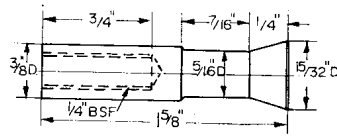
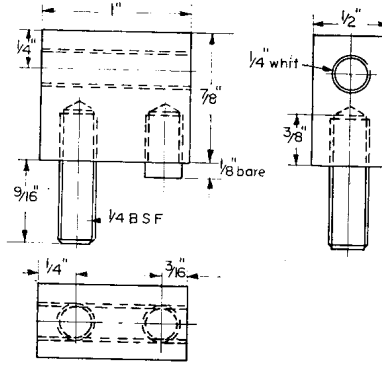


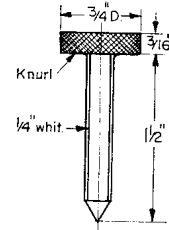
Left: The dividing attachment in use on the ML7 lathe.



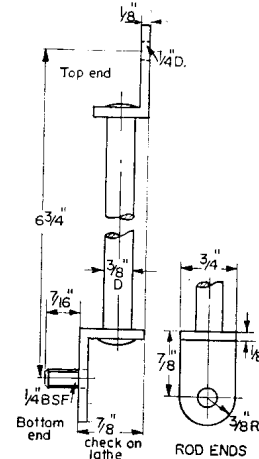
DRAWBOLT



DETENT BLOCK



DETENT SCREW



ANCHOR STAY ROD

mandrel is effected by fixing the tail end by a stiff bar to the nearside hole in the change wheel casing backplate. The earlier ML7's had a plain hole here; later ones had this slotted out to the edge for ease of fitting the guard casing. It pays to make this slight modification on lathes not so fitted, as it makes fitting the dividing attachment simplicity itself. The anchor bar is merely a length of $\frac{3}{8}$ in. dia. rod, turned down to $\frac{1}{4}$ in. at each end and riveted over in $\frac{1}{4}$ in. dia. holes in a small piece of angle. The top angle has a plain drilled hole for clamping by the detent block nut, while the bottom angle carries a short $\frac{1}{4}$ in. stud and nut for engaging the cover plate hole.

Fixing

To fix up the attachment, slip the chosen change wheel on the outer end, holding it by the recessed washer and Allen screw run in lightly finger tight. Insert the sleeve in the mandrel, engage the anchor bar stud in the slotted guard stud hole, and screw the Allen screw up tightly enough to hold the change wheel firmly. Run the detent back until only just the point protrudes, then tighten the nuts both ends of the anchor bar, positioning the detent block so that the detent point just clears the change wheel when retracted.

Instead of a normal nut and washer on the

screwed end of the draw-bolt, the fitting shown is a turned recessed washer housing the head of an Allen screw. This is to permit of another change wheel overlapping the centre of the mandrel wheel when using that attachment in a slightly different way. It will be appreciated that by using the lathe change wheel direct, it is not possible to divide into such numbers as 16, 24, 22, or any number which is not a multiple of a factor of the number of teeth occurring in some change wheels. In gear cutting, for instance, the need for such numbers often arises, and by making a small addition to the basic attachment shown, the range of divisions possible is greatly extended by the ability to carry out compound dividing.

It is proposed to describe the necessary additions for this to be done in a separate article, as the attachment as shown is adequate for many normal dividing jobs, and the compound feature can be added at any time.

The M.E. 1 in. scale Traction Engine will be back in the February 6 issue when L. C. Mason deals with the machining of the cylinder.—Ed.