

Oct. 5, 1937.

L. F. WOODNAL

2,094,936

DRILL SUPPORT

Filed July 6, 1936

2 Sheets-Sheet 1

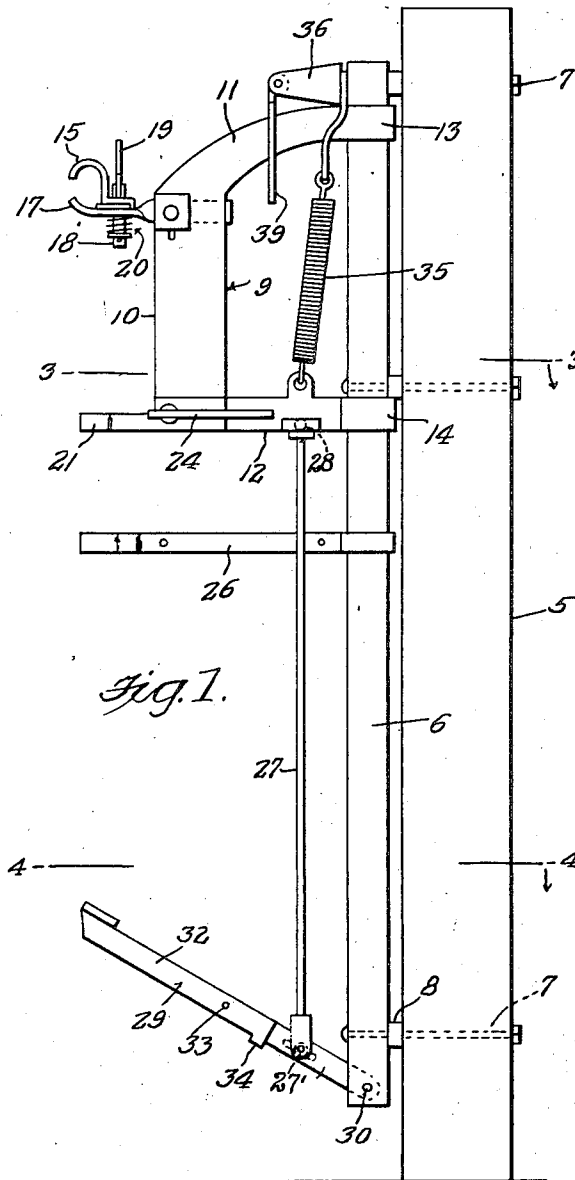


Fig. 1.

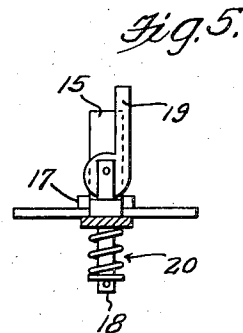
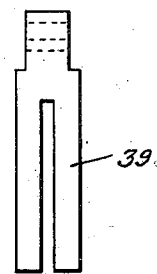


Fig. 5.

Fig. 6.



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Fig. 2.

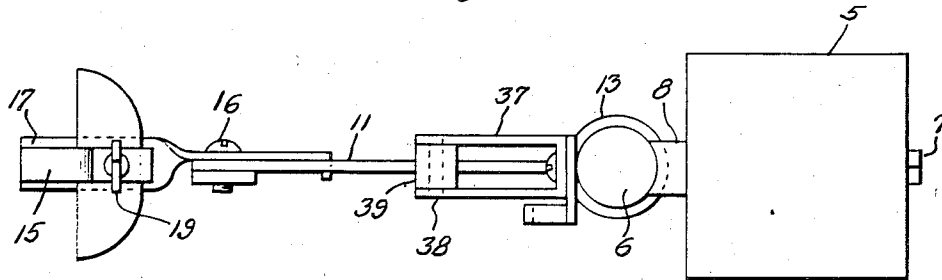


Fig. 3.

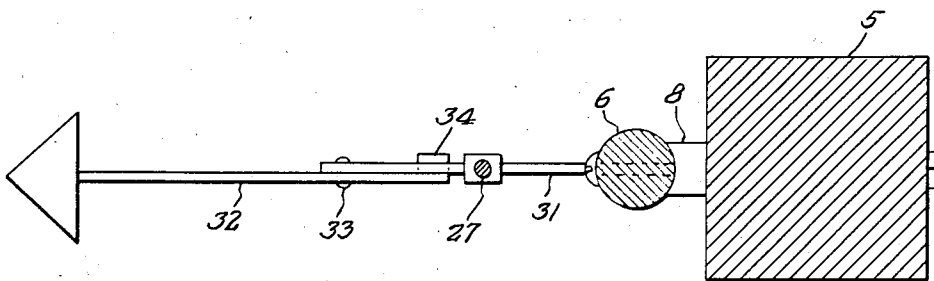
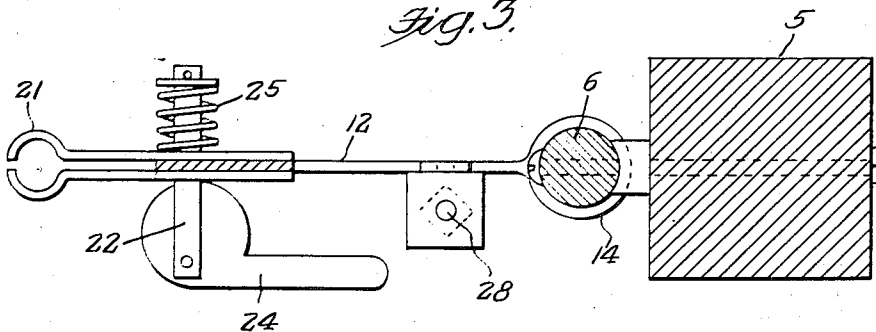


Fig. 4.

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UNITED STATES PATENT OFFICE

2,094,936

DRILL SUPPORT

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Application July 6, 1936, Serial No. 89,227

2 Claims. (Cl. 77-20)

The present invention relates to supports for electric or other power driven drills and has for its principal object to provide a device of this character for supporting the drill in position above the work providing means for raising or lowering the drill into or out of work engaging position and also to provide means for swinging the drill horizontally away from the work support.

A further object of the invention is to provide a support of this character which is strong and durable, which is efficient and reliable in operation, economical in construction and otherwise well adapted for the purposes for which the same is intended. Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout and in which—

Figure 1 is a side elevational view of the drill support.

Figure 2 is a top plan view.

Figure 3 is a horizontal sectional view taken substantially along a line 3-3 of Figure 1 and

Figure 4 is a similar view taken substantially along a line 4-4 of Figure 1.

Figure 5 is a detail of one of the drill supporting clamps and

Figure 6 is a detail of the locking member for securing the support in position for operation.

Referring now to the drawings in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates a post or similar supporting structure to one of the vertical sides of which a guide rod 6 is secured by bolts 7. Spacing blocks 8 are interposed between the post 5 and guide rod 6 to space the rod outwardly from the surface of the post as will be clearly apparent from an inspection of Figures 1 to 4 inclusive of the drawings.

A drill supporting frame designated generally by the numeral 9 is slidably mounted on the guide rod 6, said frame including a vertical member 10 and upper and lower horizontal members 11 and 12, respectively, the inner ends of said members being provided with collars 13 and 14 respectively slidably mounted on the guide rod 6.

Adjacent the upper portion of the drill frame 9, and projecting outwardly therefrom, is a drill clamping member 15 suitably secured to the frame by a bolt 16, said clamp preferably including a pair of jaws 17 secured in clamping position by a pin 18 extending through the inner ends

of the jaw and having a cam member 19 cooperating therewith to move the jaws into clamping position about a part of the drill (not shown). The pin also carries a coil spring 20 urging the cam into clamping position.

A pair of jaws 21 are also mounted on the outer ends of the lower horizontal frame member 12, said jaws 21 being positioned beneath the jaws 15 and cooperating therewith to secure the drill in position. A pin 22 is likewise provided for securing the jaws 21 into clamping position, said pin also being provided with a cam member 24 and spring 25 bearing against opposite sides of the jaws and cooperating to secure the same in clamping position.

Beneath the drill supporting frame 9 is a horizontal work support 26 having one end secured to the guide rod 6 and its opposite end positioned beneath the clamps 15 and 21 to support the work in proper relative position with respect to the drill mounted on the frame.

A rod 27 has its upper end attached to the lower frame member 12 as by the ball and socket connection indicated by dotted lines at 28 and the lower end of the rod is connected to a foot lever 29 pivoted as at 30 to the lower end of the guide rod 6. The connection to the foot lever 29 has the form of a universal joint 27' permitting lateral swinging of the frame 9 relative to the foot lever 29. The foot lever preferably is formed of a pair of foldable sections 31 and 32, as more clearly illustrated in Figure 4 of the drawings, the adjacent ends of said section being disposed in overlapping relation and connected by a bolt 33 and the inner end of the section 32 is provided with a stop 34 underlying the section 31 to prevent the downward swinging movement of the outer section 32 while permitting said outer section to swing inwardly to folded position.

An expansible coil spring 35 is also attached to the lower frame member 12 and extends upwardly for attaching to an extension 36 formed on the uppermost bolt 7. The extension 36 is formed of a pair of parallel arms 37 having a pin 38 extended between the outer end thereof for pivotally supporting one end of a locking guide member 39. The locking guide member is of a forked-shaped construction, as clearly illustrated in Figure 6 of the drawings and is normally supported in a suspended position, with the upper frame member 11 inserted between the arms of the forced member.

It will thus be apparent that through the manipulation of the foot lever 29 that the frame 9 carrying the drill may be moved downwardly

with the guide member 39 preventing swinging movement of the frame. However, when it is desired to swing the frame horizontally the guide member 39 is raised upwardly out of engagement with the upper frame section 11 and the frame is then free to swing horizontally by reason of the collars 13 and 14.

While I have described the preferred embodiment of the invention it is apparent the same is susceptible of various changes in construction without departing from the spirit of the invention or the scope of the appended claims.

Having thus described the invention, what I claim is:—

1. A drill support comprising a vertically disposed guide rod, a U-shaped drill supporting frame having upper and lower horizontal legs

provided at the free ends thereof with collars freely mounted on said rod whereby the frame is swingable laterally on said rod and vertically slidable thereon, and a bifurcated yoke pivotally mounted on said rod to swing downwardly over one leg of said yoke in straddling relation thereto whereby said yoke may be locked against lateral swinging movement and unlocked at will.

2. A drill support comprising a vertically disposed guide rod, a drill supporting frame mounted on said rod for vertical sliding and lateral swinging movement, and means for sliding the frame downwardly including a foot pedal, and operating connections between said pedal and frame providing for swinging movement of the frame laterally relative to the pedal.

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