematics. Yet when a mathematician turns philosopher, such may easily be the case. At any rate, starting with the thesis that continued advancement is the goal of all living organisms, **PROFESSOR EMERITUS HENRY B. PHILLIPS** shows (page 298) that most rapid progress occurs when the probability of finding correct solutions to the way of life is maximized, as it is under conditions of individual liberty. Professor Phillips received his bachelor's degree from Erskine College in 1900 and a Ph.D. from the Johns Hopkins University in 1905. He joined the Technology staff in 1907. Professor Phillips became a full professor in 1927 and in 1934 was appointed acting head of the Institute's Department of Mathematics, becoming its head in 1935. He has also been a consulting professor of physics at Brown University, and a lecturer at the University of California. He is author of more than 20 books and scientific papers.

Charles River Sailing. — In 1936 an important new sport was brought to Technology with the acquisition of a fleet of sailing dinghies. **WALTER C. WOOD**, '17, sailing master, recalls (page 301) the outstanding influence which the Technology fleet has had — not alone in influencing sports at M.I.T. but in injecting a new spirit of intercollegiate competition in sailing throughout the country. Mr. Wood learned the fundamentals of yachting at an early age at his home in Providence, R.I. He was a member of the committee appointed by Karl T. Compton, chairman of the M.I.T. Corporation, in 1936, to design a boat suitable for racing, as well as for training large numbers of Technology students, and subsequently became master of the M.I.T. Nautical Association. During World War II, he was instructor in sailing at the U.S. Coast Guard Academy in New London, with the rank of lieutenant commander. After the war, he returned to M.I.T. and is now engaged in studies of dinghies constructed from Fiberglas, as the original Technology dinghy fleet nears the end of its useful life.



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"Improving" any machine really means increasing its productive capacity. That means tinkering with speeds and weights and strength—ending up with alloy steels.

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\$0.80 "saved"

32.40 lost

450.00 lost

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(To say nothing of the re-scheduling headaches involved)

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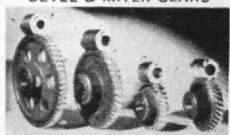
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HELICAL GEARS



BEVEL & MITER GEARS



WORMS & WORM GEARS

MAIL RETURNS

A Will and a Won't

FROM WILLIAM A. RHODES, '12:

Dr. Paul Meadows,

In "Technological Change and Social Progress,"

In your January issue,

Recognizes difficulties in forecasting sociological change. A step in the proper direction.

For, while — cause — effect — cause — effect — etc.

Is dependable in lifeless matter,

Rendering material sciences and their predictions possible, People are different.

Each person (the cuss) has a will of his own which may act As a primary cause

With or without good, bad, valid, or invalid reason.

At its own option it frequently does so.

Thus, sociological forecasting is not only difficult

But so largely impossible that

Unexpected events and developments are bound to occur.

And they do.

Each person has also a won't.

New York 23, N. Y.

Performed to a T

FROM ANDREW L. FABENS, '10:

Thank you for your article in the December, 1950, issue of The Review entitled "William T. Sedgwick, Biologist." It has brought up so many pleasant memories of M.I.T.

Professor Sedgwick was such an interesting teacher back in my days of 1907-1910 that those of us who signed up for his general course in public health had to dash to his lectures or we would find our seats and the room filled with others who had not signed up. I think the interlopers outnumbered those who signed up.

In my student days, only one other man had such an appeal. He was Dean Shaler, the geologist at Harvard, who gave his lectures in the Harvard Museum to discourage the influx of visitors.

In my days of reporting for *The Tech*, I got Professor Sedgwick to give me articles each week about his course, but this ended very suddenly and finally when a frivolous printer changed a lecture subject from "Infant Mortality" to "Infant Morality."

Delray Beach, Fla.

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Better seed, fertilizer, and new scientific methods play their part. Equally important are the various chemicals that now fight off blight, disease, and destructive insects. Starting before planting and continuing until the food is ready for our tables, hundreds of new materials increase and protect our food supply.

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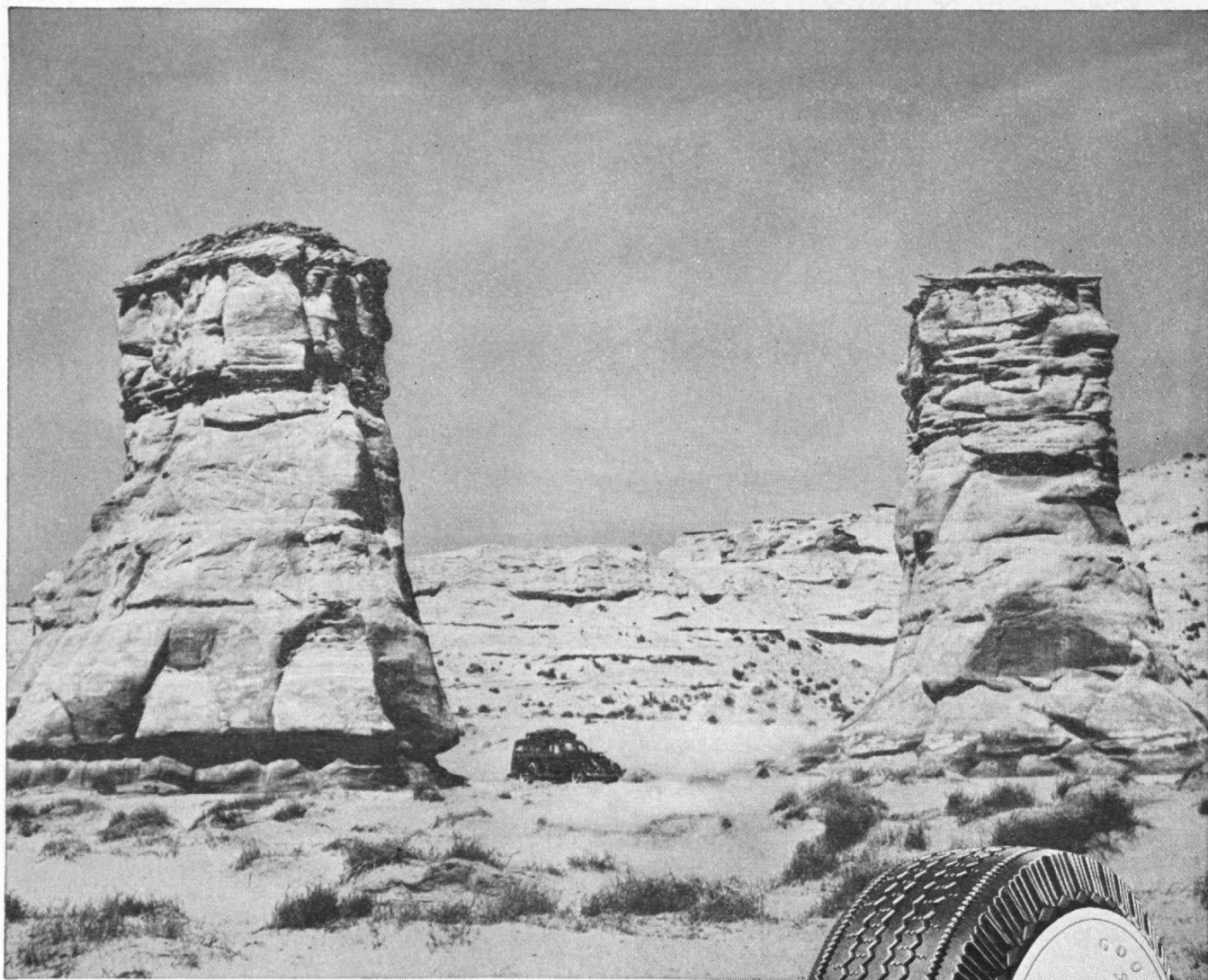


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