

32—Cold Forming of Metals

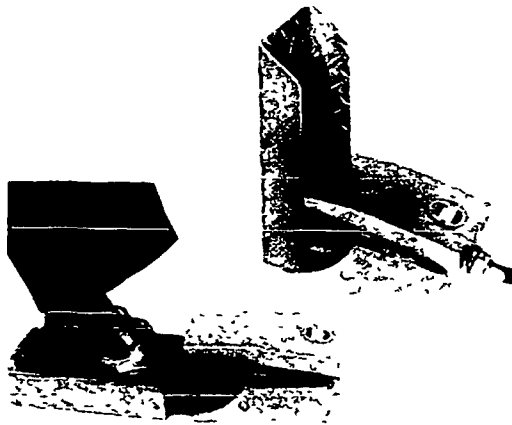


FIG 32-22 —Two views of a foot switch to which a spring-loaded shield has been attached by the shop in such a way that it closes automatically when foot is removed

without undue fatigue and without striking or scraping his leg against sharp edges of the guard. A split length of ordinary garden hose around the open edge of the pedal guard will protect against such injury.

The tripping pedal should travel about 3 in. The clutch rod should be connected to the pedal lever so that the distance between the clutch rod and the rear pivot on the pedal will be approximately one-third the length of the pedal. The travel of the connecting point will thus be about 1 in. when the pedal travel is 3 in.

The pedal lever should have no side play, and the tension of the pedal should be maintained as recommended by the manufacturer. No spring or counterweights should be added to the pedal shaft or to the pedal shaft lever.

Measures to prevent accidental tripping of the press in addition to placing a guard over the pedal include

- 1 A safety spring on the trip rod
- 2 Aisles of ample width for trucking material to the presses
- 3 Aisles adjacent to the press used only for necessary trucking of dies and stock
- 4 Enough working space between adjacent machines in the same line
- 5 Unauthorized persons kept away

- 6 Operators protected from interruption
- 7 The operator, and all other persons not concerned, kept away from the press when it is being set up
- 8 A closely supervised, mandatory rule prohibiting the operator from "riding" the pedal. The operator should remove his foot from the pedal immediately each time he trips the press
- 9 Flywheel brakes. Flywheels—especially on large presses—continue to coast for some time after the power source has been turned off, and they have been known to cycle a press when the actuating control (or controls) was tripped. A flywheel brake will stop the flywheel within 10 to 20 seconds.

On all squaring shears the entire length of the treadles should be provided with fixed guards. Such guards should be placed above the treadle, with room between the guard and the treadle only for the operator's foot. To make accidental tripping of the shear impossible, an extra foot latch can be attached to the treadle.

Single-stroke attachments. Through common usage the term "nonrepeat" has more or less come to mean both the nonrepeat device which is installed in the clutch mechanism

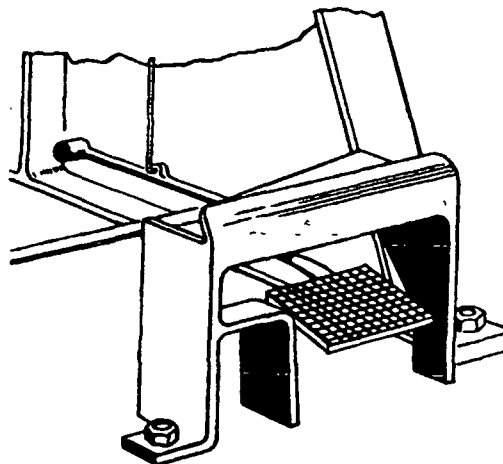


FIG 32-23 —This foot pedal guard has a foot rest at the left to prevent fatigue