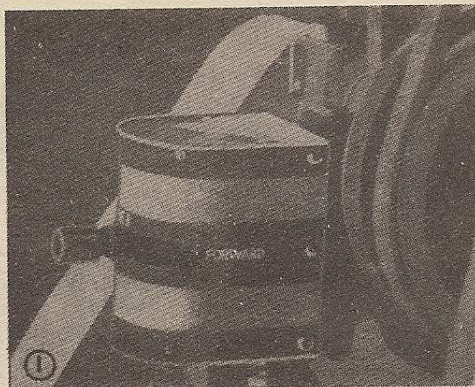


SAFETY REVERSING SWITCH

For Shop Motors



IF YOU use a split-phase or capacitor-type motor in your workshop, you can make a safety reversing switch, Fig. 1, that will enable you to change the rotation of your lathe or drill press without crossing the belt, and in addition you have the protection of an enclosed switch. The unit is made from a t.p.d.t. switch which is cut down to make it more compact. Since the dimensions of switches as manufactured vary, no measurements are given and assembly will have to be by the cut-and-try method. The blades and contacts are removed from the original base and the blades are shortened by cutting them, Fig. 2. To secure the blades to the crossbar, fillister-head screws are slotted and soldered to each blade as shown in the lower detail of Fig. 3. Holes are drilled in the fiber-board crossbar to receive the screws, and the handle is attached by fastening it to a strip of metal which, in turn, is mounted on the crossbar bridging the center blade. The base also is made of fiber board grooved to fit the contacts. These should be spaced as closely as possible, but not so closely that there would be possibility of a short circuit. Also, keep in mind that the location of the contacts must fit the throw of the switch. Top and bottom are of wood curved so the crossbar has clearance to swing within the cover and rabbeted as indicated in the lower detail of Fig. 3. For a cover, sheet metal lined with paper for insulation is used. The slot for the handle is made by drilling a hole at each end and completing the cut with tin shears. When the unit is assembled, label the two closed positions of the switch "Forward" and "Reverse," with the open position marked "Off." Do not change rotation without allowing the motor to stop. The switch can be given the finish as shown so that it is easily seen. A wiring diagram is shown in the upper detail of Fig. 3.

