

*December 1931*

# TECHNOLOGY REVIEW







# ELECTRICITY

## puts the news on the street before the fans leave the arena

**A**S THE fight ends and final reports flash in, the last newspaper plate is made up and locked on the press cylinder. With the tiny click of a push button, the snap of contactors, the whirl of motors, the roar of press units, the fight edition goes to press. Each unit automatically controlled and perfectly synchronized with Selsyn elements — each section arrives at the folder at the correct instant. Sixty thousand papers an hour. To-day the dead-line is postponed — the news is red hot. The fight news is on the street before the crowd leaves the arena.

Since its beginning, the electrical industry has

worked hand in hand with the newspaper industry. To-day, the high-speed, newspaper press, with maximum outputs of 50,000 and 60,000 papers per hour, owes no small portion of its success to electricity and the skill of General Electric engineers.

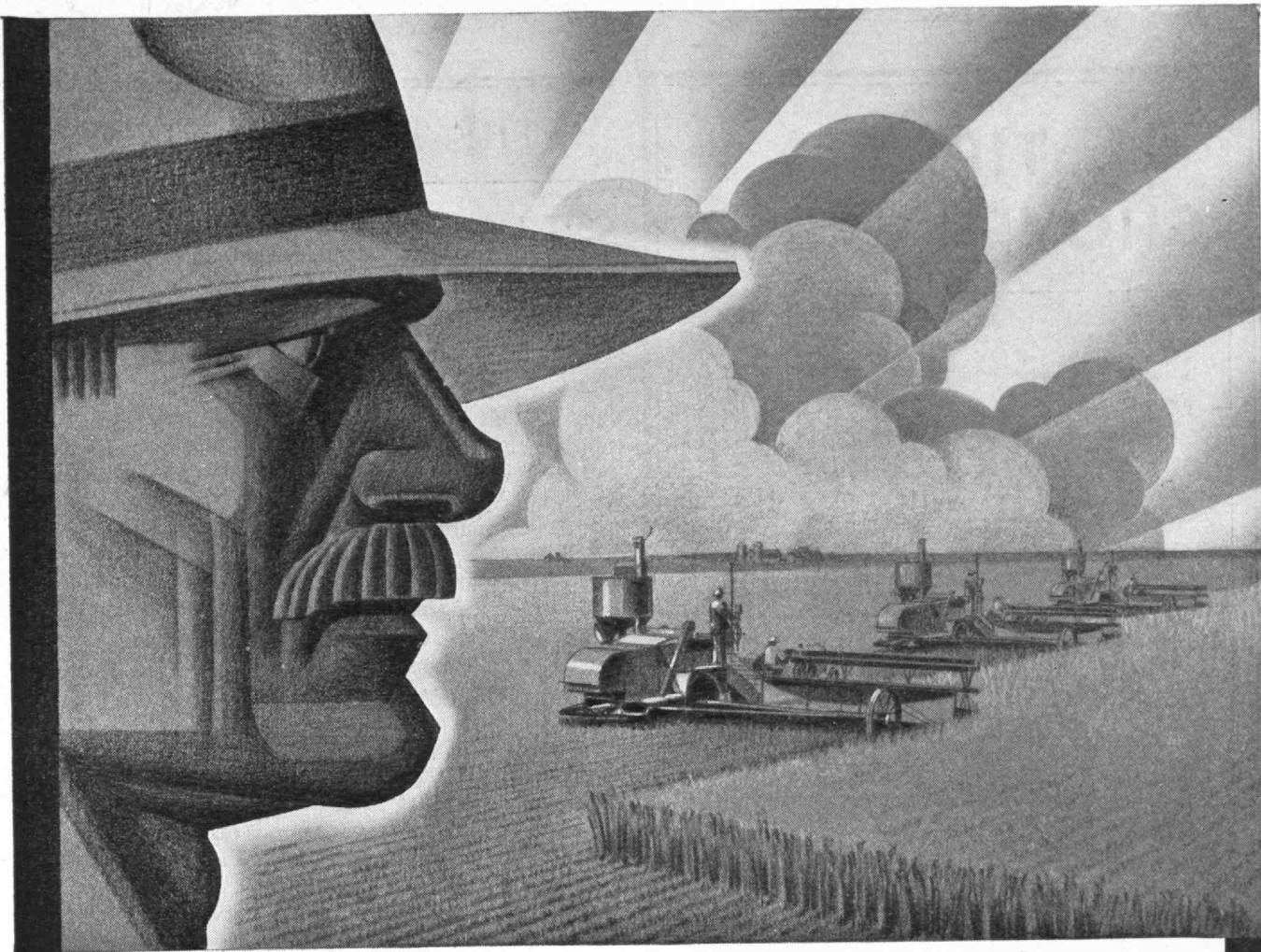
For the last 30 years, college graduates in the employ of the General Electric Testing Department have played an important part in the development of newspaper equipment. Here they gain experience which enables them to apply electricity to the advancement of this and countless other industries.

95-897DH

# GENERAL ELECTRIC

SALES AND ENGINEERING SERVICE IN PRINCIPAL CITIES

THE TECHNOLOGY REVIEW, December, 1931. Vol. XXXIV, No. 3. Published monthly from October to May Inclusive and in July at 10 Ferry Street, Concord, N. H. Publication date: twenty-seventh of the month preceding date of issue. Annual subscription \$3.50; Canadian and Foreign subscription \$4.00. Entered as second-class matter at the Post Office at Concord, N. H., under the Act of March 3, 1879.



*An industry allied with the modern  
tillers of the soil—GRINDING*

## AGRICULTURE « » « »

Marvelous machines for time and labor saving, doing the work of the world's most ancient industry . . . cultivating—harvesting. Mechanical parts, made mechanically perfect by the grinding wheel and the grinding machine, make possible their great accomplishments. Norton Company, Worcester, Mass.

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 Grinding and Lapping Machines . . . . Refractories  
 . . . . Porous Plates . . . . Pulpstones . . . .

*Great Industries  
No. 5*

# TIREX SHOVEL CABLE



To insure that portable electric shovels representing large investments shall be available for operation continuously over long periods of time — an electric cable for the supply of power must be chosen that can be depended upon to have the longest life and therefore give the lowest cost under all conditions of service. TIREX Cables for electric shovels are recommended to meet these conditions.

A construction feature, obtainable only on TIREX, is an outer sheath of carefully compounded "selenium rubber." This special rubber sheath retains its flexibility, toughness and wear-resisting qualities indefinitely, making TIREX particularly desirable for service on shovels.

When cables must be replaced on shovels already in service standardize on TIREX and secure the many advantages it offers - long life, freedom from trouble, permanency and reduced yearly maintenance costs.

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JACKSONVILLE, 417 Barnett National Bank Building

## THE TABULAR VIEW

SO MUCH misleading information about nutrition has been distributed to the American reading public that the average layman is hard put to discriminate between the genuine and spurious. The Review asked Dr. MORRIS FISHBEIN, Editor of the *Journal* of the American Medical Association, to prepare a paper which would help the intelligent reader to a sound and sane attitude toward food and to warn him against the charlatanism and misrepresentation that beset all of us on every side. Too many people think of food in terms of quantity only, yet nutritional chemists are proving beyond all doubt that the quality of foods has an enormous effect on the human economy. "One of the most impressive features in recent discoveries regarding the relations of food to health and vitality," writes Dr. H. C. SHERMAN, "is that the benefit of better feeding usually becomes fully apparent only when it is continued throughout a large part of the life-cycle, and often the benefit is greater to the second generation than to the first. . . . Through simply a wiser emphasis in the daily choice and use of ordinary staple foods, there may result improvements in the vitality of the individual or the family, all within the bounds of normal nutrition, but of very real significance for the maintenance of health or for recovery from disease. . . . As there has been so strong a tendency to attribute longevity entirely to hereditary factors, it may be worth while to emphasize the fact that . . . the influence of food on longevity is demonstrated with such degree of mathematical certainty as is represented by 'chances' much better than 10,000: 1, or with a hundredfold greater certainty than is usually considered necessary for the conclusive establishment of such scientific observations."

JOHN R. FREEMAN is one of America's great engineers. In fact, in a recent selection of the ten greatest American engineers he was, of course, included in the list. A survey of his prodigious accomplishments easily explains why. Early in the year a testimonial dinner was given Dr. Freeman by fellow American engineers and by citizens of Providence. Many of the latter, knowing him to be President of the Factory Mutual Fire Insurance Companies, were astonished to learn that he was even more eminent and active as a civil engineer. As a matter of fact, Dr. Freeman considers his great achievement of welding together the Factory Mutual system as minor to his work in hydraulics, seismology, and civil engineering in general. In his earlier days, he made many fundamental contributions to hydraulic engineering, and during his long career as a consulting engineer, he has advised on the locks and dams of the Panama Canal, the Grand Canal in China, and the Keokuk Dam on the Mississippi. He has served the Canadian Government as consulting engineer on water power conservation, and the present renaissance in hydraulic study and research in this country is almost wholly the result of his efforts. It was due to his influ-

(Continued on page 108)



# The Bath Tub Murder



By Mrs. L. R. Dooley, Tulsa Junior League. One of a series of TIME advertisements prepared by Junior Leaguers.

In 1793 revolutionary terrorists controlled France. The Girondins (idealistic moderates) had been defeated. Three men ruled Paris: Danton with his Cordeliers, Robespierre with his Jacobins, and one who was too suspicious, too sincere for party attachment, Jean Paul Marat.

Marat, at this time near death from a painful skin disease contracted in two years of hiding from political enemies in the sewers of Paris, was confined to his home. There, burning with his malady, his political spleen, his consuming energy, he spent his days in a treated bath, compiling his daily pamphlets. He was so engaged on the late afternoon of Saturday, July 13, 1793.

As TIME, had it been published in 1793, would have reported subsequent events:

... Long a sufferer from pruritis (malignant eczema), Jean Paul Marat, 50, Swiss M.D., potent revolutionary pamphleteer, erstwhile pill-mixer in England, ingenious experimenter in physics, correspondent of the late great Ben Franklin, was accustomed to write his daily "Journal de la Republique Francaise," receive visitors, in the bathroom of his Paris apartment. There, soaking in the medicated waters of a shoe-shaped bath, a sheet to pull about his shoulders, a writing-board across his knees, he found surcease from his affliction, prepared with some composure lists for the guillotine. Above him, on the wall, were a map of France and two pistols; above the pistols the written words: "La Mort."

Cultivated Americans, impatient with cheap sensationalism and windy bias, turn increasingly to publications edited in the historical spirit. These publications, fair-dealing, vigorously impartial, devote themselves to the public weal in the sense that they report what they see, serve no masters, fear no groups.

To this apartment, with its strangely-used *salle de bain*, came last week a fresh-faced country miss. Pleasantly she gave her name: Marie Anne Charlotte Corday D'Armont; her business, news from Caen, where Marat's exiled foes, the Girondins, had fled. (TIME, June 10). She was unwillingly admitted, escorted to the bath by Marat's housekeeper and common-law wife, one Simonne Evrard. Left alone, they talked: the neatly-gloved caller, handsome in ash blond hair, white bonnet; the naked, repellently-ill patriot.

Shortly Simonne Evrard heard a feeble cry: "A moi, ma bonne amie, a moi!" Bursting in, she found Pamphleteer Marat stabbed, dying, the bathwater fouled with blood. Vainly she tried to stop the flow with her hands, screamed shrilly for help which quickly came.

Alloof, poised, Assassiness Corday did not resist arrest.

Questioned, Mlle. Corday, 24, convent-trained, descendant of Dramatist Corneille, admitted the killing, insisted she was no common murderess; surrendered from beneath her fichu her baptismal certificate pinned carefully to an heroic manifesto flaying Marat's terrorism; also a sheath for the fatal ebony-handled dinner knife, purchased the day before for two francs.

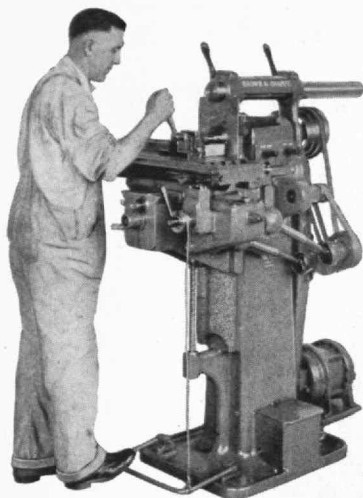
On trial July 17th, asked by dread Prosecutor Antoine Fouquier-Tinville if she had practiced the death-blow (the knife penetrated neatly between 1st and 2nd ribs, pierced lung and aorta) Mlle. Corday replied, indignant: "The wretch! He takes me for an assassin!"

Condemned, she refused a priest, spent her last hours posing for Portraitist Hauer, his payment a lock of her shorn hair. Then, in red chemise, she began the jolting journey through rain to the guillotine....

# TIME

The Weekly Newsmagazine

YEARLY SUBSCRIPTION \$5 .. 205 EAST 42nd STREET, NEW YORK CITY .. 15 CENTS AT ALL NEWSSTANDS



## TREADLE CONTROL

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Milling

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**BAUSCH & LOMB**  
OPTICAL COMPANY  
ROCHESTER - NEW YORK

## THE TABULAR VIEW

(Concluded from page 106)

ence, for instance, that Congress voted the appropriation for constructing an international hydraulic laboratory at the Bureau of Standards. He has sent many young men to Germany to study in the great German hydraulic laboratories, and he has served in an advisory capacity in the establishment of the Institute's hydraulic laboratory. Carrying his interest still further, he has financed the publication of a notable book, "Hydraulic Laboratory Practice," and is now sponsoring the publication by the Institute of a series of translations of German hydraulic titles. Besides his degree from M.I.T. in 1876, Mr. Freeman holds honorary doctor's degrees from Brown (1904), Tufts (1905), *Sachs Technische Hochschule* (1926), the University of Pennsylvania (1927), and Yale (1931). He has been a member of the Corporation of the Institute since 1893. In 1929 he received an honorary fellowship from the Polytechnic Institute of Karlsruhe, bestowed "in recognition of his pioneer activities as a many-sided engineer in prominent scientific research and his service for the international promotion of hydraulic systems." He was designated in 1927 by the Federal Government as its representative to the Third International Congress of Scientific Management in Rome, and in 1928 he was a member of the Committee of Eighty sent to the World Engineering Congress from America. He has been President of the B.S.C.E. (1893), of the A.S.C.E. (1922-23), of the A.S.M.E. (1904), and he is a fellow of the American Academy of Arts and Sciences.

**M**R. ROSSMAN'S article on page 117 "Do Engineers Invent?" is presented by The Review without comment, but with the expectation that our readers themselves will furnish adequate comment. Mr. Joseph Rossman is a new contributor to The Review. He is a chemical engineer and a member of the United States Supreme Court Bar. For the last eight years, he has been Patent Examiner in the U. S. Patent Office and Editor of the *Journal of the Patent Office Society*, the only periodical in the country which deals with patent law and related subjects. Mr. Rossman is a graduate of the University of Pennsylvania in Chemical Engineering, receiving his LL.B. and M.A. from George Washington University, and his Ph.D. from American University. He has written much, having contributed over 60 articles to technical journals. His book "The Psychology of the Inventor" is allied in feeling and thought to the subject of his article in The Review, and the research necessary in preparing this book gave him an authoritative background on which to base his conclusions on engineering inventiveness. He obtained first-hand information from a group of over 700 inventors, from such well-known men as Elihu Thomson, Reginald Fessenden, John Hayes Hammond, Jr., and August Smedh. This material was supplemented by questionnaires sent to patent attorneys in the United States and to research departments of the large corporations.

# **MEN'S READY-TO-WEAR CLOTHING AT THE COOP**

## ***in Harvard Square***

---

The past college year this department's sales went ahead when sales in most clothing establishments went behind. Our appeal was based on good clothes at as reasonable prices as possible.

### **Raincoats**

Alligators \$6.00 to \$25.00. Gaberdines \$25.00. Trench Coats \$15.00.

### **Overcoats**

Levy Adler at \$45.00 — Hickey Freeman at \$60.00.

### **Alterations**

are free on all garments and you are satisfied.

### **Suits**

This Season we are showing a Legion suit at \$25.00. At \$35.00 we are showing three-piece suits by Smithson, Fashion Park and Levy Adler. At \$45.00 are four-piece suits by Fashion Park and Adler. The Hickey-Freeman suits at \$50.00 and \$65.00 top the line.

### **Dress Clothes**

Levy-Adler dress coat and trousers at \$55.00. Tuxedo Coat and Trousers by same maker at \$45.00. Tuxedo Coat and Trousers by Smithson at \$35.00. Vests at \$5.00 to \$10.00.

ANY FORMER MEMBER OF TECHNOLOGY IS ELIGIBLE FOR MEMBERSHIP AND WILL SECURE DIVIDEND ON HIS PURCHASES AT  
HARVARD SQUARE STORE

## **HARVARD COOPERATIVE SOCIETY**

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having resigned wishes to announce the  
formation of a new travel company*

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80 BOYLSTON STREET

*Hancock 0983 and 0984*

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## E. J. WHITCOMB COMPANY, INC.

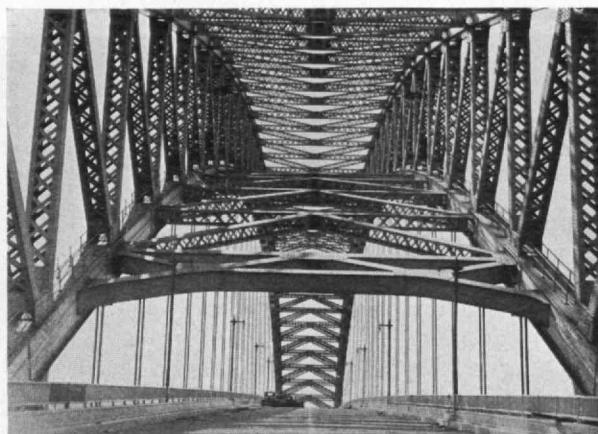
NEW YORK OFFICE

551 FIFTH AVENUE

*Vanderbilt 3-5581 and 3-5582*



Kill van Kull Bridge, the longest steel arch in the world (1,675 feet), dedicated on November 14. It was constructed by the Port of New York Authority at a cost of \$16,000,000



Rosser

With its approaches, it stretches one and a third miles from Staten Island, N. Y., to Bayonne, N. J., the fourth bridge built between these states in three years

# THE TECHNOLOGY REVIEW

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THE COVER . . . . . *From a Photograph BY HIROMU KIRA*  
*The Mulholland Dam in Hollywood, Calif.*

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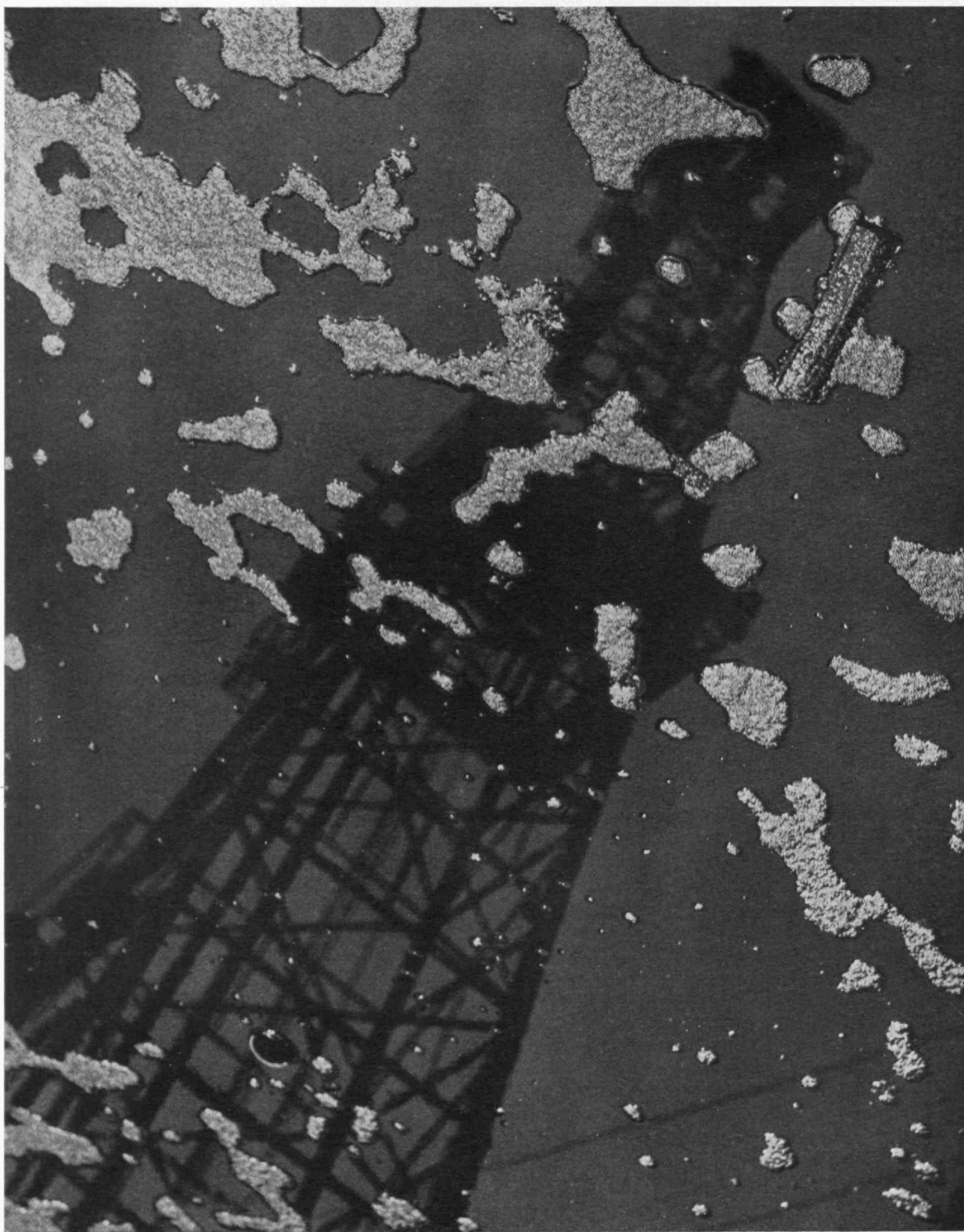
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*M. I. T. Photo*

*Reflection of an oil derrick on the surface of an oil pool flecked with foam. The 10,000-foot oil well pictured in the October Review has been exceeded by an oil well in Vera Cruz, Mexico, which has been carried to a depth of 10,585 feet, nearly two miles. During the drilling of the well, as high as 300,000 barrels of hot salt water per day gushed from the hole, as well as obnoxious gas at great pressures*