

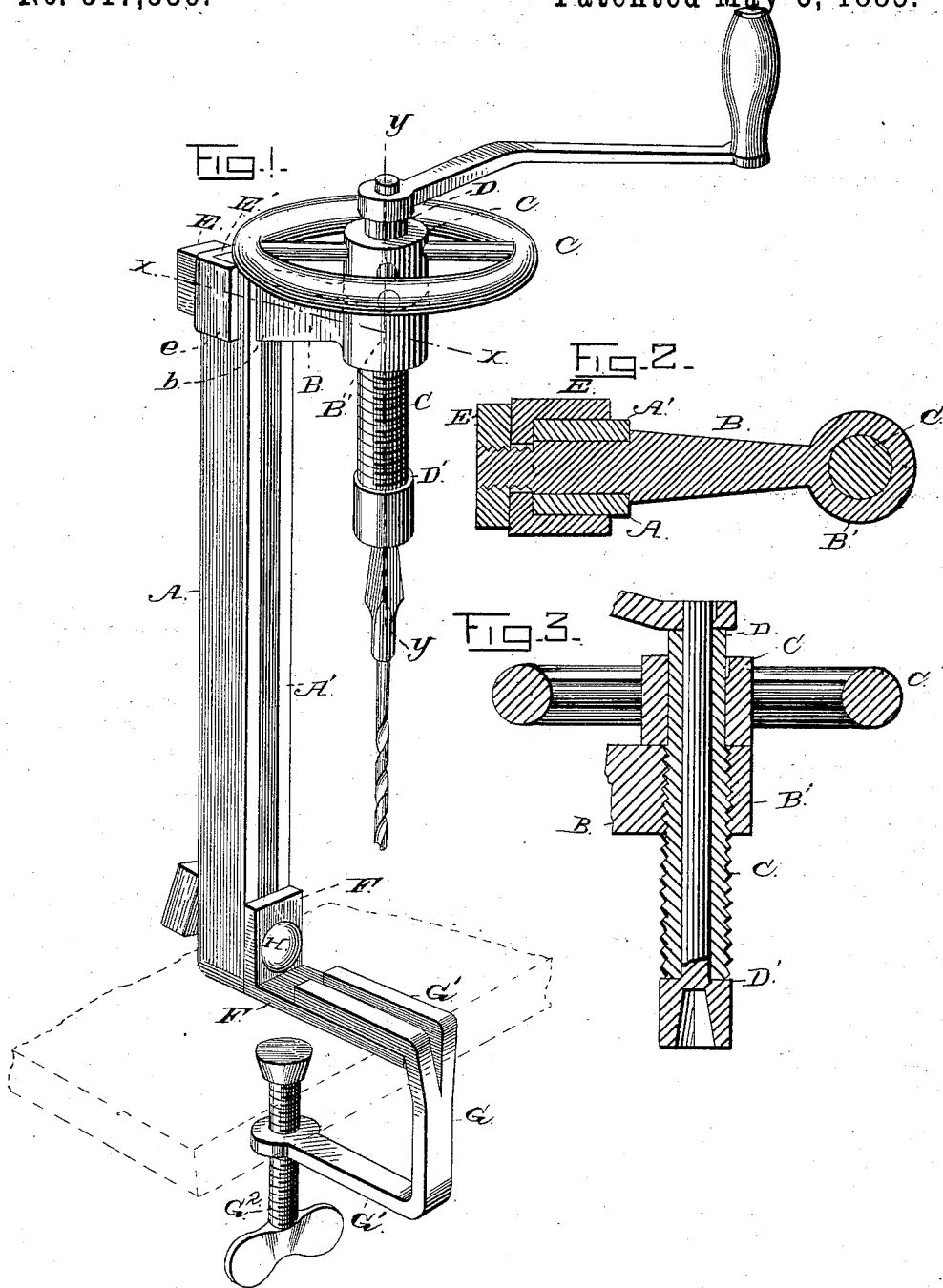
(No Model.)

J. M. GLENN.

DRILL.

No. 317,336.

Patented May 5, 1885.



WITNESSES:

Storvis A. Clark
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INVENTOR.

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UNITED STATES PATENT OFFICE.

JOSEPH M. GLENN, OF SOUTH ENGLISH, IOWA, ASSIGNOR OF TWO-THIRDS
TO DAVID N. COFFMAN AND JONATHAN F. WHITE, OF SAME PLACE.

DRILL.

SPECIFICATION forming part of Letters Patent No. 317,336, dated May 5, 1885.

Application filed February 7, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH M. GLENN, a citizen of the United States, residing at South English, in the county of Keokuk and State of Iowa, have invented certain new and useful Improvements in Drills, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to drills, and has for its object to provide a simple and convenient frame for the drill-shaft, and means by which the work may be clamped in place during the operation of drilling.

In the drawings Figure 1 is a perspective view of my machine, and Figs. 2 and 3 are respectively sections on lines *xx* and *yy*, Fig. 1.

In carrying out my invention, I provide the standard A, which is preferably slotted at A' throughout almost its entire length, for reasons presently described. An arm, B, projects at right angles from the upper end of the standard, and has formed through it, near its outer end, a vertical threaded opening or bearing, B'. The feed-barrel C has a thread fitted to that of the bearing B', and is turned therethrough. This barrel is provided, usually at its upper end, with a hand-wheel, C', or other proper expedient by which it may be rotated when desired. The drill-shaft D is journaled in the bore of the feed-barrel, and is provided on its upper end with a hand-crank or other device by which it may be turned; or the said end may be fitted to receive a wrench. A socket fitted to receive the drill is formed in the lower end of the shaft, and near said end with a shoulder, D', which projects under the feed-barrel and receives the pressure of such part in the operation of the device. It is manifest that the arm might be formed integral with the standard; but I prefer to make it separate therefrom, and secure it to the standard in such manner and by such devices that it may be adjusted vertically, in order that the arm may be properly set for operation on work of different sizes. In order to secure this adjustment, I prefer to connect the arm B with a stem, *b*, which is projected through the slot A', and may be secured at any desired point of vertical adjustment by the nut E, turning against the washer-plate E', which latter may be

formed with wings *e*, which project alongside the standard. The standard, it will be seen, has shoulders *b'*, which fit against the front side of the standard, and are pressed firmly thereto when nut E is tightened. I prefer this construction because it is simple, efficient, and admits of any proper degree of adjustment; but it is obvious that the adjustment could be secured in various ways—as, for instance, instead of slotting the standard, it might be formed with a vertical series of transverse threaded openings fitted to receive the threaded shank of the arms—and various other modifications may be made without departing from the broad principles of my invention.

In operation, when the device has been clamped to the work, the feed-barrel is turned up in its bearings sufficiently to permit it to be turned down through the bearing far enough to feed the drill through the work, and the arm is adjusted properly to bring the point of the drill against the work. The drill is then rotated and forced down from time to time by turning the feed-barrel. If the hole to be drilled is deeper than the length of the feed-barrel, the latter may be turned up from time to time, and the arm set farther down on the standard, in a manner that will be apparent. The full length of the barrel serving as a bearing for the drill-shaft prevents any twisting of the drill such as is likely to occur with a short bearing.

In clamping the device to the work, I provide it with a base-plate, F, which rests flat on the work and extends to the edge thereof, and has an opening through which the drill passes when the bearing-arm is arranged as shown.

When desired to drill a hole in the middle of a plate, casting, &c., the arm B may be removed from the position shown and fitted on the opposite side of the standard.

A clamp, G, having arms G' G', and screw, G², is used for clamping the base-plate to the work. This base-plate is secured by a bolt, H, passed through an upturned flange, F', of said plate, and one on the other side of the standard may be held against the said flange, as shown.

By using base-plates of different lengths, and by throwing the bearing-arm B toward or

from the edge of the work, holes may be drilled at any desired point thereof close to or distant from the edge.

I claim—

5 1. The combination, with the support and the arm extended therefrom, and provided with a vertical threaded opening, of a threaded feed-barrel, turned in said opening and a drill-shaft journaled in said feed-barrel, sub-
10 stantially as set forth.

2. The combination of the standard, the arm supported by and adjustable vertically on the standard, the feed-barrel, and the drill-shaft, substantially as set forth.

15 3. The combination, with the slotted standard, of the arm having a screw-shank pro-

jected through the slot in the standard, a washer-plate placed on said shank and extended on opposite sides of the slot, and a nut turned on the screw against the washer-plate, 20 substantially as set forth.

4. The combination of the standard, the base-plate detachably secured to the standard whereby plates of different lengths may be employed, and a clamp, substantially as set forth. 25

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH M. GLENN.

Witnesses:

D. A. GOW,

R. H. GEMMILL.