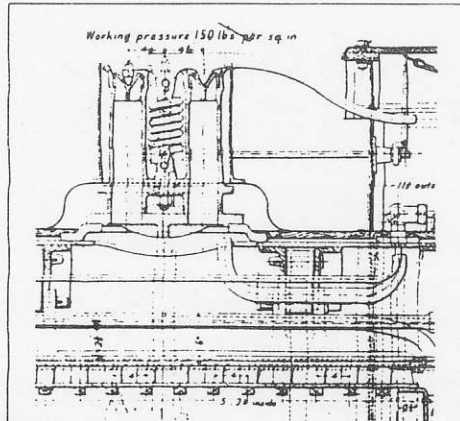


Forming the flange

GEOFF HELLIWELL, a stalwart of the 3mm Society, has found a successful way of forming flanges on chimneys and domes:

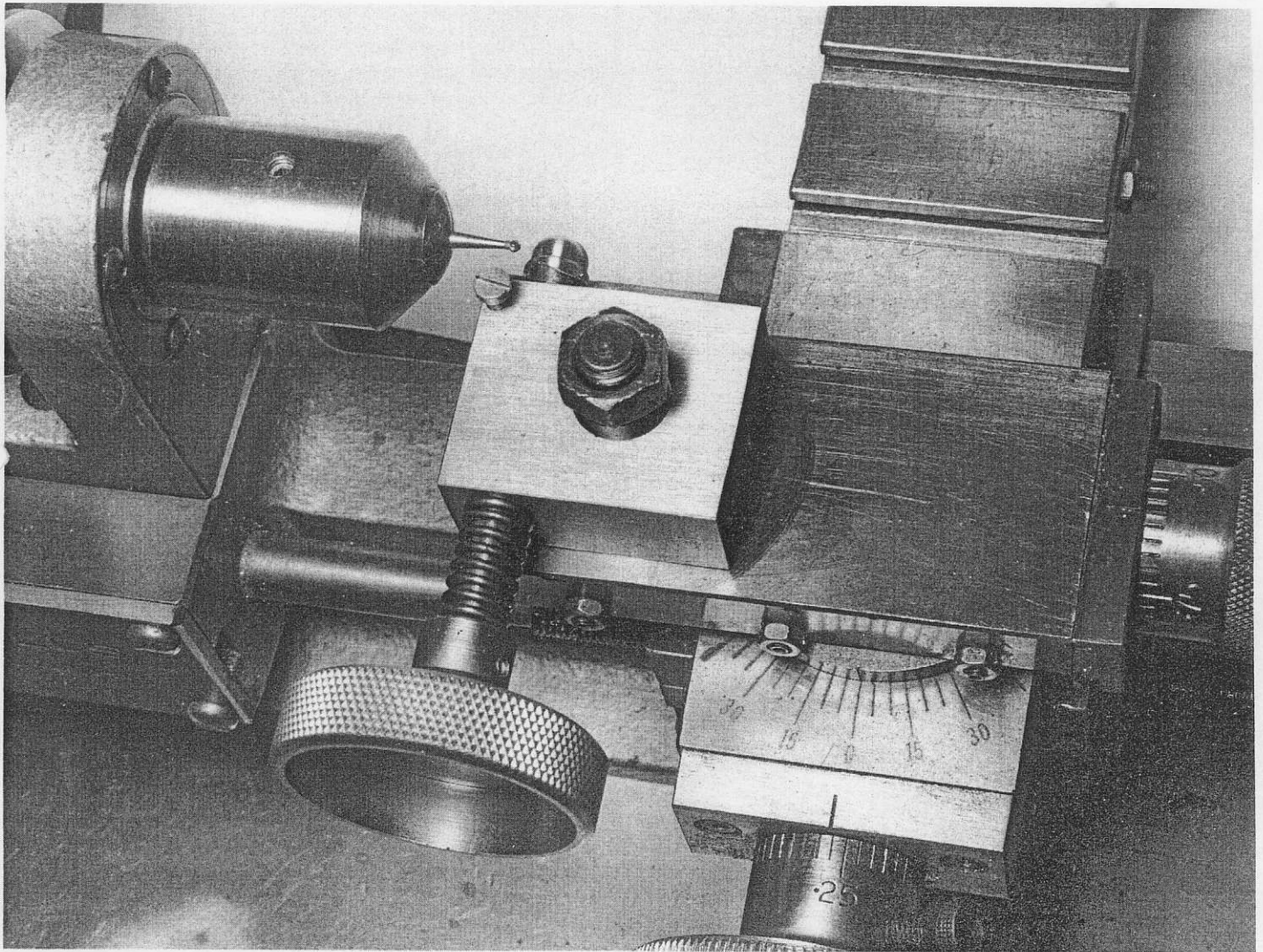
Way back in MRJ No. 50, Paul Berntsen described his method of making chimneys and domes. This kind of article is just the sort of thing I look for in MRJ. However, I was a little disappointed that when it came to forming the base flange on a steam dome, Paul reverted to a hand-held rotary burr and rat-tail files. I nevertheless followed his teachings when making the dome for my GWR '517' which subsequently gained me a bronze medal at the Model Engineer Exhibition. Stewart Hine, one of the judges, commented in his subsequent write-up that I had lost marks because the dome base flange was poorly formed. This stuck in my mind, so when



WORKSHOP MATTERS

the 3mm Society asked me to make some casting masters for a range of L & Y steam domes, I began to seriously consider how Paul's method of forming the flange could be improved upon. I felt sure there must be a way of machining the profile and eventually came up with the following solution.

My technique for cutting the underside of the dome is very similar to Paul Berntsen's – that is, mount the work on the toolpost of a lathe or on a milling machine and use a flycutter to form the face that mates with the boiler. Great care must be taken to see that the cutter is exactly on the centre line of the work-piece otherwise the finished dome will sit off-centre on the boiler. The next stage also follows fairly closely the teachings of the Antipodean master in that the work is held in the lathe chuck, to be spotfaced



General view showing the jig in place, ready to machine the flange profile.