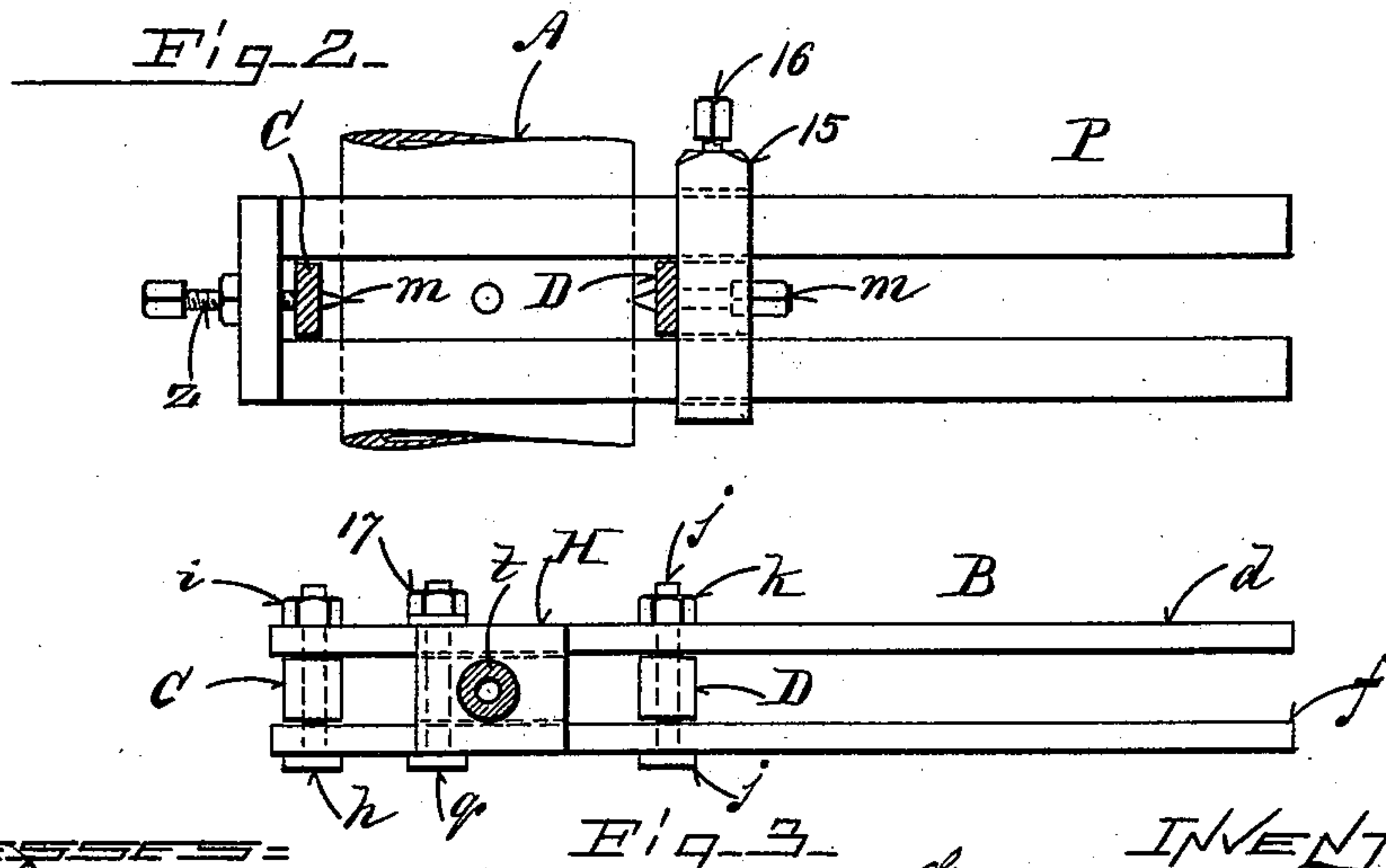
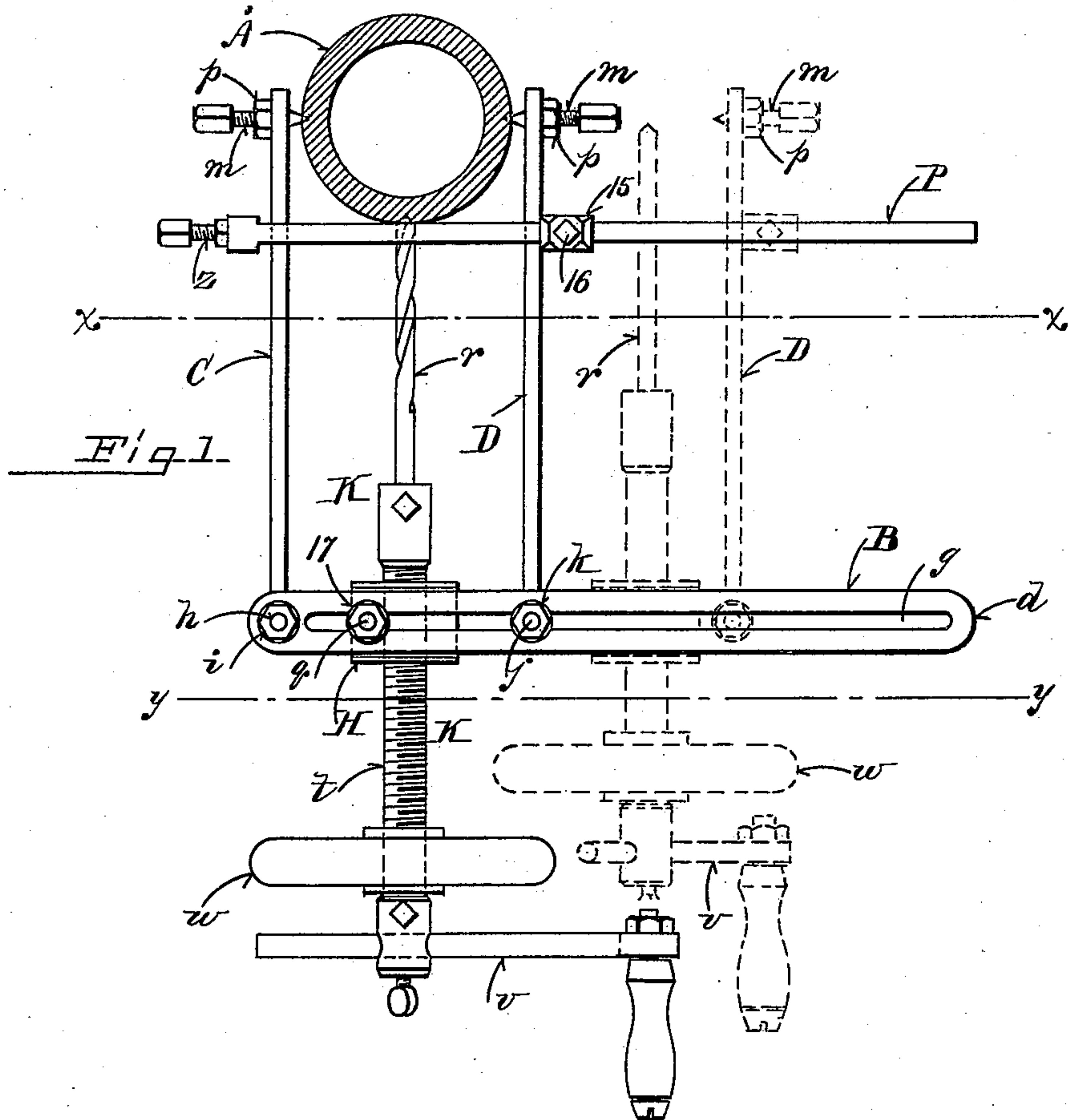


(No Model.)

G. A. TRAFTON.
SUPPORTING CLAMP FOR EXTENSION DRILLS.

No. 532,841

Patented Jan. 22, 1895.



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GEORGE A. TRAFTON, OF PORTSMOUTH, NEW HAMPSHIRE.

SUPPORTING-CLAMP FOR EXTENSION-DRILLS.

SPECIFICATION forming part of Letters Patent No. 532,841, dated January 22, 1895.

Application filed June 6, 1894. Serial No. 513,608. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. TRAFTON, of Portsmouth, in the county of Rockingham, State of New Hampshire, have invented certain new and useful Improvements in Supporting-Clamps for Extension-Drills, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view representing my extension drill and support in position for use; Fig. 2, an elevation the portions being shown in sections and taken on line, *x, x*, in Fig. 1; and Fig. 3, a like view taken on line, *y, y*, in Fig. 1.

Like letters and numerals of reference indicate corresponding parts in the different figures of the drawings.

Much difficulty is ordinarily experienced in employing extension drills, or ratchet or breast-drills while boring metallic studding or posts. The ordinary method of using these drills is extremely slow and laborious. Frequently the position in which it is necessary to drill is very awkward and requires an unusual expenditure of labor.

My invention is designed particularly to provide a supporting clamp whereby the ordinary extension drill may be readily attached and supported on the article to be perforated, providing said article projects even in a slight degree from the structure of which it forms a part.

In the drawings the clamp is represented as in use on a cylindrical metallic post, *A*. Said clamp comprises a body portion, *B*, which consists of two parallel bars, *d, f*, which are longitudinally slotted at *g*. These bars are connected at one end by a bolt, *h*, on which a nut, *i*, is turned the bolt opening being outside the slot, *g*.

A laterally arranged clamping-arm, *C*, is pivoted by an end on the bolt, *h*, and a companion arm, *D*, parallel therewith is pivoted on a bolt, *j*, adjustable laterally in the slots, *g*, of the bars, *d, f*, and held in position by a check-nut, *k*. These clamping-bars, *C D*, have in their free ends needle-pointed screw-bolts, *m*, which are in alignment when the bars are

parallel and on which check-nuts, *p*, are turned. - A flanged box, *H*, is fitted to slide on the body, *B*, and a bolt, *q*, passes through the slots, *g*, thereof. The extension-drill, *K*, is of the ordinary form and construction its feed-screw, *t*, working in the box, *H*, and the bit, *r*, being actuated by a crank, *v*, in the usual manner. A feed-wheel, *w*, actuates the screw.

The clamping-bars, *C D*, are embraced by a forked bar, *P*, in the head of which a set-screw, *z*, is turned, bearing against the bar, *C*. A link, *15*, encircles the arms of the forked-bar, *P*, on which it is fitted to slide and in use engages the clamping-bar, *D*. A set-screw, *16*, turned into the top of the link holds the same in position on the forked bar.

In the use of my improvement, the clamp is adjusted on the object to be bored by means of the needle-pointed screws, *m*, in the pivoted clamping arms, *C, D*. The drill, *K*, is moved laterally in its support until it registers with the point in the post, *A*, or other object in which it is desired to bore the hole. Said support is then locked in position by turning on the nut, *17*, which clamps said support. The forked bar, *P*, is moved on the clamping arms into engagement with the posts and the link or loop, *15*, is forced into engagement with the adjacent arm, *D*, and held by turning in the set-screw, *16*. The set-screw, *z*, is also turned in against the arm, *C*, preventing said arm from spreading. The check-nuts, *i, k*, are turned up clamping the pivots of the arms and the needle-pointed screws, *m*, are turned in until they obtain sufficient hold on the post. The drill may now be operated and fed in the usual manner it being held firmly in position by the clamping device which may be easily supported against vertical movement by the hand of the operator.

An angular hole may be drilled by adjusting the clamping arms, *C D*, and the forked bar, *P*, to pitch the drill at the required angle, said arms being readily movable on their pivots for this purpose and secured by the jam-nuts.

It will be seen that by the use of my improved clamp any object with which the needle-pointed screws, *m*, can be engaged can readily be drilled, obviating the necessity of using the breast-drill ordinarily employed for

this purpose and effecting a great saving of time and labor.

I do not confine myself to the particular devices described for adjusting the clamping arms and journal of the drill, as any device wherein this can be effected and secure the same to the object to be drilled may be employed without departing from the spirit of my invention which comprises as a salient feature adjustably mounting an extension-drill in a support with devices for clamping said support to the object to be drilled.

Having thus explained my invention, what I claim is—

15 1. A supporting clamp for an extension-drill comprising a slotted body portion, two arms pivoted thereto, the pivot of one arm being adjustable laterally; needle-pointed screws in the free ends of said arms; a forked bar embracing said arms and an adjustable link on said bar.

20 2. A supporting-clamp for an extension-drill comprising a forked body portion; a block

adjustable laterally thereon and bearing the drill; two clamping arms pivoted on said body; needle pointed screws adjustable in the free ends of said arms and a connection for preventing the spread of said arms. 25

3. The combination with the body, B, of an extension drill laterally adjustable in said body; the pivoted clamping arm, C; the adjustable pivoted arm, D; the screw-points, *m*, in the free ends of said arms and devices for preventing the spread of said arms. 30

4. The combination with the body, B, and drill adjustable laterally therein, of the pivoted clamping arms, C D; the adjustable attaching points, *m*, in said arms; the forked bar, P, and link, 15, on said bar and link all being arranged to operate substantially as described. 35 40

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