

RIDING SKYWARD

IN A SIGNAL-CONTROL ELEVATOR

THE AUTOMATIC SIGNAL-CONTROL ELEVATOR has caused so much favorable comment by those who have had the pleasant experience of riding in one that this simple explanation is made of its "electrical mind."

OTIS ELEVATOR COMPANY



● **ALL THAT** most people see of an elevator system are a few twinkling lights and the interior of an attractive car.

But that elevator is one of the most highly developed electrical and mechanical devices in use today, and in it you ride with greater safety than in any other conveyance in the world.

As you enter the car of an Automatic Signal-Control elevator, you announce your floor: "The twenty-fourth, please." A button is pressed; and a moment later the doors silently close. With a smooth upward surge you are on your way.

Above the car door, glass numerals suddenly begin to flash the passing floors. Twenty-one, twenty-two, twenty-three—almost as fast as you can say them.

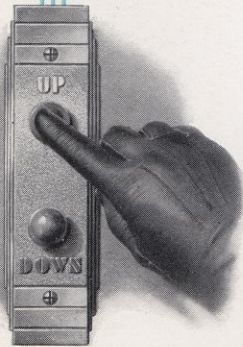
There is no uncomfortable sensation, but you know that the car must be slowing down. Twenty-four—and the doors open. The car has glided into place exactly at floor level.

Without realizing it, you have traveled very fast—much faster than the old "high-speed" elevator that started with a series of violent jerks. And instinctively you compare the automatic operation of this modern elevator with the old slap-bang, "watch-your-step" type of service that once prevailed in even the most dignified structures.

OFTEN you, as a passenger, take the control of this automatic elevator into your own hands. When you press a button in the hallway to call a car for the return trip, your signal actually stops the next approaching car at your floor **without action on the part of the elevator attendant.** It is from this feature of operation that Otis Signal-Control derives its name.

Even for the most intensive office building service, many Signal-Control elevators are operated by girls. Because the Signal-Control Elevator stops of its own accord in response to car or corridor signals, and the doors open automatically, she is free to answer questions or direct strangers in the building. This service is appreciated by tenants and visitors alike.





CORRIDOR BUTTON

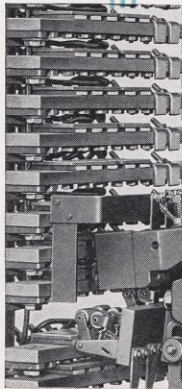


RELAY PANEL

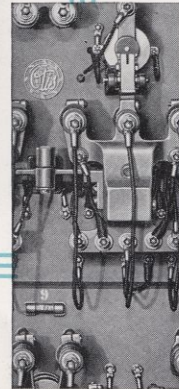
Something, however—in reality a great deal—has happened during the few seconds that lapsed between the time you pressed the button and the arrival of your car. Let us see what did happen:

1. Your signal was first registered in a “master mind” (the *Relay Panel*) overhead in the machine room. This mechanism, which never forgets a signal, passed your call on to the automatic control devices of all the elevators so that it could be answered by the nearest available car.

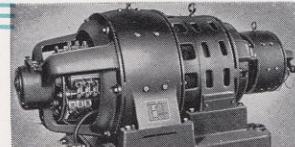
2. Now each elevator also has an electrical brain of its own (its *Selector*). The first car to come within about 18 feet of your floor picked up your signal through its Selector, and cancelled the call to all the other cars.



SELECTOR



CONTROLLER

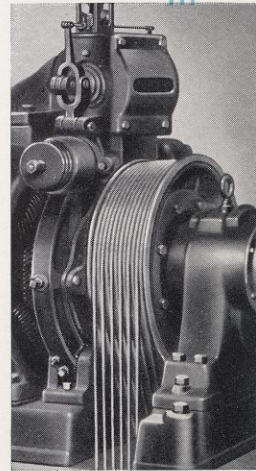


MOTOR
GENERATOR

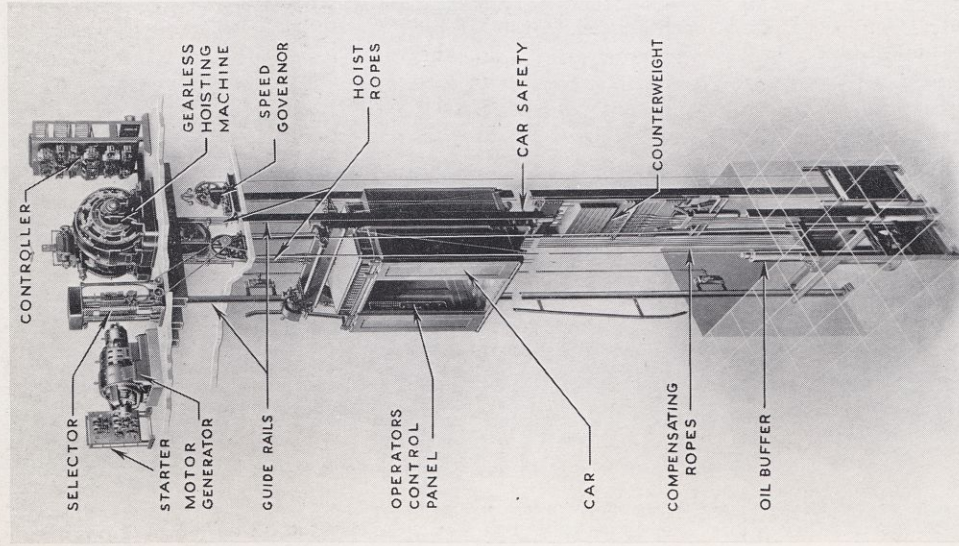
3. Your signal was then flashed to the automatic switchboard (or *Controller*) which regulates the motor and brakes of that particular elevator. If this Controller, however, simply shut off the power and applied the brakes, the car would stop with a severe jolt.

4. So your signal was sent to a shock absorber (*Motor-Generator Set*) between the Controller and the Hoisting Machine. This apparatus cuts off the current to the machine so smoothly that passengers in the car scarcely notice when the elevator slows down.

5. Thus, your finger, in pressing the button, finally controls the operation of the powerful, direct-drive Hoisting Machine, which raises and lowers the elevator car by means of a number of special traction-steel hoist ropes.



GEARLESS
HOISTING
MACHINE



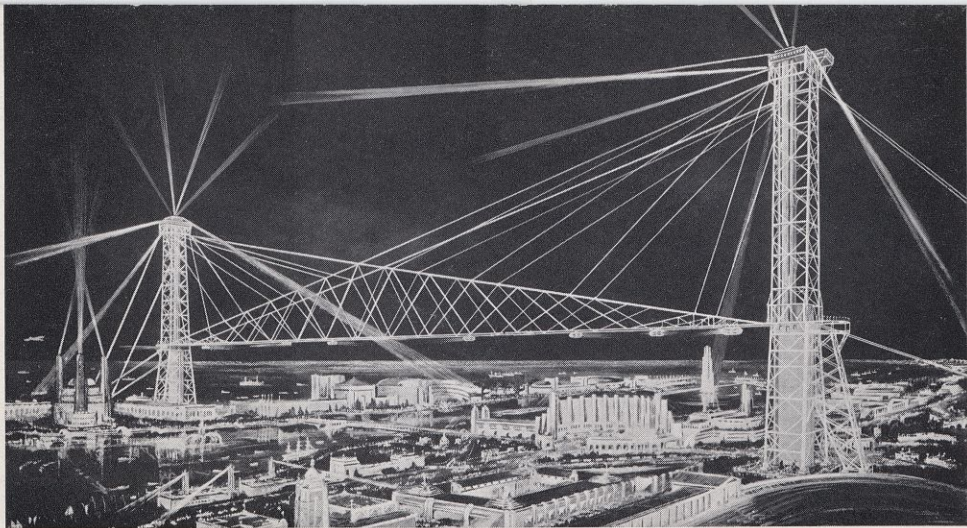
GENERAL ARRANGEMENT
OF AN
OTIS SIGNAL-CONTROL ELEVATOR

The machine may weigh six or eight or ten tons. It can pick up its load of thousands of pounds and bring it smoothly to full speed in a few seconds. Yet it is controlled with such precision that it automatically stops the car within a fraction of an inch of your floor in response to your signal.

This degree of automatic high-speed transportation has been attained entirely through the efforts of the Otis Elevator Company. For more than 80 years it has concentrated on one job—to give safer, faster, and more comfortable elevator service.

Otis designs, manufactures and installs all of its own equipment. Every part—cars, machines, controllers—the amazing two-way self-leveling Micro-drive equipment that automatically levels the car at every floor—even the push buttons in the corridors—is made in Otis factories. By thus controlling every step from raw material to finished product, Otis can stand back of—and unqualifiedly guarantee—every elevator bearing its name.





The Towers of the Skyride, at the 1933 Century of Progress Exposition, Chicago, are equipped with Otis Signal-Control Elevators. Here, for the first time, elevator motor rooms have been opened for public inspection; with the hoisting machines and automatic control equipment shown in actual operation.

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