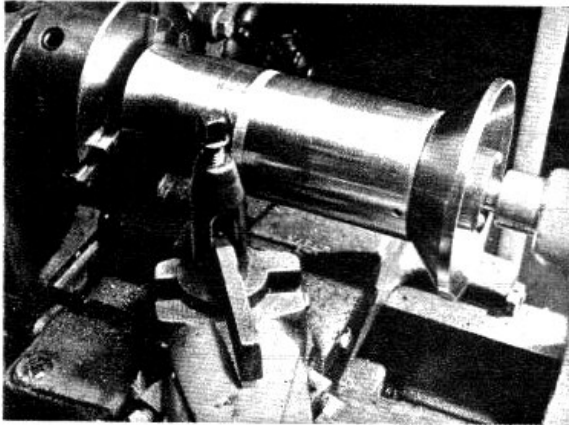
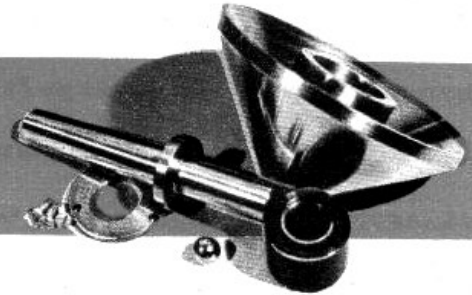


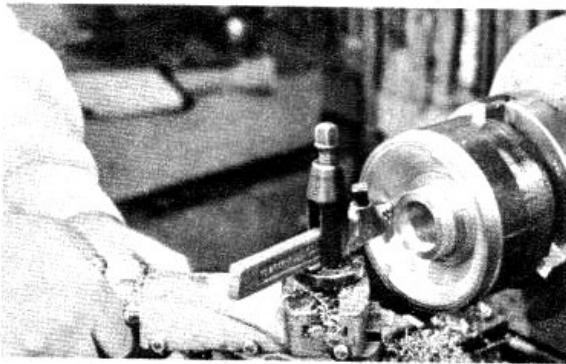
# Tail Stock Pipe Center

Taking all thrust on ball and needle bearings, this lathe accessory is almost frictionless.

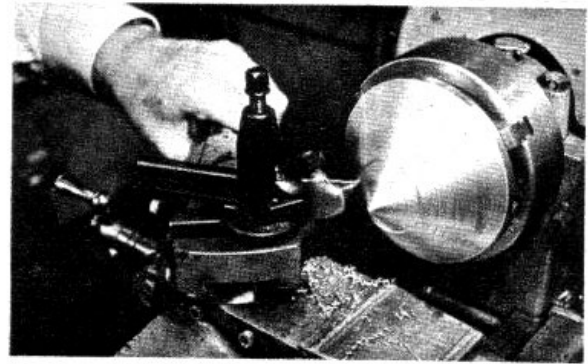


Unlike usual pipe centers, this one, shown here in use, will not score or heat up under pressure.

**T**HIS tailstock pipe center accommodates all pipe sizes from  $\frac{1}{4}$  to  $4\frac{1}{4}$  in. It takes end thrust on a  $\frac{1}{16}$ -in. ball and radial thrust on a  $\frac{5}{8}$  in. i. d. by  $1\frac{1}{4}$  in. o. d. by 1 in. long needle bearing. If bearings of other sizes are used, alter dimensions to suit. Machine the inside of the head first, completing all operations (the piece can't be rechucked after the outside is shaped); then reverse in chuck and machine and finish the face. The final operation here is drilling the oil hole through the nose. The shank is machined and finished between centers; then the ends are faced and the race for the ball is cut. Fashion the retainer ring from a piece of steel plate.—Will Thomas.



Removing excess metal from inside of head. This, while not vital, saves weight and looks neater.



To cut the conical face, set the tool-post slide at  $45^\circ$ ; then slowly and carefully feed the tool.

