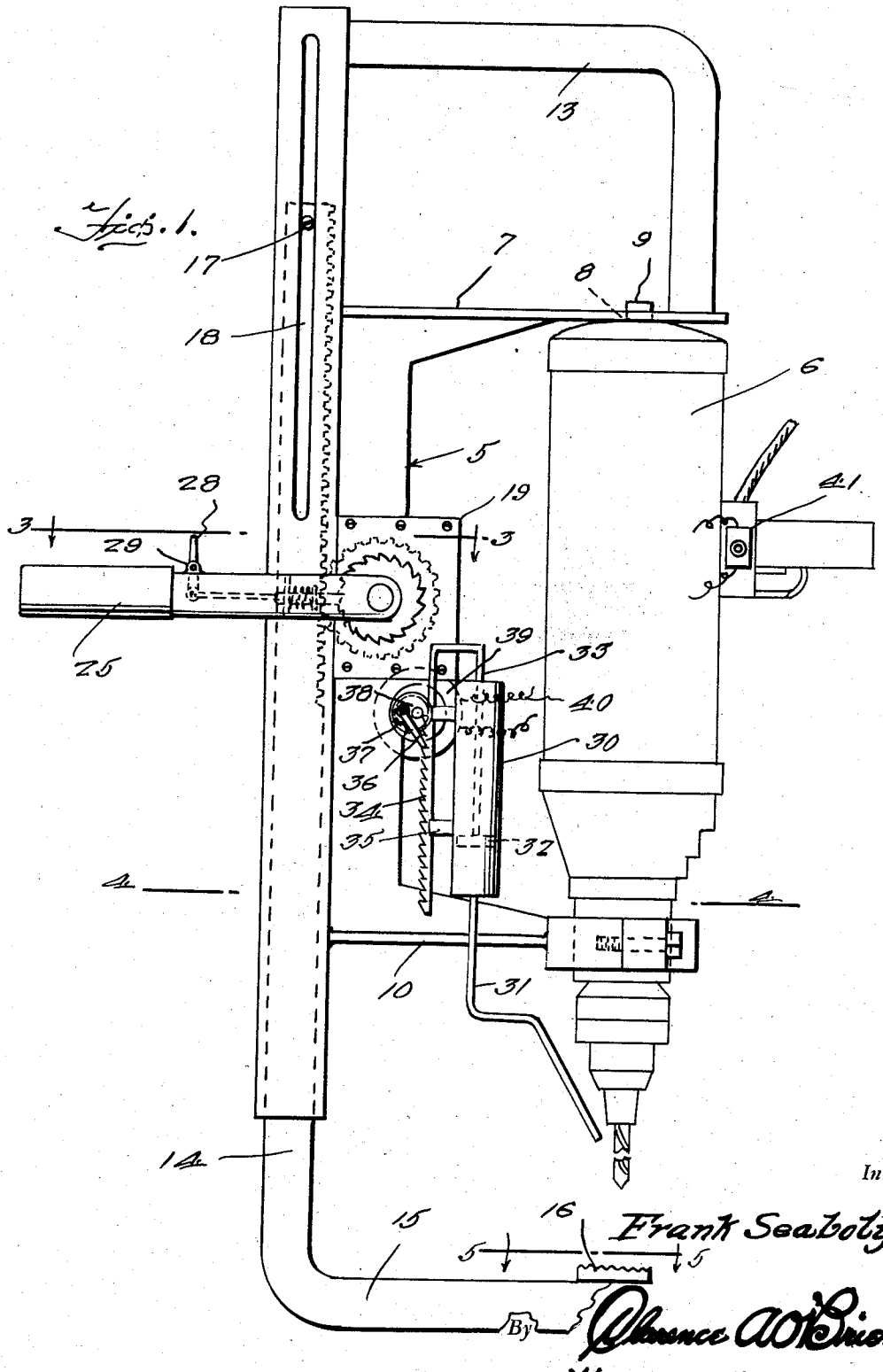
April 17, 1945. F. SEABOLY 2,373,785

PORTABLE ELECTRIC DRILL

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PORTABLE ELECTRIC DRILL

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Fig. 7.

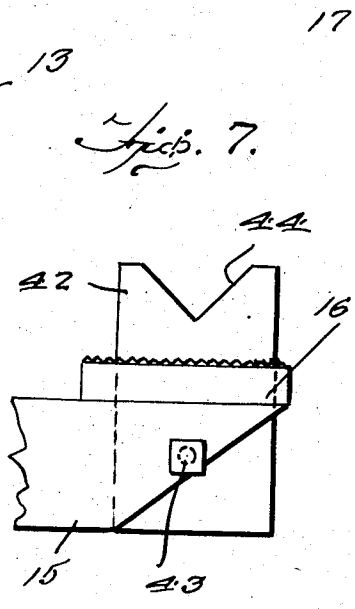


Fig. 2.

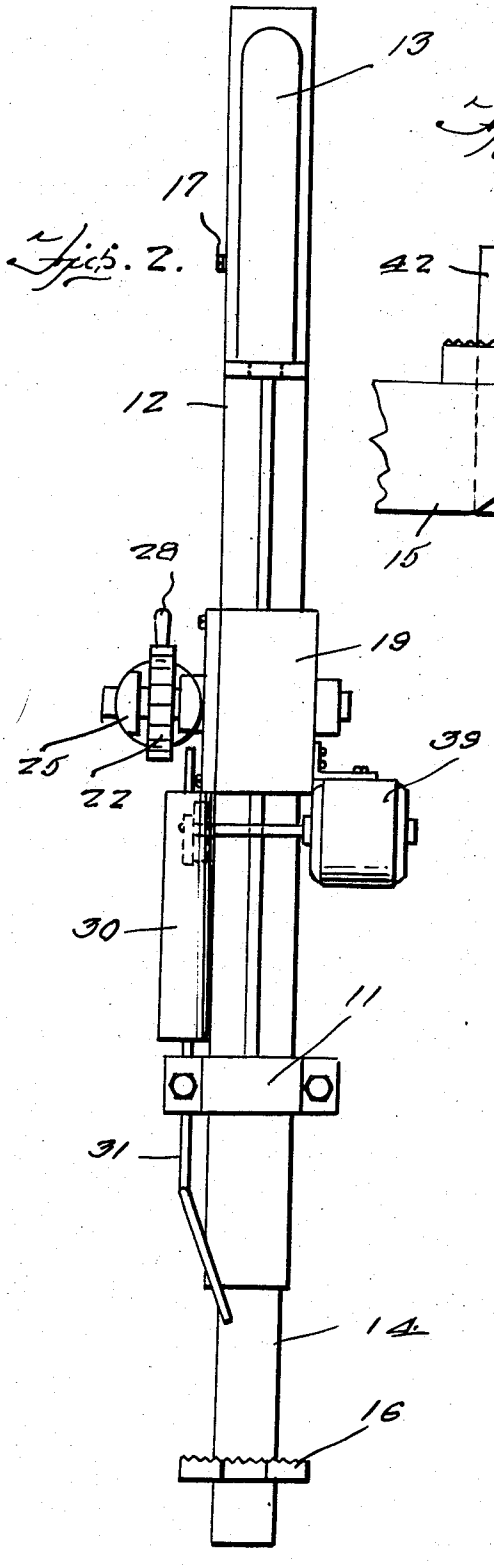
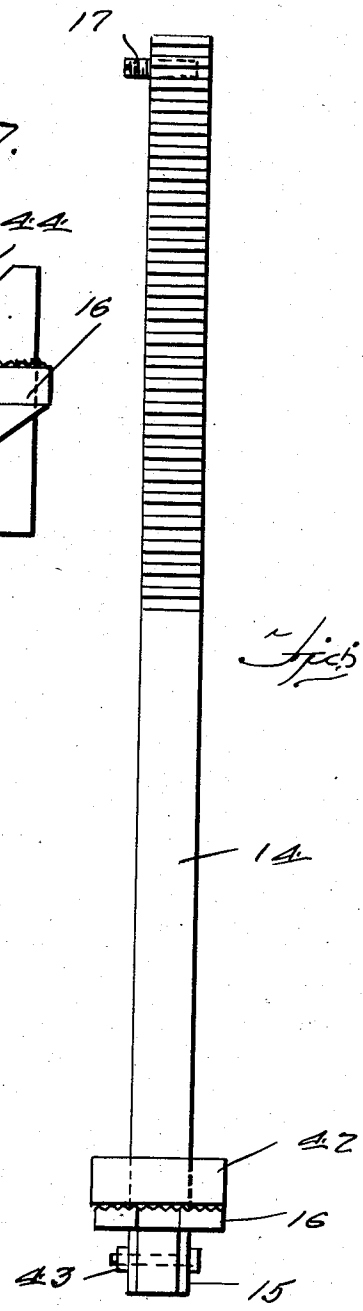


Fig. 6.



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Fig. 3.

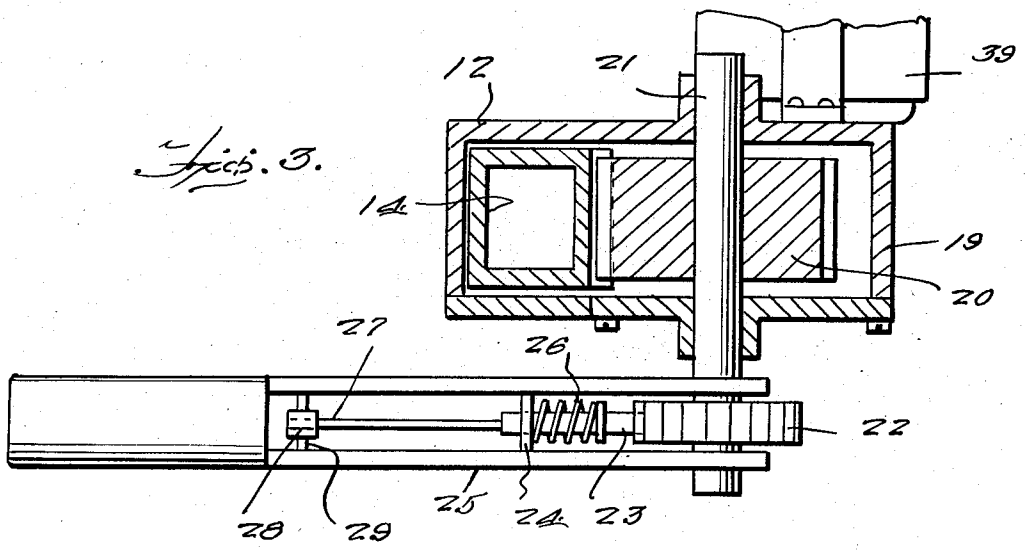
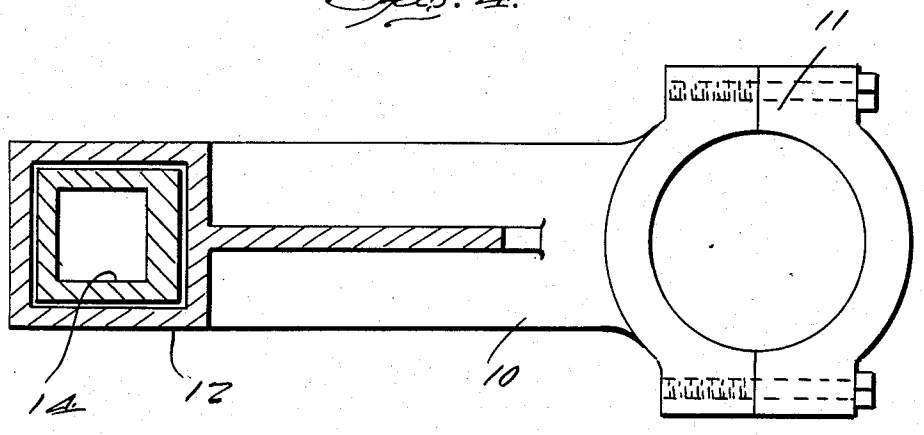


Fig. 4.



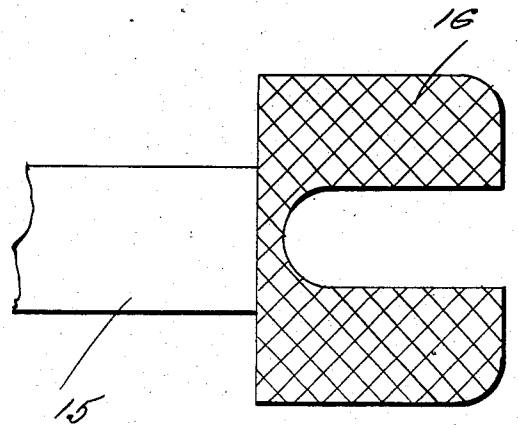


Fig. 5.

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UNITED STATES PATENT OFFICE

2,373,785

PORTABLE ELECTRIC DRILL

Frank Seaboly, Champaign, Ill.

Application June 13, 1942, Serial No. 446,919

2 Claims. (Cl. 77—7)

The present invention relates broadly to portable drills and more particularly to a portable electric drill which may be handled with greater ease and efficiency and which will have substantially the same advantages as characterized by a stationary drill.

An important object of the present invention is to provide a portable electric drill of this character embodying a holder having novel means for adjustably securing the drill in position therein as well as for adjusting the work with respect to the drill.

A further object is to provide an electrically operated oiling attachment for the drill bit.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in performance, relatively inexpensive to manufacture 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.

Figure 2 is a front elevational view.

Figure 3 is a sectional view taken substantially on a line 3—3 of Figure 1.

Figure 4 is a sectional view taken substantially on a line 4—4 of Figure 1.

Figure 5 is a fragmentary top plan view of the work support.

Figure 6 is a view in elevation of the rack for the work support, and

Figure 7 is a fragmentary side elevational view of a work supporting adapter.

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 holder generally for a conventional form of portable electric drill 6, the holder including an upper frame member 7 having an opening 8 adapted for receiving a lug 9 formed on the rear end of the drill and in spaced parallel relation to the frame 7 is a lower frame 10 having a clamp 11 at its outer end adapted for clamping engagement with the lower portion of the drill 6.

The holder 5, including the frames 7 and 10, is formed at one edge of a tubular member 12 disposed in parallel relation to the drill 6, the outer end of the frame member 7 being connected to the upper end of the tubular member 12 by means of a handle 13 of angular construction.

Slidably mounted in the tubular member 12 is a rack 14 having a laterally extending lower end 15 provided at its outer end with a work-supporting foot 16 disposed immediately beneath the drill 6. The upper portion of the rack 14 is provided with a stop pin 17 working in a vertical slot 18 formed in the tubular member 12, the stop pin being engageable with the upper and lower ends of the slot to limit movement of the rack.

A gear housing 19 is formed on the holder 5 and is in communication with the tubular member 12, the housing 19 having a pinion gear 20 positioned therein and secured on a shaft 21 journaled in the sides of the housing, the pinion being supported in a position for engagement with the teeth of the rack 14. Secured on the outer end of the shaft 21 is a ratchet 22 with which a dog 23 is engageable, the dog being slidably mounted in a guide 24 carried by a handle 25 having one end pivoted on the shaft 21. A spring 26, carried by the dog 23, urges the dog into engagement with the ratchet and extending from the dog is a rod 27 to which a lever 28 is pivotally attached at one end, the lever being pivotally mounted intermediate its ends as at 29 on the handle 25 to retract the dog from engagement with the ratchet.

Also attached to the holder 5 is an oil cylinder 30 having an oil feed pipe 31 extending from its lower end and having its discharge end terminating adjacent the bit of the drill 6, the cylinder 30 having a piston 32 working therein connected to the lower end of a piston rod 33 projecting upwardly through the top of the cylinder. A rack 34 is connected to the piston 33 in spaced parallel relation thereto, the rack working in guides 35 carried on the outside of the cylinder. A dog 36 engages the rack by means of a spring 37, the dog being actuated by means of an eccentric 38 operated by an electric motor 39 carried by the frame, the eccentric 38 and dog 36 operating to move the rack 34 in a step-by-step movement for forcing oil from the cylinder 30 through the pipe 31 for lubricating the drill bit. Circuit wires 40 lead from the motor 39 to a switch 41 attached to the drill 6 so that the oiling attachment may be controlled by said switch.

In Figure 7 of the drawings, I have illustrated a modified form of work support designated at 42 which is secured in a position above the foot member 16 by means of a bolt and nut 43, the upper surface of the support 42 having a groove

44 therein adapted to hold round work in a position for engagement by the drill bit, in a manner as will be apparent.

In the operation of the device, it will be apparent that the rack 14 may be adjusted vertically in the tubular member 12 so as to move the work supported on the foot member 16 toward and away from the drill bit by means of the manipulation of the handle 25.

It is believed the details of construction and manner of use of the device will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention what I claim is:

1. A portable drill comprising a U-shaped horizontally positioned drill holder adapted to support a drill in vertical position at the ends of the holder, a tubular member attached to the bight portion of the holder and positioned in spaced parallel relation to the drill, a work support including a rack slidably mounted in the member, a gear carried by the holder and engaging the rack, and ratcheting means for actuating the gear.

2. A portable drill comprising a U-shaped horizontally positioned drill holder adapted to support a drill in vertical position at the ends of the holder, a tubular member attached to the bight portion of the holder and positioned in spaced parallel relation to the drill, a work support including a rack slidably mounted in the member, a gear carried by the holder and engaging the rack, a handle pivoted on the holder, and ratcheting means connected to the gear and operated by the handle.

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