Offset Taper Turning

Avoid the annoyance of setting the tailstock over for turning a taper by using this fixture.

By Frank W. Harth

A small four-jaw chuck is the principal component of this gadget. Replace the No. 1 Morse-taper shank with a No. 2 shank. Make the sliding member from machine steel. Pin or cement a 2-in. length of plastic or steel rule to a metal plate and screw the plate to the chuck as shown. Use the headstock center as a guide when lining up the scale's center mark. To keep the slide parallel to the lathe bed, scratch a mark on the tailstock ram and a matching mark on the back of the chuck.

Employing the center mark that's etched on the slide and the plastic or steel scale, set off desired amount of offset with an Allen wrench.

This adjustable offset-center attachment fits the tailstock ram. Turn the taper exactly the same as if tailstock had been set off center conventionally.