

Many years ago I saw a note in one of the then current model railway journals regarding a vernier caliper which a modeller had had made. It read direct in feet and inches to the gauge 1 scale. In fact, it was so accurate that it gave readings to one scale eighth of an inch.

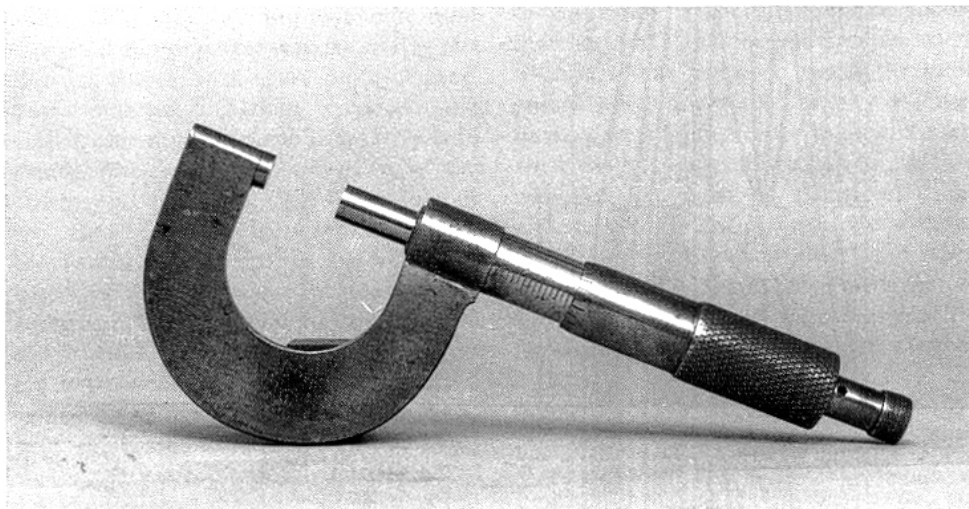
The possibility of one for my scale of 4mm/1ft was quite exciting but I imagined the cost would be prohibitive. However, on thinking about it, I realised that a micrometer could do the same job more accurately, and the making of such a micrometer might not be too difficult a job on my lathe.

I reckoned that the micrometer screw would need to be 1mm pitch so that one turn of the thimble would advance the anvils 1mm, equal to 3in in 4mm scale. Accordingly, the thimble could be graduated 0.3, each graduation equalling one scale inch and the major graduations could then be divided into eight, each of these equalling $\frac{1}{8}$ in scale and giving a total of 24 divisions round the thimble.

I got cracking on my Myford ML2 lathe (now 56 years old and featured on page 225 of MRJ No. 81) and managed the job without too much difficulty. The screw/spindle component was cut in silver steel, hardened, and the screw thread lapped to a mirror finish. The nut has the top portion split part way down and an external tapered thread and nut permit slight closing to accommodate wear and eliminate slack. Finally, there is a small ratchet knob on top of the spindle to give a constant anvil pressure when taking a measurement. The hardest part was sawing, filing and milling the micrometer body. The actual design and dimensions

A Scale Micrometer

With his usual engineering panache, SID STUBBS gets scale measurement down to a fine art (and then goes mad and makes it even finer!):



were copied from the Lin Johansson micrometer which I acquired during my apprenticeship long ago.

Having got thus far, I was seized by a spasm of utter madness and engraved on the barrel a vernier scale which enabled me to read to one eighth of each scale eighth inch division on the thimble. Consequently, the micrometer actually reads to *scale* sixty-fourths of an inch which, in Imperial units, is approximately two ten-thousandths of an inch! Just how much value there is in this degree of accuracy is very questionable! In fact, the

whole business really adds up to a case of doing it for the challenge rather than meeting any real need. Still, there it is, and this applies to quite a few aspects of our hobby.

For anyone wishing to experiment along these lines but not having a screw-cutting lathe, I would point out that OBA or 6mm metric does involve a screw of 1mm pitch. Just where the O gauge boys are going to get their $1\frac{3}{4}$ mm pitch screws from I don't know, but the $\frac{3}{8}$ in scale 1 gauger is ideally served at 32 threads per inch, each turn equalling one scale inch.