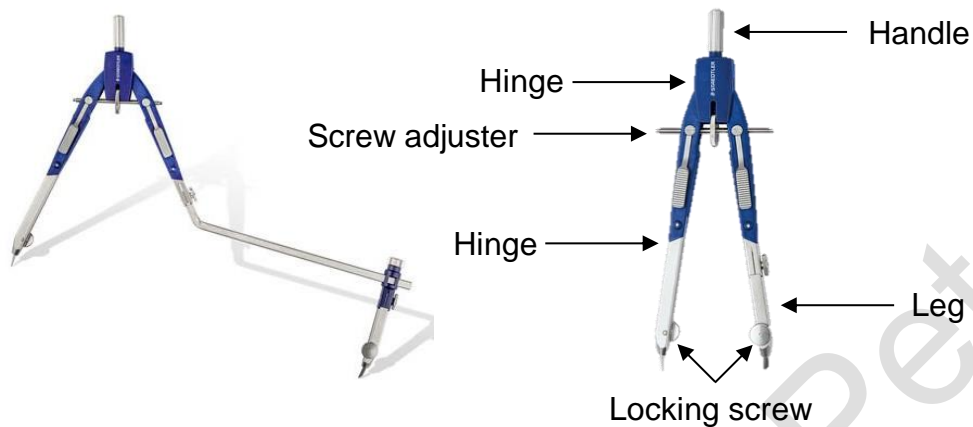




## Compass



### Function

A pair of compasses, is used to mark circle or arcs. It can also be used to 'step-off' repeat distances. Whilst its use might have been superseded with computer packages in the design industry, it is still a very useful tool for the woodworker, especially with the extension arm as shown above.

### Description

The handle is a small knurled rod, which is turned between the index finger and thumb to rotate the compass. There are two legs (hence 'pair' of compasses), one which holds the pin, or needle point, and the other which holds a small lead point. The higher quality compass, as shown above, has a hinge in the middle of each leg, so that they can be bent to as near  $90^\circ$  from the drawing surface as possible when spread out, for great accuracy. This compass also has an adjustable wheel for precise setting, the cheaper version is simply stretched or squeezed by hand to the desired distance. The top hinge holds the two legs together and enables them to be moved together or apart. The locking screws fix the needle and lead points in place. Locate the needle point at the centre and use the lead point to mark the desired arc or circle.

For much larger arcs and circles, which are too big to use a pair of compasses, use a beam compass as shown below. Alternatively, use a small section of timber (about 10mm x 5mm), drive a veneer or panel pin through one end and locate this at the centre, then drill a hole for the pencil at the required radii and draw the arc or circle, with the pencil located in the hole.

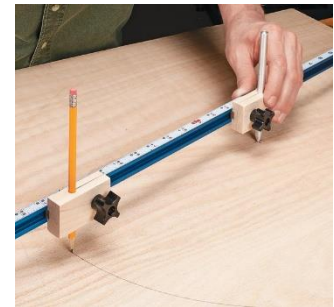


## History

The first known pair of compasses were found in ancient Rome, during an archaeological dig<sup>1</sup>, they were also known to be in Greece. Compasses before the eighteenth century consisted of two needle points, so it was used to scratch rather than apply a mark to the surface. These were also used as dividers in order to transfer distances from one location to another. Leonardo da Vinci made improvements to the design of the compass, including a knuckle joint and beam compass to draw arcs and circles with bigger radii.<sup>2</sup> By the twentieth century compasses were prevalent throughout the known world.

## Health & Safety

Care must be taken with the needle-sharp point.



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<sup>1</sup> [Drawing Compass - History, Use and Types \(historyofpencils.com\)](http://historyofpencils.com)

<sup>2</sup> [hand tool - Compass, divider, and caliper | Britannica](https://www.britannica.com/technology/hand-tool/Compass-divider-and-caliper)