

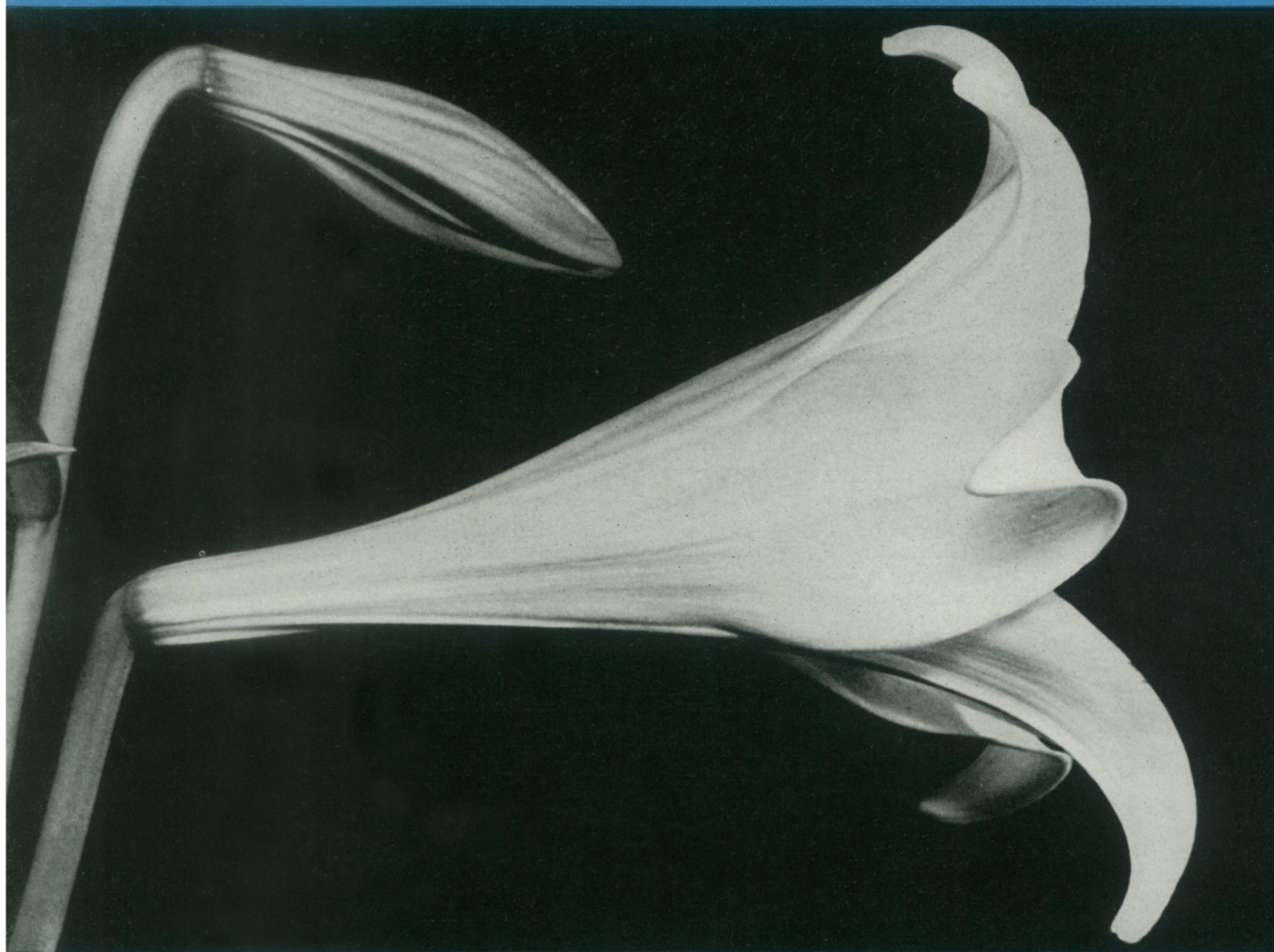
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Bigger and Better

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1946



Transportation pioneer

The two dominating spheres of achievement of George Westinghouse were *transportation* and *alternating current*.

His first major contribution to transportation was the famous Westinghouse air brake—followed, a few years later, by his development of automatic block-signaling systems for railroads.

Later, this great inventor-engineer pioneered a single-reduction-gear direct current motor which caused sweeping changes in the operation of street railways.

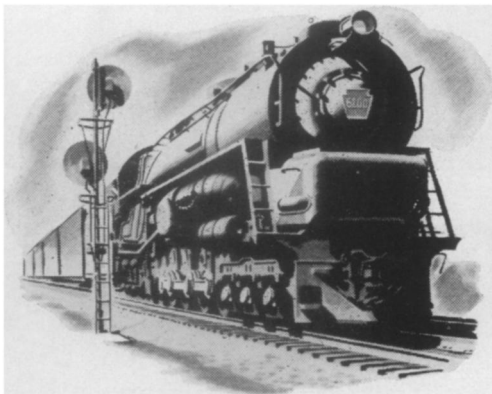
But a unique achievement in the life of George Westinghouse came in 1905—when he brought trans-

portation and *alternating current* together in a single, masterful triumph of engineering.

For, on May 16, 1905, he successfully demonstrated the first *single-phase main-line* electric locomotive before the delegates to the International Railway Congress, at his plant in East Pittsburgh, Pa.

Shortly afterwards, in 1907, Westinghouse electrified the first *main-line railroad* . . . the New York, New Haven & Hartford, between Woodlawn, New York, and Stamford, Connecticut.

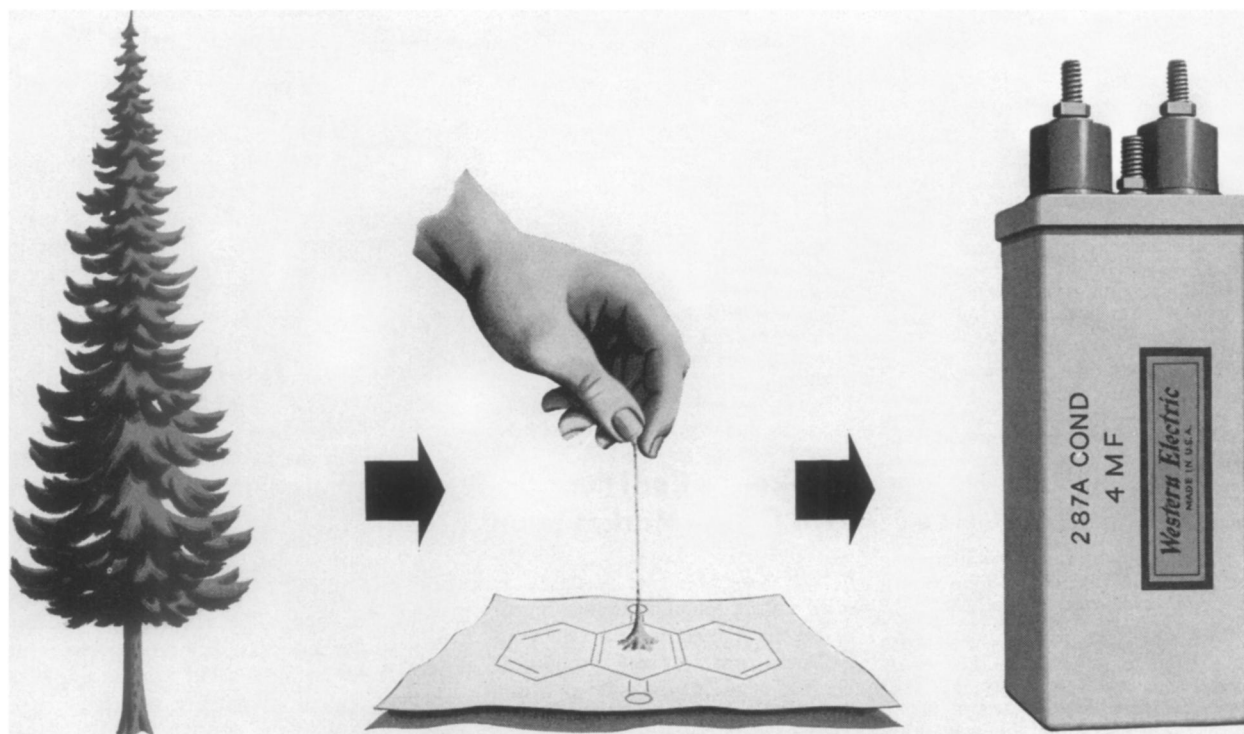
This spectacular accomplishment heralded the major electrification of railroads the world over.



Westinghouse
PLANTS IN 25 CITIES OFFICES EVERYWHERE

TODAY . . . A new and revolutionary type of locomotive is hauling heavy trains over the Pennsylvania Railroad Lines. It is powered by a Westinghouse geared steam turbine . . . the smoothest, most compact, most efficient source of steam power ever devised by man. In addition to many products used by railroads, the Westinghouse Electric Corporation also builds electric mine locomotives and other types for industrial use.

LIFE-EXTENSION BY THE GRAM



CRUCIAL links in every wire and radio system are paper capacitors — rolls of impregnated paper and metal foil. At least one is in every telephone — and more than 100 million are in the Bell System. A single failure can sever a telephone call, put a costly line out of service. So finding out how to make capacitors stand up longer is one of the big jobs of Bell Telephone Laboratories.

All-linen paper was once the pre-eminent material. Then wood pulp was tried — and found to last longer

under heat and direct voltage. But why? Something in the wood was helping to preserve life. What was it?

Ultra-violet light, delicate micro-chemical analysis and hundreds of electrical tests gave a clue. Researchers followed it up—found the answer by treating the impregnated paper with anthraquinone — a dye intermediate. A mere pinch of the stuff prolongs capacitor life by many precious years.

When war came, great quantities of capacitors were urgently needed

for military equipment, where failures could cost lives, lose battles. The Western Electric Company, manufacturing for the Bell System, willingly disclosed the life-preserving treatment to other manufacturers. Today in communication capacitors, the new “life-extension” is helping to give more dependable telephone service.

Day by day, resources of this great industrial laboratory are being applied to perfect the thousands of components which make up the Bell Telephone System.



BELL TELEPHONE LABORATORIES EXPLORING AND INVENTING, DEVISING AND PERFECTING FOR CONTINUED IMPROVEMENTS AND ECONOMIES IN TELEPHONE SERVICE