

FIGURE 4

Roll Design

As nearly as possible, the roller should be over the center of the cut (refer to samples at bottom of page). This is easier if a shop has on hand a variety of right-hand, left-hand and on-center roll holders. There are numerous varieties of roll position, and each application calls for a different usage.

When radiused surfaces are shaved, a straight, cylindrical roller will give only line contact, and may leave a pressure mark. On the other hand, a roll contoured exactly like the part may bind on contact with the unshaved surface. The best answer is shown in Figure 4, where the radius of the roll is slightly greater than that of the part. In a concave situation, the reverse would be true; the roll's radius should be less than that on the workpiece.

In shaving a taper, rolls may skid, due to the differential between the various diameters of roll and work piece. There are two logical solutions: (1) use split rollers side by side in the same holder; (2) use one tapered roller in a tilted holder. While the second suggestion calls for a specially designed roller back rest, it is generally the best.

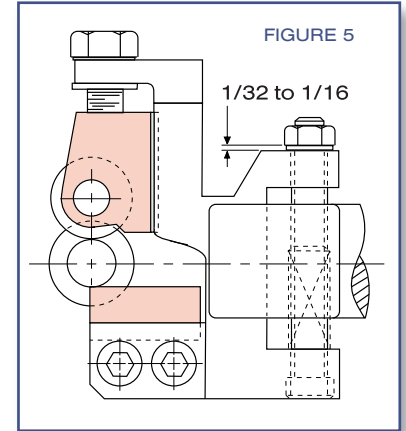


FIGURE 5

Shaving Shoulders and Grooves

If the tool must work close to a deep shoulder, a stop device, like the one shown in Figure 5, controls the upward travel of the tool and insures against tool-grabbing. As holder advances toward stock center, the tool digs into shoulder and body is raised to an unsuitable clearance. This improper shaving condition will not allow roll to contact part and guide tool in its proper cutting path, but rather allows tool to advance unguided. This will damage dovetail tool or break work piece. It is possible tool may raise holder to a point where body would ram shank. If this happens, damage will occur to the shave tool holder. Note the stop nut limits travel, but does not interfere with the float of the holder on the spring.

Actual jobs shaved with **SLATER TOOLS** shave tool holders. Standard rolls and roller back rests may be positioned, and adjusted to shave the contours of many parts usually associated with special rolls and roller back rests. Standard roller back rests may be placed in any of 3 positions for both straddle and offset type roller back rests. (7/16 shave tool holder have 2 roller positions only.) A combination of any 2 roller back rests may be used in the D-1 and D-3 positions for all shave tool holders. Tools are located on the dovetail in the holder after part has been positioned for support by the roll. Special ground rolls are needed for tapered and spherical surfaces. Extra wide roller back rests are made on order only. Undercuts, if not too deep (.010-.020) may be shaved in without forming.

IMPORTANT:

Shave tool holders come equipped with large diameter roller and left hand offset type roller back rest, unless otherwise specified.

