

May 29, 1928.

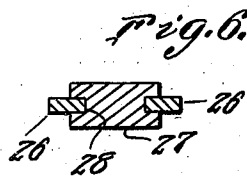
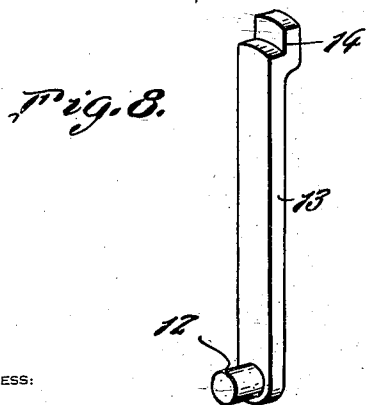
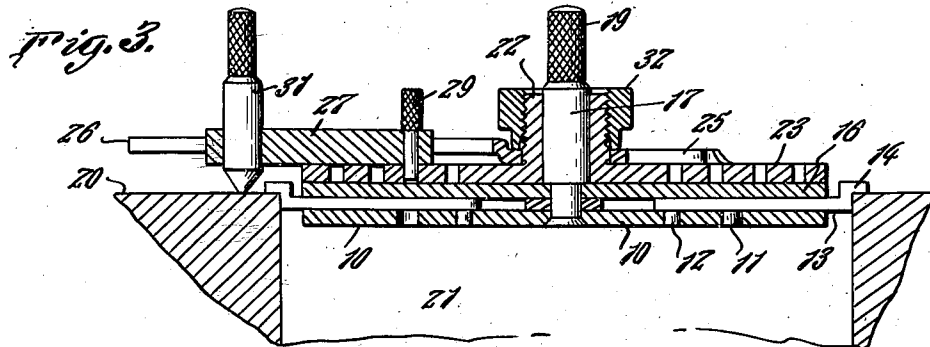
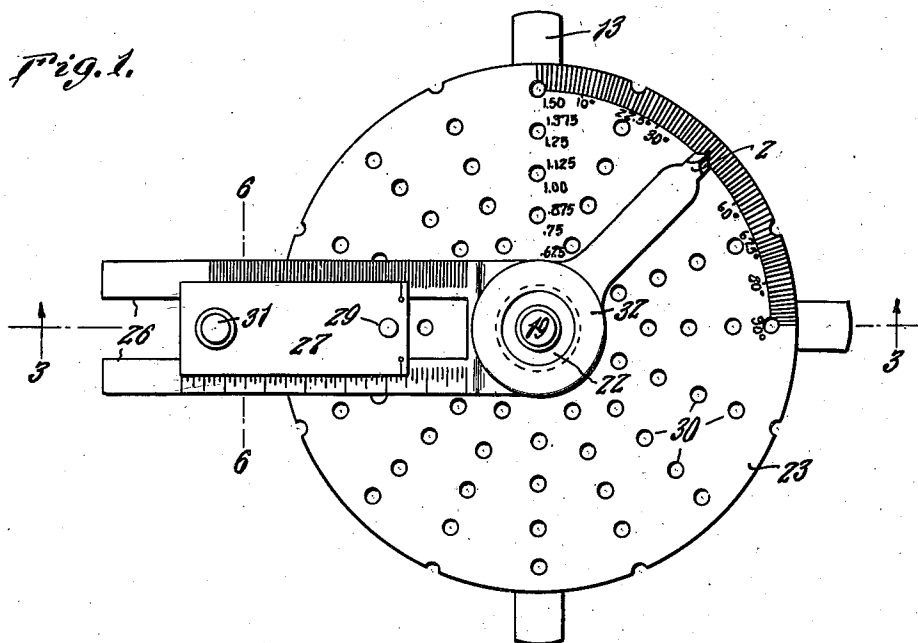
1,671,341

L. J. BROWN

LAY OUT DEVICE

Filed Nov. 26, 1926

2 Sheets-Sheet 1



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WITNESS:

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2 Sheets-Sheet 2

Fig. 2.

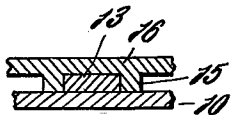
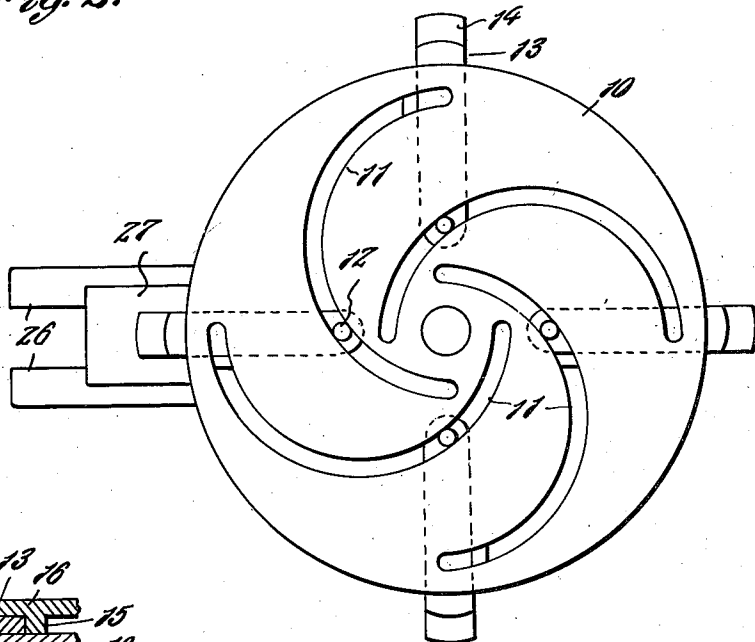


Fig. 7.

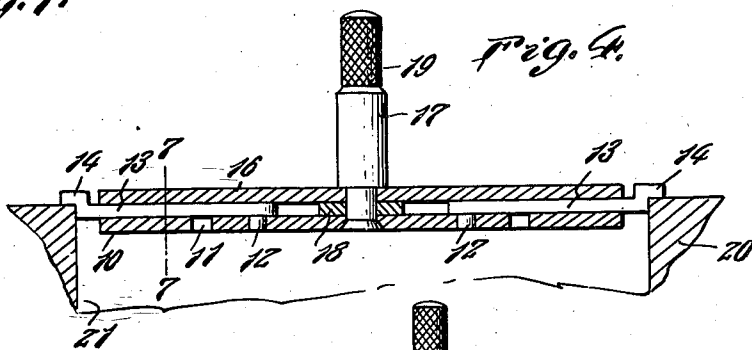


Fig. 4.

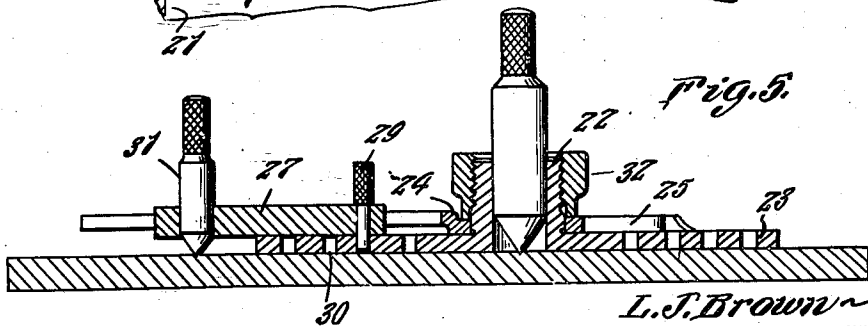


Fig. 5.

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Patented May 29, 1928.

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UNITED STATES PATENT OFFICE.

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LAYOUT DEVICE.

Application filed November 28, 1928. Serial No. 150,935.

The invention relates to devices readily applicable upon various forms of work for correctly and easily determining the centers therein and for marking points remote from the centers thereof.

Another object of the invention resides in the construction of supporting means consisting of thrust arms adapted to be moved outwardly for engagement with the work and an arm connected with the centered axis which in turn may be relatively adjusted for punch marking the work at a remote point from the center thereof.

An additional object of the invention comprehends a pointer adapted for rotary movement upon the device to clearly determine punch marking of work, if desired and pre-determined distances therefrom.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is a top plan view of the invention.

Figure 2 is a bottom plan view thereof.

Figure 3 is a transverse section taken on the line 3—3 of Figure 1.

Figure 4 is a similar view of the adapting or centering means per se.

Figure 5 is a similar view of the range finding adjusting means.

Figure 6 is a sectional view taken on the line 6—6 of Figure 1.

Figure 7 is a vertical section taken on the line 7—7 of Figure 4.

Figure 8 is a detail perspective of a thrust arm.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates a relatively flat disk member having semi-circular grooved portions 11 extending from near the center thereof and within which are positioned for travelling movement downwardly extending studs 12 carried upon the under sides of the thrust arms 13 which also provide offset end portions 14 for seating and supporting the device in its entirety upon the periphery of an opening. Such thrust arms 13 are guided between spaced lug members 15 depending from the under side of a disk 16 arranged in superimposed relation with the disk 10;

both of which receive the lower end of a vertically disposed adjusting-pin 17 received centrally thereof and within a spacing washer 18 arranged between the corresponding inner sides while the upper and outer end of the pin has a central or knurled portion 19 to provide convenient gripping means thereon to facilitate and impart the necessary thrust to the arms 13.

As mentioned in the foregoing, the invention is adapted for application upon various forms and designs of work, but in this instance is applied upon a cylinder block 20 and fitted over and upon the bore 21 thereof in the manner as illustrated in Figures 3 and 4 of the drawings. An upwardly extending exteriorly threaded sleeve portion 22 integrally formed and centrally disposed upon the upper side of a calibrated and apertured disk 23 adapted to receive the upper portion of the pin 17 within the bore thereof while an enlarged and apertured circular portion 24 is received and loosely mounted upon the outer surface of the sleeve 22 and has a pointer hand 25 provided upon one side while spaced parallel relatively flat arms 26 radiate in diagonally disposed relation therefrom with respect to the pointer hand 25. A gauge plate 27 is provided having channels 28 formed in its opposite side edges which channels are adapted to receive therein the adjacent edges of the arms 26 for slidable connection therewith. Said plate has marks formed thereon adapted to be brought into registration with calibrations upon the upper sides of the arms 26 in order that a pin 29 may be dropped within any one of a plurality of openings 30 in the face of the calibrated disk 23. A punch pin 31 carried by the plate 27 may afterwards be tapped by a hammer or like instrument to indicate a desired point remote from the center of the work. A knurled nut 32 is threaded upon the outer side walls of the upwardly extending exteriorly threaded sleeve 22 to sustain the pointer hand 25 and arms 26 upon the face of the disk 23 and for rigidly locking the same in place to serve as an auxiliary to the pin 29 in the instance of a finer adjustment than that afforded by the pointer hand 25 or the pin 29 adapted for reception within the openings 30 of the disk 23.

It will be noted from the foregoing description that rotary movement imparted to the disk 10 due to the fixed connection of

the pin 17 therewith will cause the studs 12 carried by the arms 13 to be slidden through the grooves in order that the outer ends thereof may effectively engage their work.

5 The invention is primarily adapted for use upon gears and internal combustion cylinder blocks.

As illustrated in Figure 5 of the drawings, the superstructure of the invention utilizes the disk 23 as the base and may be used independently of the disk 10 and supporting arms 14 in the instance of its application upon flat work. The pin 17 is also lacking in so far as a punch pin is substituted therefor to indicate the center of the work to be laid out.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:

25 1. A lay out device comprising superimposed disk members, means for connecting said disk members for relative rotation, arms slidably mounted between the disks, means whereby rotation to one of the disks may be imparted, said arms having connection with the rotatable disk and adapted to be shifted simultaneously with the rotation of the disk, a punch, means adjustably supporting the punch with relation to the disks, and the remaining disk being adapted to limit the shifting movement of the arms.

2. A lay out device comprising disk mem-

bers, means for connecting said disk members for relative rotation, supporting arms slidably arranged between the disks, one of the disks having grooves, studs carried by the arms and positioned within the grooves and adapted to be shifted upon rotation of the aforementioned disk, and the remaining disk being adapted to retain the arms in position for use.

3. A lay out device comprising a disk having spaced annular series of openings therein, and graduations along a portion of its periphery, a second disk arranged beneath the aforementioned disk and having grooves therein, means for connecting said disks for relative rotation, arms slidably mounted between the disks and provided with studs extended within the grooves for laterally shifting the arms upon rotary movement imparted to the disks, a pin carried by the grooved disk to correctly determine a measurement remote from the center of the disks.

4. A lay out device comprising superimposed disk members, means for connecting said disk members for relative rotation, arms slidably mounted between the disks, means centrally disposed of the disks whereby movement to one of the disks may be imparted and arms to dispose the device centrally of the work upon which the same is applied, and the remaining disk being adapted to check the shifting movement of the arms.

In testimony whereof I affix my signature

LOUIS J. BROWN.