

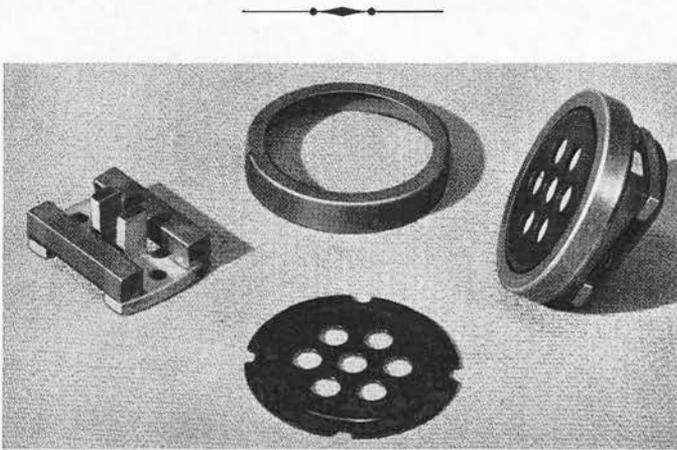
polarity and strength of current to be sent over the two conductors simultaneously but independently.

This system employs four register relays, 1, 2, 4, and 5, and the sum of the numbers of the relays operated indicates the digit recorded. Of the three relays in each side, one is polarized to operate only on negative pulses, one is marginal and operates only on heavy current, and the third is a sensitive relay that operates on pulses of either polarity and either strength. This latter relay controls only the steering circuit that switches the leads to successive sets of

register relays. The pulses are sent by operation of the various keys, and the register relays operated as a result are shown in Table III.

A similar two-wire key-pulsing system is sometimes employed in step-by-step areas, but the senders associated with it must be arranged to send out dial pulses, while the senders in the panel areas operate on revertive pulses.

The situation employing these various kinds of pulsing are indicated diagrammatically in Figure 4, which is an extension of the chart given in the pulsing article published in the August issue.



STEEL REPLACES COPPER IN HANDSET PARTS

WAR needs for strategic materials required that the aluminum grids and ferrules of handset transmitters and receivers be changed to copper and then to steel. After receiving a coating of zinc the steel grids are finished in black enamel. The ferrules are dipped in dichromate to inhibit corrosion of the zinc. To reduce telephone

use of nickel, silicon steel has been substituted for permalloy in the cores of the receiver units. This change tends to decrease the efficiency of the unit but it is approximately offset by the effect of the steel grid and ferrule on the magnetic lines through the diaphragm. Transmission data and plant practices are not affected by these changes.

