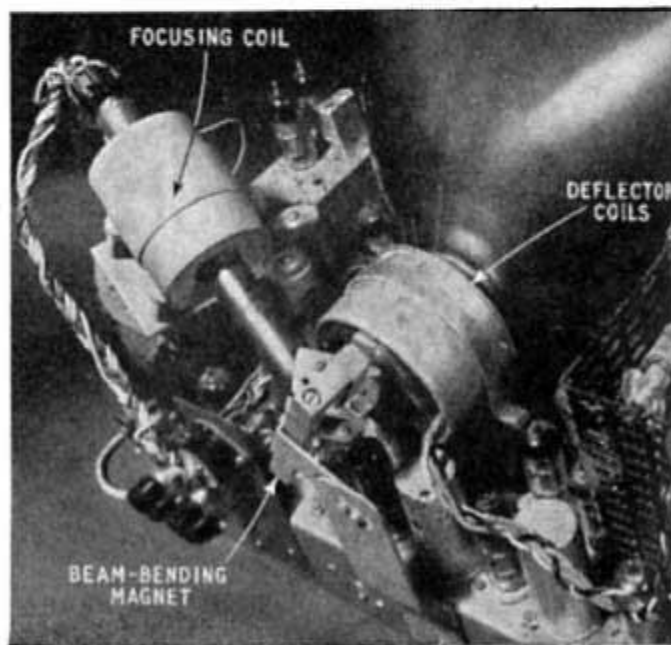


FOLDED-UP C.R. TUBE

TELEVISION sets with large screens are obliged to have rather deep and unwieldy cabinets to accommodate the considerable length of their picture tubes. By bending the neck of the tube back on itself, however, and using a small permanent magnet to deflect the electron beam round the bend, it is possible to reduce the depth of the cabinet to less than the diagonal of the screen. This has been done as an experiment by the Philips research laboratories at Eindhoven, and they have built a 16-in receiver, which, with a width of 20in and a height of 14½in, has a depth of only 13¼in. In fact, it is no larger than a medium-sized sound broadcast receiver. As the bent part of the tube can be somewhat longer than that of an equivalent straight tube the focusing in this arrangement can be made correspondingly better than normal. Moreover, the focus coil (see picture) can be made long and narrow, and by bending the neck through an angle greater than 90 deg the thickness of the coil can be kept within the overall front-to-back length of the tube. It goes without saying, of course, that the bend in the neck and the beam-deflecting magnet together act as a very effective ion trap. J. L. H. Jonker describes the scheme more fully in the June, 1953, issue of the *Philips Technical Review*.



WIRELESS WORLD, JANUARY 1954

Wireless World, January 1954

Courtesy of Jon Evans