

Dec. 24, 1929.

C. R. WHIPPLE ET AL

1,741,044

DRILL STAND

Filed Oct. 26, 1927

3 Sheets-Sheet 1

Fig. 1.

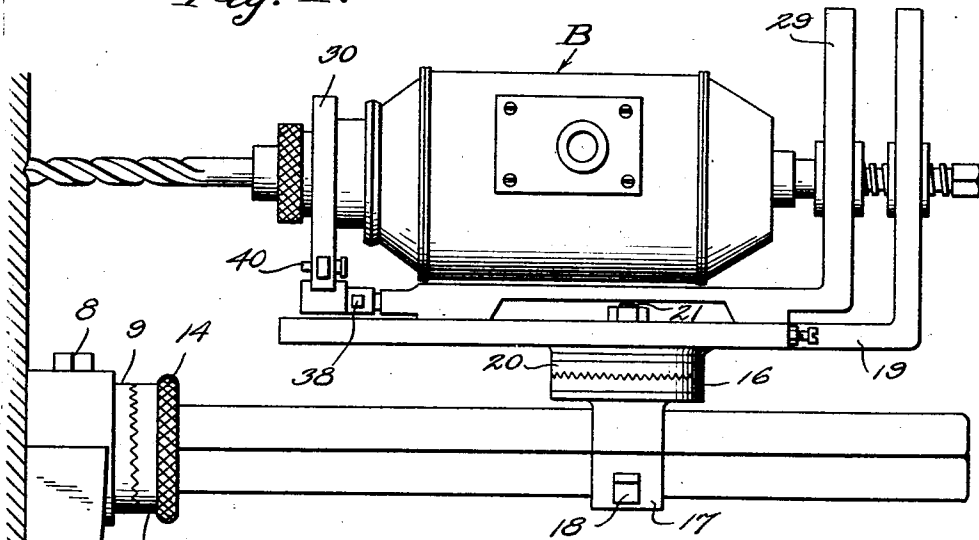


Fig. 4.

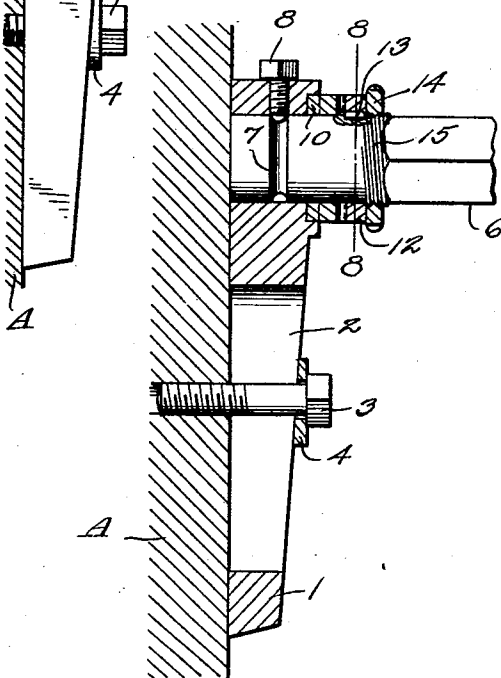


Fig. 6.

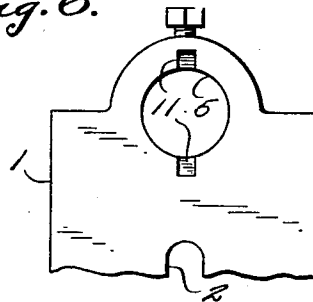
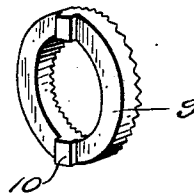


Fig. 7.



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Fig. 2.

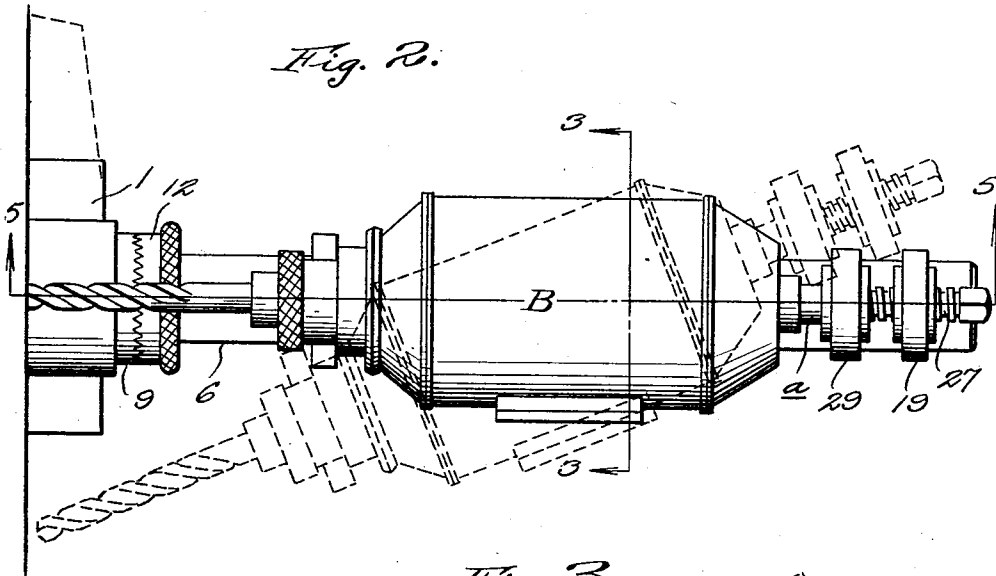


Fig. 3.

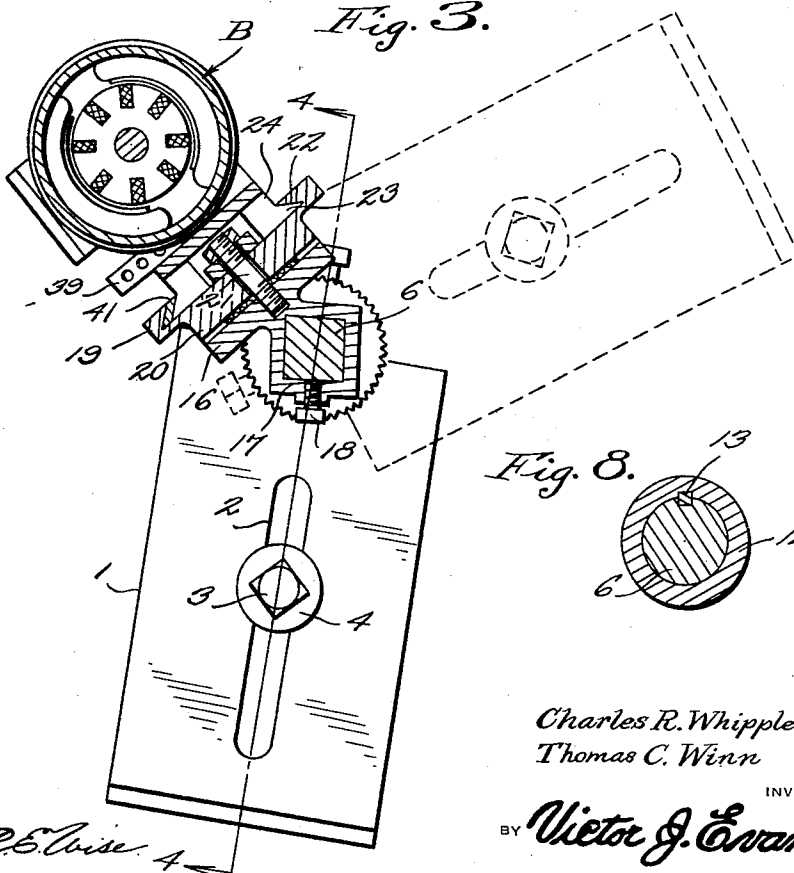
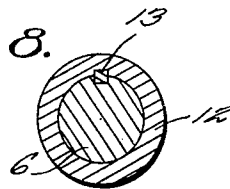


Fig. 8.



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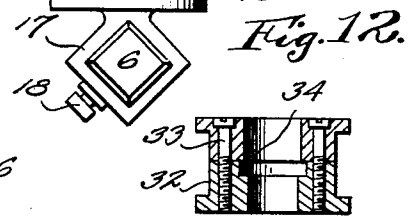
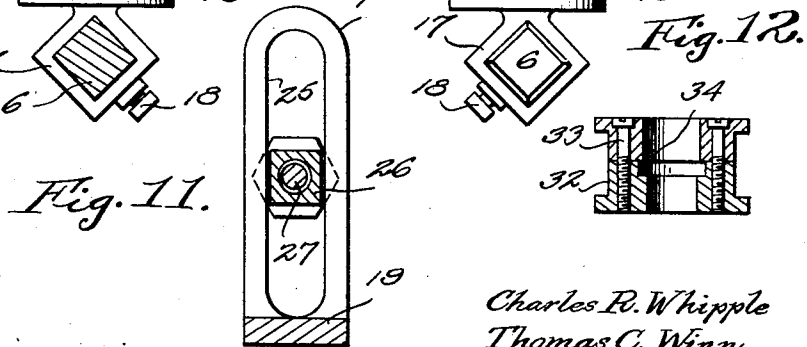
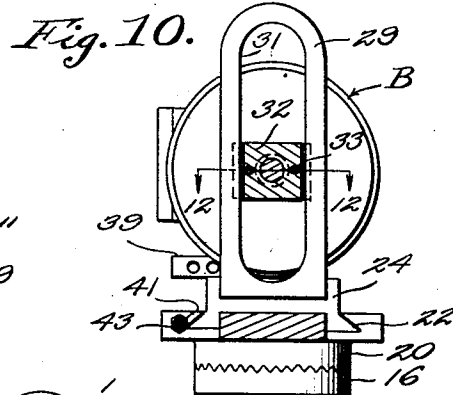
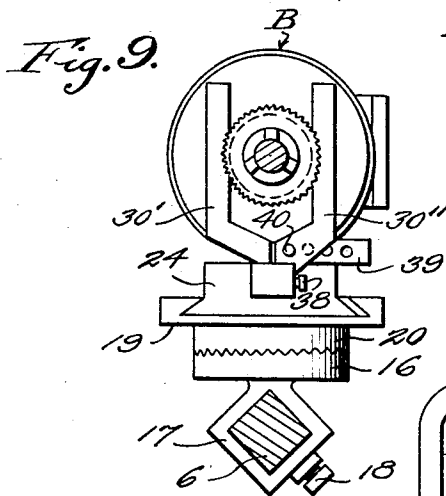
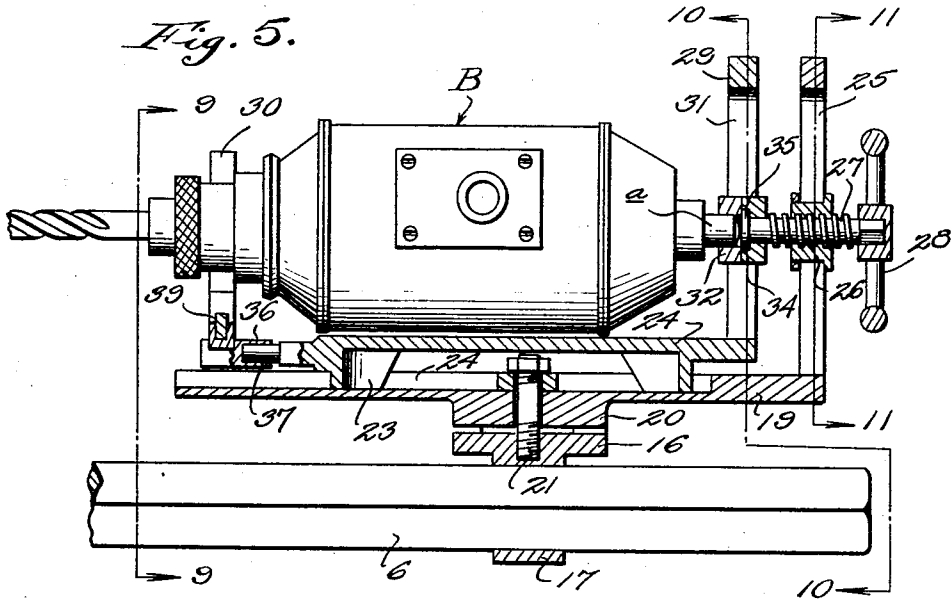
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DRILL STAND

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3 Sheets-Sheet 3



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## UNITED STATES PATENT OFFICE

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## DRILL STAND

Application filed October 26, 1927. Serial No. 228,949.

This invention relates to a stand or holder for a power drill, the general object of the invention being to provide means for holding a drill in any conceivable position and to so form the holder that drills of various sizes and types can be placed therein.

5 Another object of the invention is to provide a standard on which the drill holding means are vertically adjustable, with means for permitting the standard to be adjusted about its axis with a base carrying the stand-  
10 ard and means for adjustably connecting the base to a support.

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

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

Figure 1 is an elevation of the invention, showing a drill supported therein.

25 Figure 2 is a top plan view, showing the parts adjusted to one position in full lines and to another position in dotted lines.

Figure 3 is a section on line 3—3 of Figure 2.

30 Figure 4 is a section on line 4—4 of Figure 3.

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

35 Figure 6 is a fragmentary view of the base.

Figure 7 is a perspective view of the corrugated ring which engages the base and helps to hold the standard in adjusted position.

40 Figure 8 is a section on line 8—8 of Figure 4.

Figure 9 is a section on line 9—9 of Figure 5.

45 Figure 10 is a section on line 10—10 of Figure 5.

Figure 11 is a section on line 11—11 of Figure 5.

50 Figure 12 is a section on line 12—12 of Figure 10.

In these views, 1 indicates a base which is provided with a longitudinally extending slot 2 which is adapted to receive a bolt 3 which secures the base to a support such as A, a wedge-shaped washer 4 being placed between the head of the bolt and the sloping outer face of the base. This arrangement permits  
55 the base to be adjusted longitudinally on the support and it also permits the base to be moved in a rotary manner around the bolt so that various adjustments of the base can  
60 be made by loosening the bolt and then by tightening the bolt, the base is held in adjusted position.

A circular hole 5 is formed in one end of the base for receiving the rounded end of a square standard 6, this rounded end having  
65 an annular groove 7 therein for receiving a set screw 8 which holds the rounded end in the hole and permits the standard to be rotated about its axis. A corrugated ring 9  
70 is placed over a part of the rounded end of the standard and has legs 10 thereon for engaging notches 11 formed in the base so that the ring is held against rotary movement. A second ring 12 has its corrugated face en-  
75 gaging the corrugated face of the ring 9 and this ring 12 is fastened to the rounded part of the standard by a key 13. The two rings are held in engagement with each other by a nut 14 engaging a threaded part 15 on the  
80 rounded end of the standard. Thus by loosening the nut 14, the standard can be revolved on its axis as the corrugated ring 12 will slip on the ring 9, it being understood that the key 13 is of less length than the  
85 keyway in the standard so as to permit a certain amount of play on the ring 12. When the nut is tightened to force the corrugated faces of the rings together, the standard will be held against rotary movement.

90 A disk 16, having a corrugated outer face, is formed with or is attached to a member 17 which is provided with a square socket to receive the square part of the standard 6 and this member is fastened in adjusted position  
95 on the standard by the set screw 18. An L-shaped member 19 is provided with a circular boss 20 having its outer face corrugated to contact the corrugated face of the disk 16 and a bolt 21, passing through the parts 19, 100

20 and 16 and into the part 17, connects these parts together and by loosening the nut of the bolt, the member 19 can be rotated about the bolt and then by tightening the nut, the corrugated faces of the parts 16 and 20 will be brought into firm engagement and thus the member 19 will be held in adjusted position. The long arm of the member 19 is provided with a dovetail groove 22 which forms a guideway for the dovetail projections 23 formed on the holder 24 for the drill B so that the holder is slidably arranged in the member 19. The short arm of the member 19 is formed with an elongated slot 25 in which is slidably but non-rotatably arranged a nut 26 through which passes a screw shaft 27, the outer end of which has connected therewith a handle 28 so that the shaft can be rotated by hand so as to move the shaft longitudinally through the nut. The holder 24 is formed with an arm 29 at one end thereof and with an arm 30 at its other end, the arm 29 having an elongated slot 31 therein in which is slidably but non-rotatably mounted a sectional member 32, the two sections of which are connected together by the screws 33, this member 32 being connected with the shaft by having its annular groove 34 receiving the flange 35 at the end of the shaft. A projection *a* on the drill B enters the member 32 and bears against the flanged end of the shaft.

The arm 30 of the holder 24 is adjustably connected with the holder by having its socket part 36 receiving a projection 37 on the holder, these parts being adjustably connected together by the set screw 38. The arm 30 is of forked construction with its prongs arranged to receive a portion of the drill between them, as clearly shown in Figures 5 and 9, and one prong 30' is adjustably connected with the other prong 30'' by having a part sliding in a part 39 of the prong 30'', this part 39 being provided with a plurality of holes so that a bolt 40 can be passed through any one of the holes in the part 39 and through a single hole in the part of the prong 30' which fits in the part 39 to hold the prong 30' various distances from the prong 30''. Thus the space between the two prongs can be widened or decreased to fit drills of various sizes and the holder can be lengthened or shortened by adjusting the forked arm 30 toward or away from the arm 29.

From the foregoing it will be seen that the holder can be adjusted to support various sizes of drills and that the supporting member 19 for the holder can be adjusted about a transverse axis formed by the bolt 21 so as to set the drill in any desired position. It will also be seen that the supporting member 19 can be adjusted lengthwise of the standard and that the standard can be rotated about its axis to make a further adjustment of the parts. The base can also be adjusted on the

support A to provide a still further adjustment of the parts. After the parts are adjusted to set the drill in the desired position, the screw shaft is turned and as it moves longitudinally, its movement is communicated to the holder and to the drill therein by means of the flanged end of the shaft engaging the member 32 which is carried by the holder so that the drill will be fed toward the work piece or away from said piece according to the direction of movement of the screw shaft.

By placing the nut and the member 32 in the slots in the member 19 and the holder, said nut and member 32 can be adjusted to suit different sizes of drills.

A jib 41 is placed at one side of the dovetail groove 42 in the supporting member 19 and this jib is adjusted by the set screw 43, this jib holding the member 24 tight in the supporting member 19.

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

It is to be understood that we may make changes 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.

What we claim is:—

1. Drill supporting means comprising a base, a standard rotatably connected with the base, means for locking the standard in adjusted position on the base, a member slidably connected with the standard, means for holding the member in adjusted position on the standard, a supporting member rotatably connected with the member on the standard, means for holding these two members in adjusted position, a drill holder slidably connected with the supporting member, a nut carried by the supporting member, a screw shaft passing through the nut and engaging a part of the holder for moving the holder in the supporting member, said holder comprising two arms, one arm being slotted, means for adjusting the other arm lengthwise of the holder, said adjustable arm being formed with two prongs, means for adjusting one prong in relation to the other, a member adjustable in the slotted arm and having an opening therein for receiving a part of the drill, means for connecting the screw shaft to said member and means permitting adjustment of the nut in the supporting member.

2. Drill supporting means comprising a base having a slot therein, a bolt passing through the slot for attaching the base to a support, a standard rotatably supported by the base, means for locking the standard in adjusted position, a member slidably mounted on the standard, means for locking the member in adjusted position, an L-shaped supporting member having its long arm rotatably connected with the member on the standard,

means for locking the two members in adjusted position, the short arm of the supporting member having a slot therein, a nut slidably arranged in the slot, a screw shaft passing through the nut, a drill holder slidably arranged in the long arm of the supporting member and formed with a slotted arm and a forked arm, a member sliding in the slot of the slotted arm and connected with the end of the screw shaft and having an opening therein for receiving a part of the drill, means for adjusting the forked arm lengthwise of the holder and means for adjusting one prong in relation to the other.

In testimony whereof we affix our signatures.

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