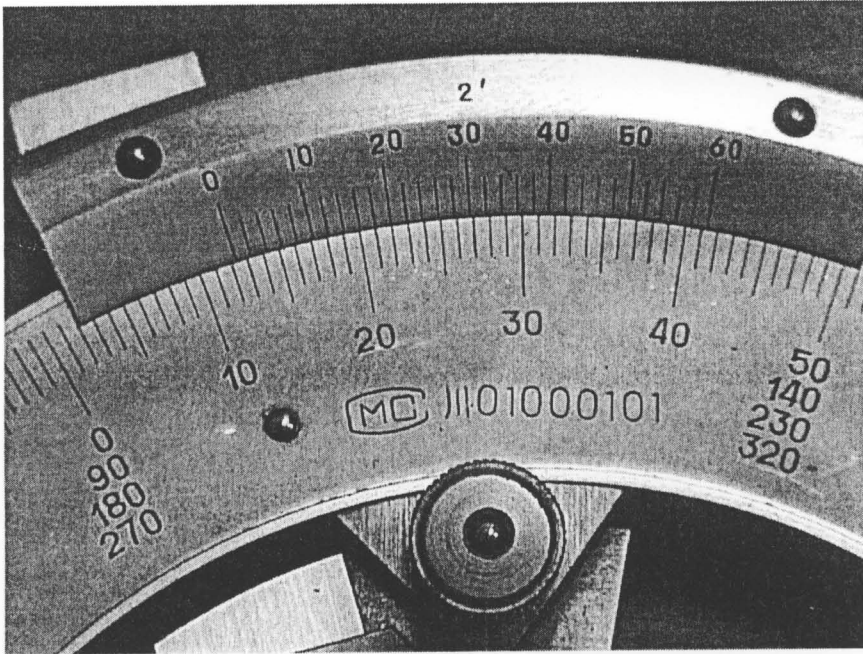


The Vernier Scale

In earlier times, most precision measuring device employed vernier scales. This scale has fallen into disuse of late and many people have never learned its use. This little explanation should serve to make it understandable

This shows the vernier scale of a protractor. While most scales are arranged for linear measurement and use inches or millimeters, the protractor scale is calibrated in degrees and minutes. Since there are 60 minutes in a degree, the vernier portion of the scale just reads 60'.



Each mark on the upper scale is worth 2 minutes and with it we can divide an individual degree into 30 parts. The picture has the protractor reading $12^{\circ} 20'$.

To obtain this reading, first read the number which is just to the left of the 0 on the upper scale. This number is 12. Next find the mark on the upper scale which lines up with any mark on the lower scale. Only one of the 30 will line up perfectly. In this case it lines up with the 22° mark but It does not matter which mark on the lower scale is used, the minutes are indicated by the number on the upper scale which is 20'.

The Beall Tool Co.
Newark Ohio