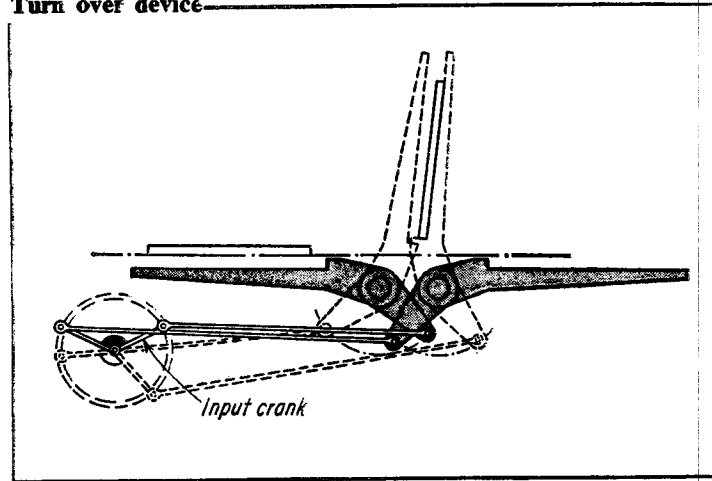


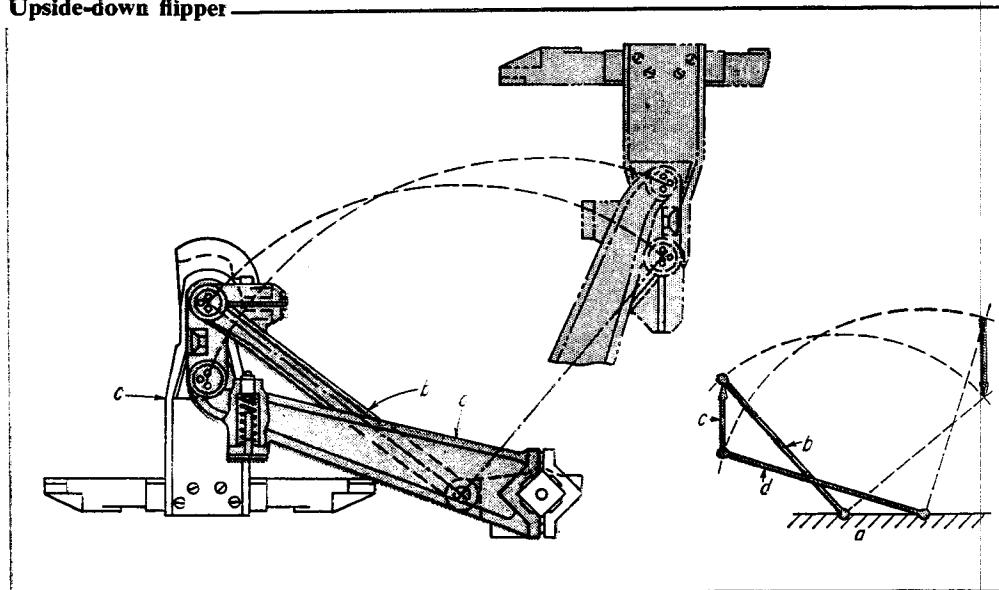
FLIPPING DEVICES

The mechanism can turn over a flat piece by driving two four-bar linkages from one double crank. The two flippers are actually extensions of the fourth members of the four-bar linkages. Link proportions are selected so that both flippers come up the same time to meet at a line slightly off the vertical to transfer the piece from one flipper to the other by the momentum of the piece.

Turn over device



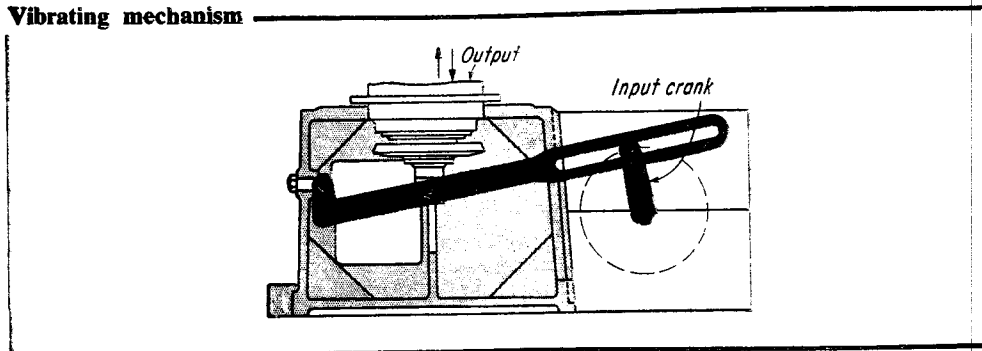
Upside-down flipper



This is actually a four-bar linkage (links *a*, *b*, *c*, *d*) in which the part that is to be turned over is the coupler *c* of the linkage. For the proportions shown, the 180-deg rotation of link *c* is accomplished during 90-deg rotation of the input link.

SPECIAL-FUNCTION DEVICES

Vibrating mechanism



As the input crank rotates, the slotted link, which is fastened to the frame with the aid of an intermediate link, oscillates to vibrate the output table up and down.