

June 9, 1942.

J. F. FARRAR
MICROMETER DIVIDER
Filed May 14, 1941

2,285,918

2 Sheets-Sheet 1

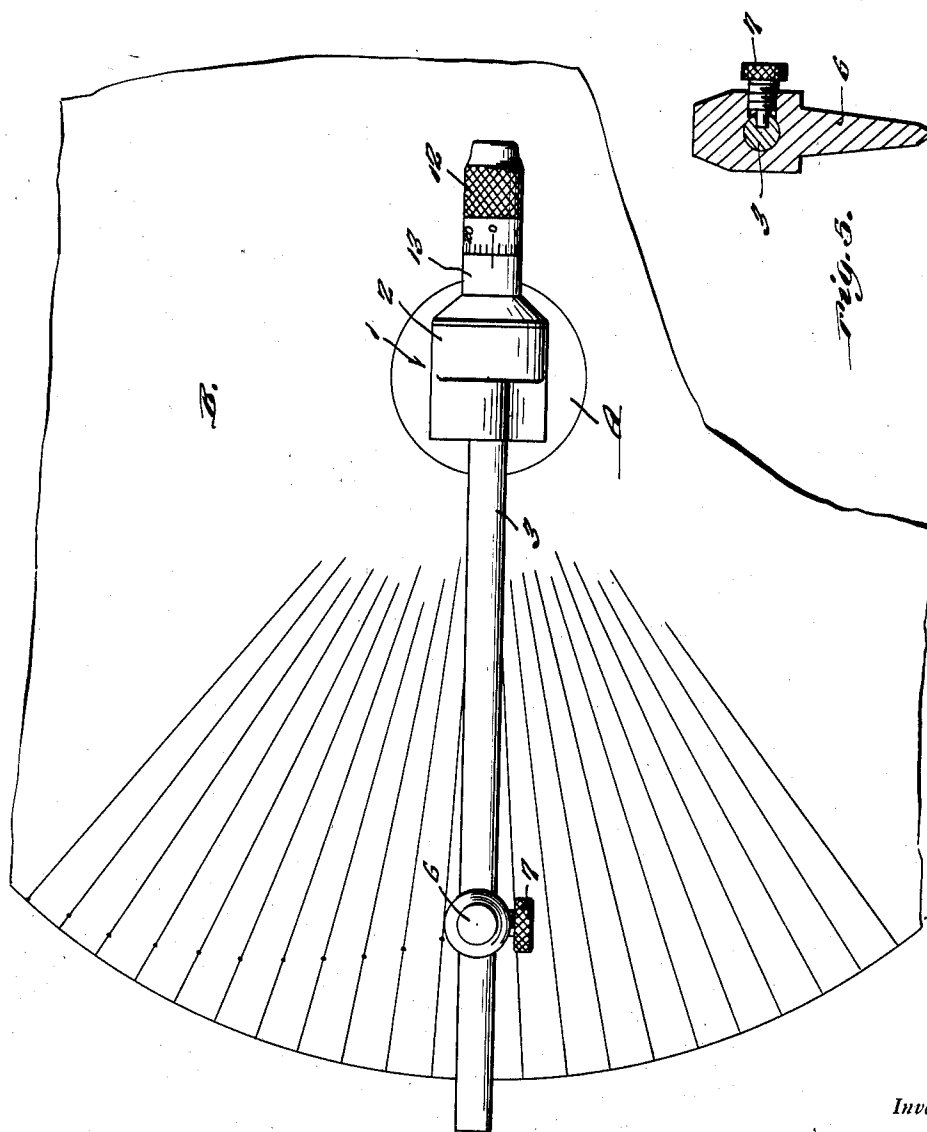


Fig. 1.

Fig. 3.

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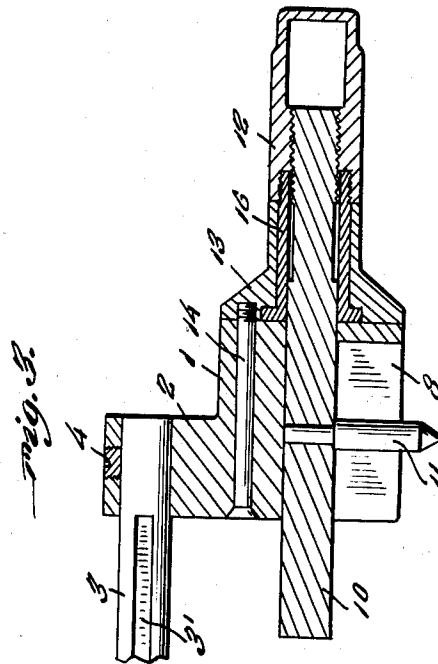
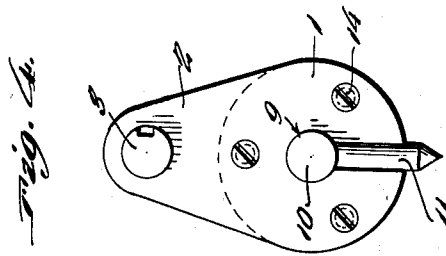
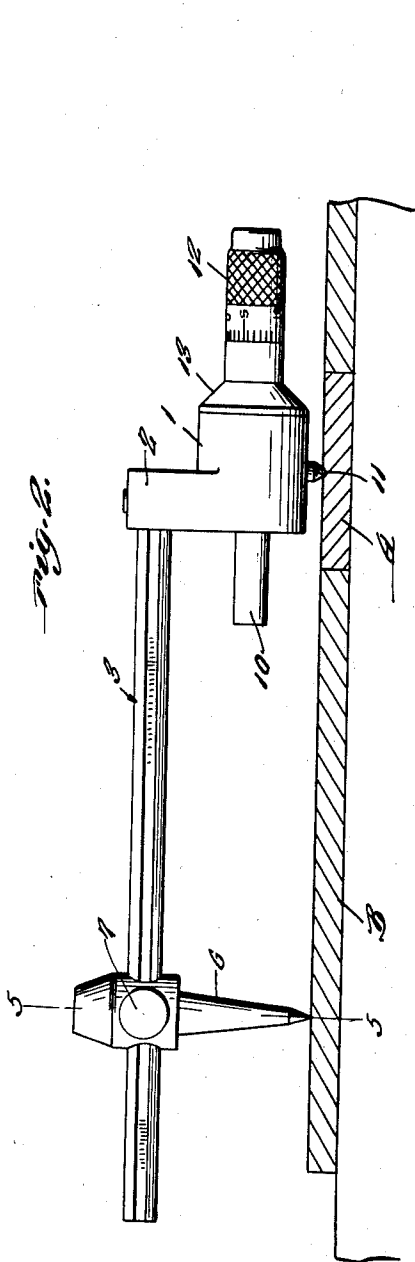
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2 Sheets-Sheet 2



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MICROMETER DIVIDER

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Application May 14, 1941, Serial No. 393,441

2 Claims. (Cl. 33—189)

This invention relates to a micrometer divider, the general object of the invention being to provide a tool mainly designed for laying out cams directly on cam blanks, the tool being specifically designed for use toward the production of the Brown and Sharpe screw machine cams.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a top plan view showing how the device is used.

Figure 2 is an elevational view of the device as shown in Figure 1 with the blank in section.

Figure 3 is a longitudinal sectional view through the head or body part of the tool.

Figure 4 is an end view looking toward the head end of the device.

Figure 5 is a section on the line 5—5 of Figure 2.

In these drawings, the numeral 1 indicates the body of the tool which is formed with an upright part 2 having a horizontal hole therein for receiving one end of the trammel bar 3 which is held in place by the screw 4. A punch 6 has a hole in its head part through which the bar 3 passes and the punch is held in adjusted position on the bar by the set screw 7. While this punch is shown as an ordinary prick punch an automatic prick punch may be used in its place but such punch is not shown as it is in common use in manufacture. The bar is provided with an elongated groove 3' which receives the inner end of the screw 7. A slot 8 is formed in the lower part of the body 1 and the body is provided with a bore 9 with which the slot communicates. A spindle 10 passes through the bore and has depending therefrom a pointed projection 11 which passes through the slot, this projection acting as a pivot point. The rear end of the spindle is threaded and a graduated thimble 12 is threaded on this end. A thrust collar 13 is fastened to the rear end of the body by the screws or bolts 14 and the inner end of the thimble abuts the outer end of this collar and the collar provides a recess for the flange on a sleeve 16 extending rearwardly from the body and passing through the collar 13 into the inner end of the thimble, this sleeve acting to take up the thrust

of the spindle. As will be seen the sleeve 16 is rotatably arranged in the collar 13 and said sleeve is threaded tightly to the thimble 12 to rotate therewith, the sleeve being free of the spindle 10. Thus when the thimble 12 is turned the spindle 10 will be moved longitudinally, or if the spindle 10 is held against movement then the body 1 and the parts attached thereto will be moved longitudinally on the spindle 10. When the parts wear the threaded end of the sleeve 16 may be ground and reassembled and screwed tightly into the thimble. The parts 12, 13 and 16 must first be assembled and adjusted before the member 13 is secured to the body by the screws 14.

Thus it will be seen that by using the projection 11 as a pivotal point and then turning the thimble the punch can be adjusted very finely by means of the graduations on the thimble.

In using the device the center hole of the cam blank B has a disk A placed therein and this disk has a punch mark in its center. This punch mark in the disk provides a pivot from which all other marks are measured, the cam surface being divided equally into one hundred radial lines for convenience in laying out and with the parts in the position shown in Figures 1 and 2 the operation is as follows.

Having the throw of each lobe of cam specified in the layout sheet, it is necessary simply to divide the throw in inches, by the number of hundredths of cam surface in lobe, to ascertain the amount of rise (in thousandths) per hundredth of cam surface. After locating the starting point of the first lobe the pivot point 11 is placed in center of cam and the prick punch 6 is moved along beam 3 until it coincides with starting point of lobe and clamped in position. The prick punch is tapped lightly with small hammer. The thimble is then turned the required number of thousandths for the next radial line and the center is again tapped, and so on until lobe is marked. The prick punch is again adjusted for the start of each succeeding lobe until finished; when the light marks may be made clearer with a regular prick punch.

The tool can also be used as a divider for scribing circles, etc.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A tool of the class described comprising a stationary body having a bore and a slot in its lower edge communicating with the bore, a spindle passing through the bore of the body and having a part projecting from an end of the body, the end of said part being threaded, a pointed projection depending from the spindle through the slot and forming a pivotal point, a graduated thimble internally threaded and fitting over the threaded part of the spindle, means for rotatably connecting the thimble to the body, a bar having one end connected with an upper portion of the body and a prick punch slidably arranged on the bar and depending therefrom.

2. A device of the class described comprising a body having a slot in its lower part and a bore passing longitudinally through the body and having a part in communication with the slot, a

spindle passing through the bore, a pointed projection depending from the spindle and passing through the slot and forming a pivotal point for the body, said spindle having a portion projecting from an end of the body with the end of said portion threaded, a graduated thimble threaded on the threaded end of the spindle, a thrust collar connected with said end of the body and having one end abutting the inner end of the thimble, a thrust sleeve rotatably arranged in the thrust collar and connected with the inner end of the thimble for rotary movement with the thimble, said thrust sleeve surrounding a part of the spindle, an upwardly extending part on the body having a hole therein, a bar having one end held in the hole, a prick punch slidably arranged on the bar and means for holding the punch in adjusted position.

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