

## CBS COLOR-TV RECEIVERS

RECENT simultaneous color-television demonstrations in Chicago and New York, by the Columbia Broadcasting System, have attracted favorable attention. These public demonstrations have definitely shown the value that color television will have in the entertainment, advertising and educational fields. For the Chicago demonstration the CBS color program was fed from New York over the same coaxial cables used for networking black-and-white television to the Midwest.

One new color-TV receiver in the CBS demonstration group was the direct-view drum type illustrated in photo A. This shows color pictures on a 17-in. rectangular tube without a magnifier, in a console 34 in. high and 27 in. wide. The picture tube is inside the rotating color drum, as indicated in diagrams, Fig. 1. The color drum was originally developed by Dr. Peter C. Goldmark and his CBS laboratory associates in 1941, and was recently improved. A motor is employed to drive the color drum with its segments of television's primary colors.

Other types of TV color receivers using the conventional CBS system of flat, spinning color wheels, were included in the demonstration. The color converter, shown in photo B, slides to one side when the standard black-and-white programs are desired. Others were of the industrial type with the color-disk mechanism and enlarging lenses built in. The mechanical CBS color-TV system is illustrated in Fig. 2. As each red, green and blue color segment comes between the scene and the TV camera, the lens picks up chiefly that particular color. A similar whirling color wheel at the receiver, when synchronized with the one at the transmitter, produces the same effect on the TV screen. Persistence of vision blends the colors into a full-color picture.

