

How a concrete building lifts itself by its own bootstraps is shown in the series of pictures above, made from the same location during the

construction of the radio relay station on Troy Hill, near Pittsburgh. The first photograph (far left) was made on a Wednesday, when the build-

## *TV Towers Sprout from Sliding Form*

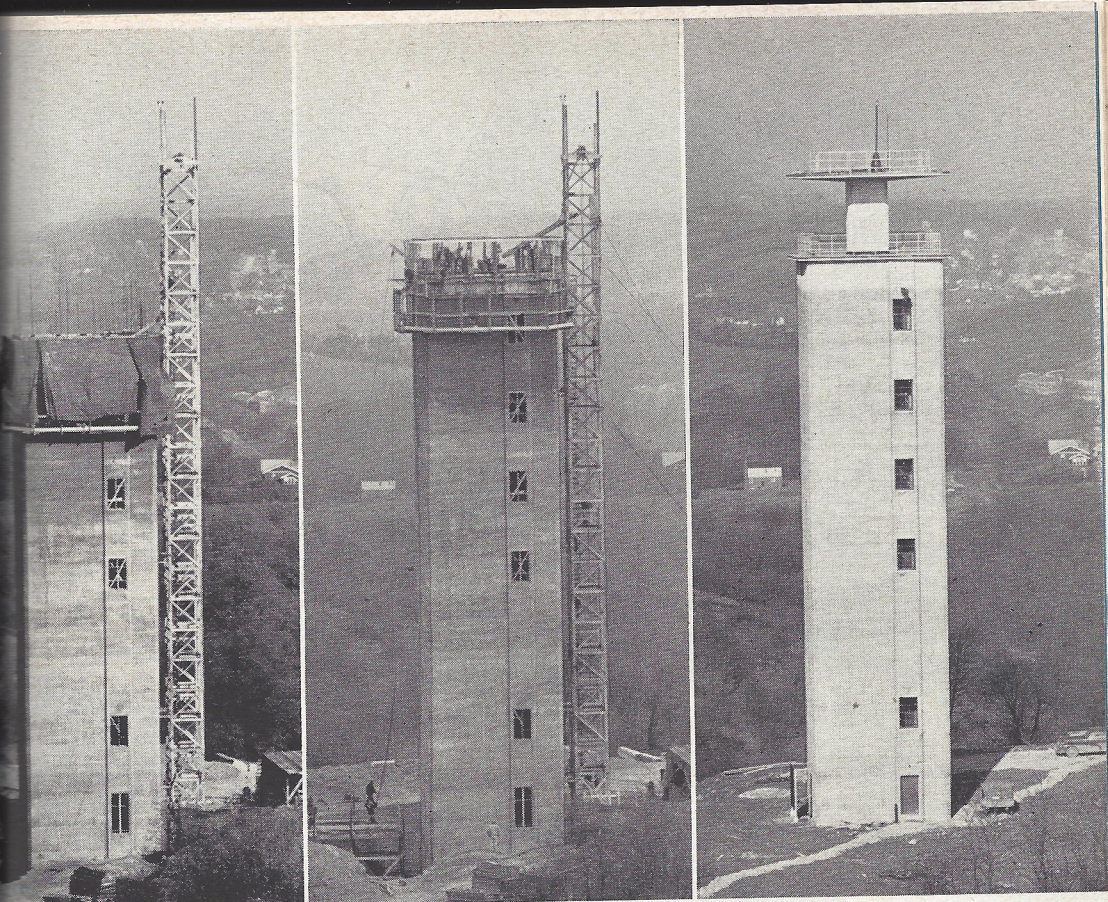
**T**OWERS that were raised by their own bootstraps will be relaying television shows cross-country this fall. Part of A.T.&T.'s New York-to-Chicago chain of radio relay stations, they were built with the help of an unusual wooden form that rises with the structure, sliding up as the concrete in it hardens.

Ordinarily, concrete buildings are poured one level at a time, the forms being knocked apart and reassembled for each higher level. Here, though, the sliding form stays together until the building is finished. It rides on 20 threaded steel rods that make up part of the vertical reinforcement of the structure. Screw jacks on these rods raise the form about six inches an hour. Since

the concrete must be poured continuously, work goes on day and night.

The sliding form consists of three wooden frames, two small ones fitting inside the third large one. Concrete poured into the space between the large frame and two small ones makes the outside wall. The space between the two small frames makes an inside wall enclosing the stairs.

The continuous-pouring method was employed by A.T.&T.'s Long Lines Department for much of the eastern leg of the 31-station New York-Chicago relay chain. While built primarily to relay television shows on its searchlight-like beams of micro-waves, it may also be used to carry great numbers of long-distance phone calls.



ing was only 16 feet high. By the next Monday (second from right) it had reached its full height of 103 feet. Photo at far right shows the

structure completed, but before installation of huge horns that serve as antennas. Tower is one link in New York-Chicago television relay.

**Scaffolding** hanging from the sliding form supports a "finisher," who smooths concrete as it is uncovered by the form. The workmen's platform atop the structure also rides on the form.

**Form rises about an inch** at a time as workmen operate jacks fitted to threaded steel bars. Note yardsticks placed behind threaded bars to aid in keeping platform level as it moves up.

