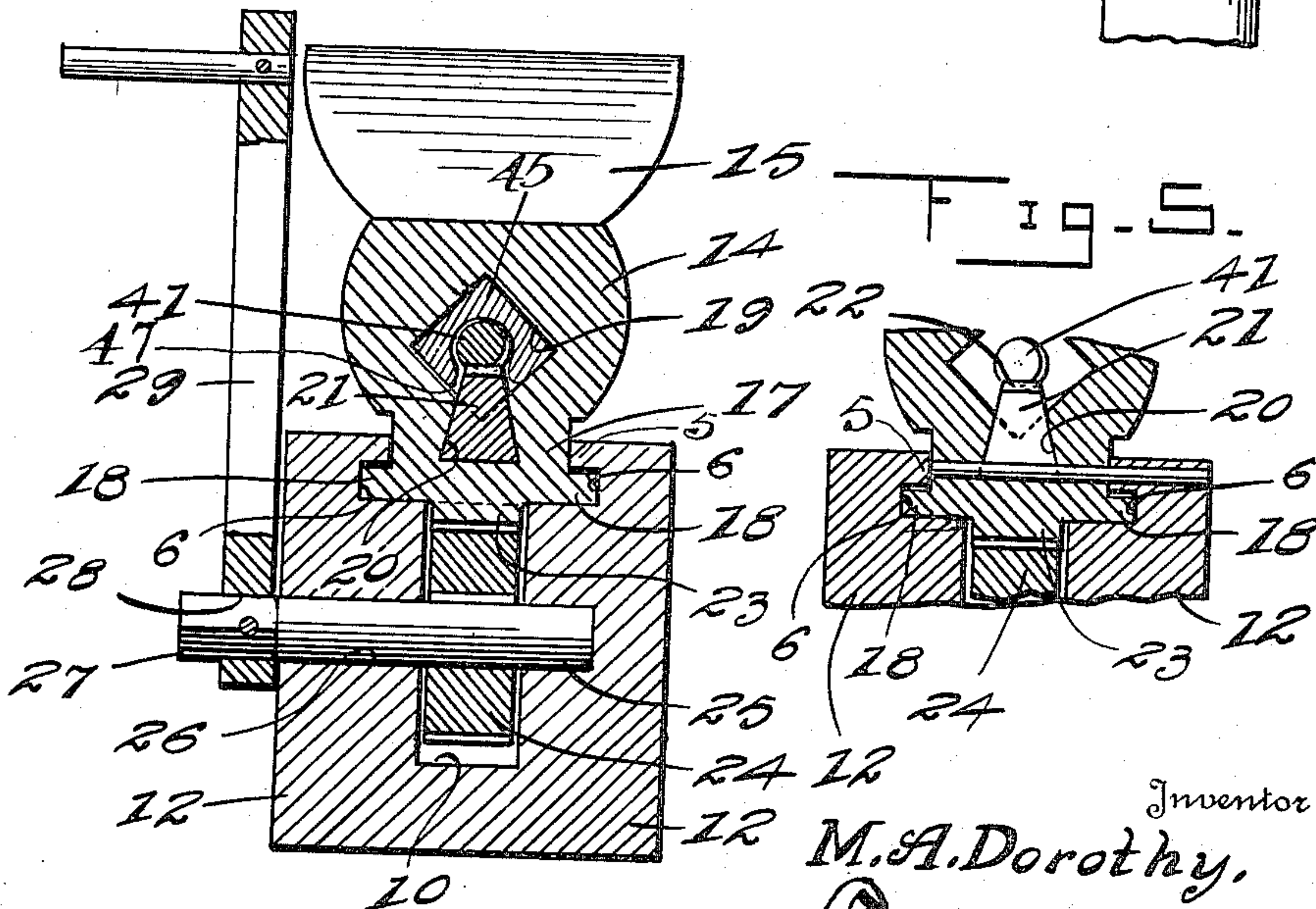
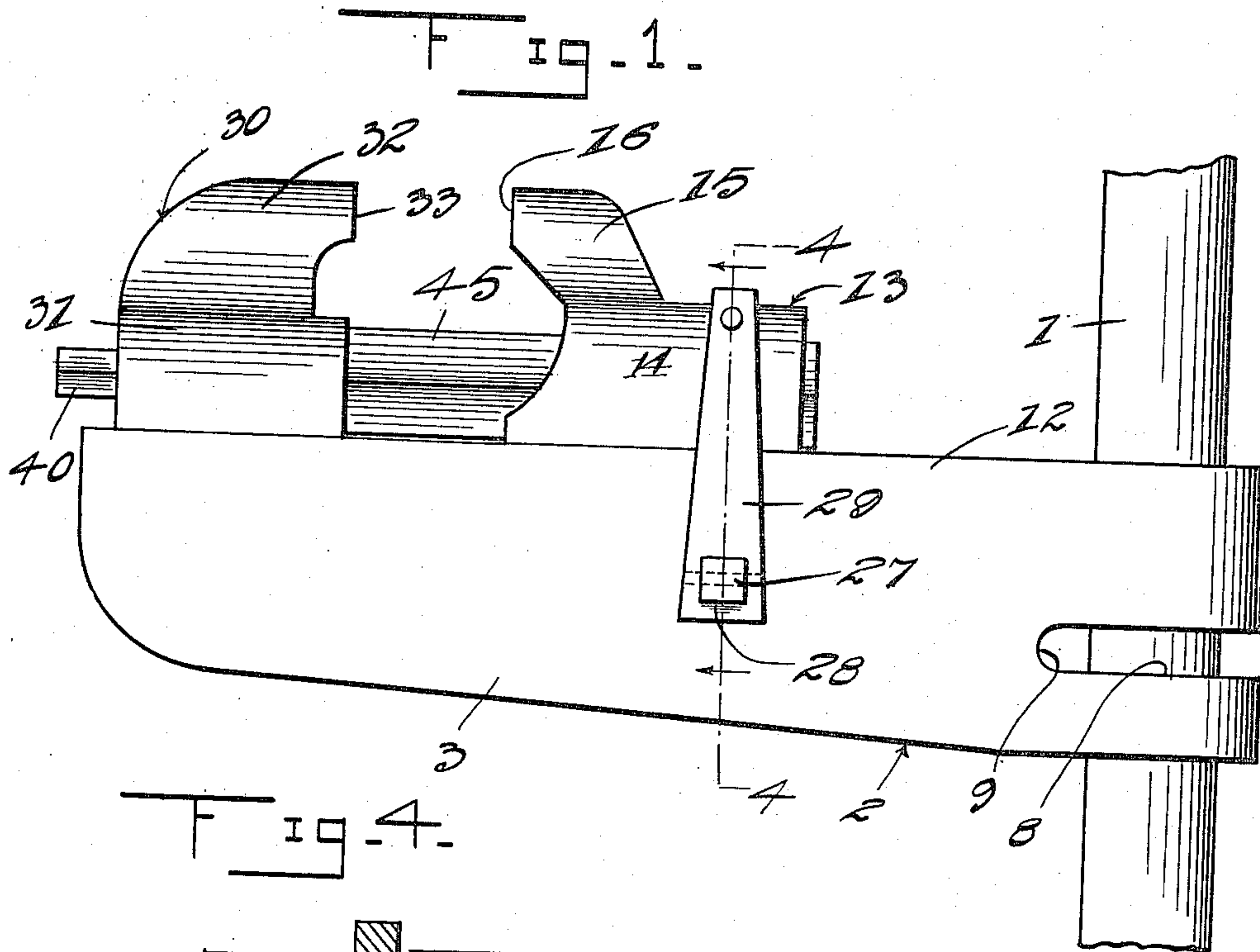


M. A. DOROTHY.
BLACKSMITH'S POST DRILL.
APPLICATION FILED DEC. 11, 1914.

1,155,222.

Patented Sept. 28, 1915.
2 SHEETS—SHEET 1.



Witnesses

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By

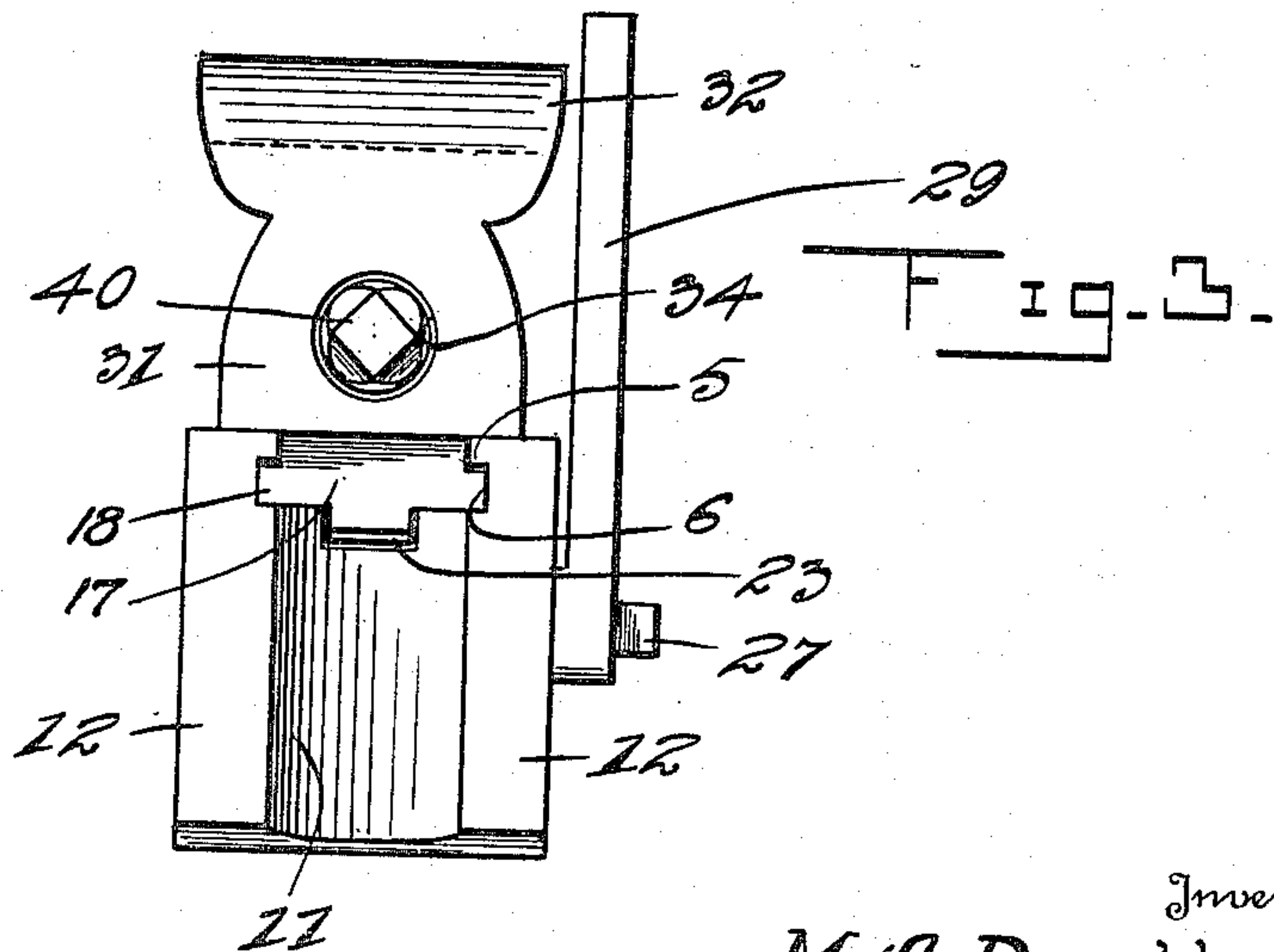
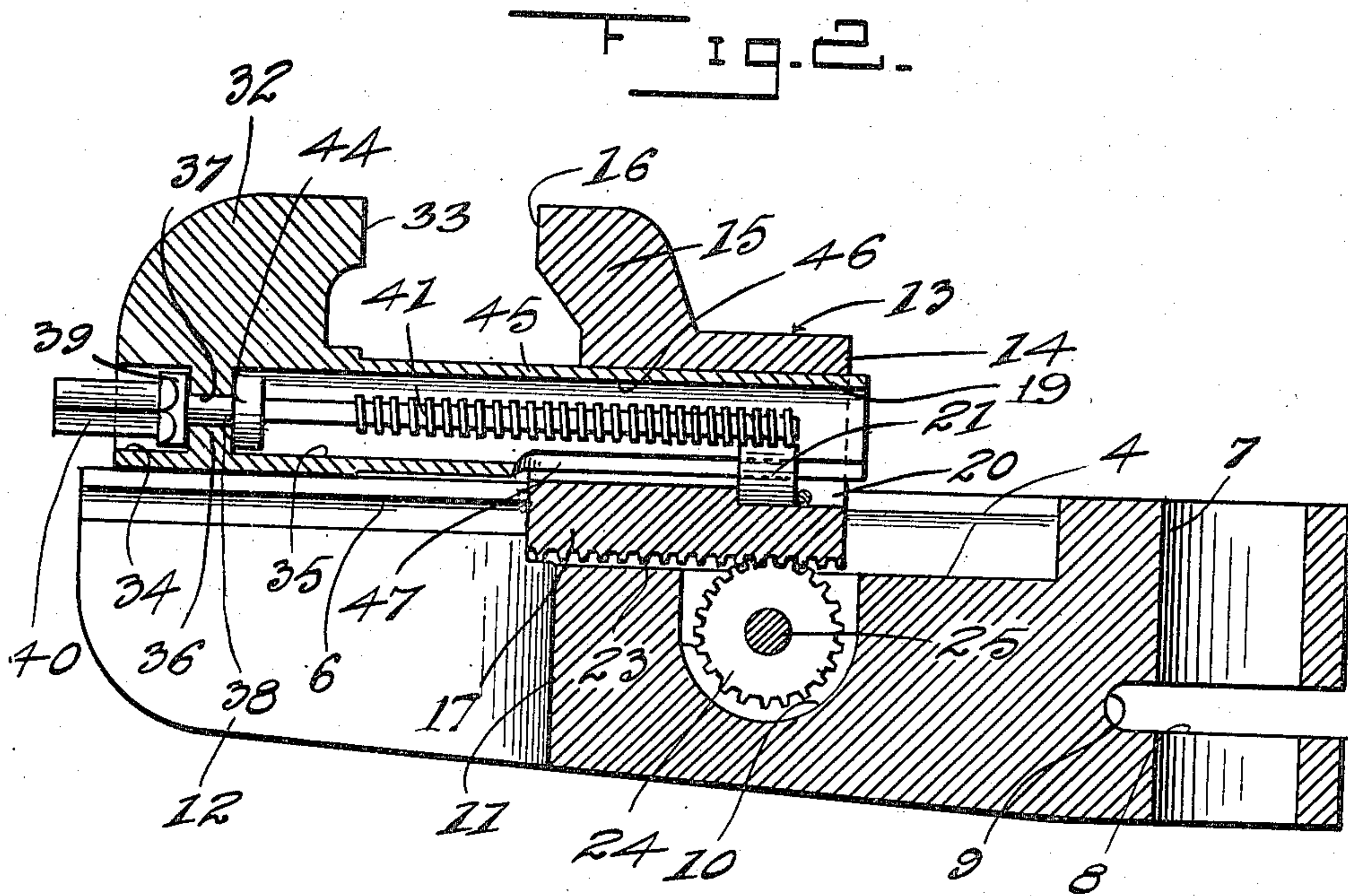
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UNITED STATES PATENT OFFICE.

MERLIN A. DOROTHY, OF PILLSBURY, NORTH DAKOTA.

BLACKSMITH'S POST-DRILL.

1,155,222.

Specification of Letters Patent.

Patented Sept. 28, 1915.

Application filed December 11, 1914. Serial No. 876,712.

To all whom it may concern:

Be it known that I, MERLIN A. DOROTHY, a citizen of the United States, residing at Pillsbury, in the county of Barnes and State of North Dakota, have invented certain new and useful Improvements in Blacksmiths' Post-Drills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in attachments for post drills, and has for its principal object to provide a vise for holding material which is to be drilled, in position therebeneath, thus insuring the user against danger of spoiling the article.

Another object of the invention is to provide a novel means for adjusting the vise in order that the drill point will come in the proper place.

A further object of the invention is to provide a novel form of vise which is particularly strong in construction and efficient in use.

Still another object of the invention is to provide a novel form of support for the vise which may be easily and quickly attached to the post supporting the drill and which also may be easily adjusted to different heights.

With these and other objects in view, the invention consists in the novel combination and arrangement of parts which will be fully set forth in the following specification and accompanying drawings, in which,

Figure 1 is a side view in elevation of a drill constructed in accordance with this invention, Fig. 2 is a longitudinal sectional view taken through the center of the attachment, Fig. 3 is an end view in elevation of the attachment, Fig. 4 is a vertical sectional view taken on line 4—4 of Fig. 1 and looking in the direction of the arrow, and Fig. 5 is a fragmentary detail view showing the threaded block in elevation.

Referring now to the drawings by characters of reference, the numeral 1 designates the post supporting the drill to which the attachment, designated by the numeral 2, is secured. This attachment comprises the base member 3 which is provided with the longitudinal groove 4. This groove 4 is extended for substantially two-thirds the length of the drill of the attachment and is

provided at its upper end with the inwardly extending tongues 5, which tongues form the grooves 6, the use of which will appear as the description proceeds. Extending through the body in a plane at right angles to the groove 4 is the aperture 7 through which the supporting post 1 extends. A suitable slot 8 is formed horizontally in the body 3 and this slot extends to a point beyond the inner terminal of the aperture 7 as at 9. A suitable enlarged chamber 10 is formed substantially centrally of the body and this chamber communicates at its upper end with the groove 4 hereinbefore referred to. The end of the body opposite the aperture 7 is slotted vertically as at 11 for substantially one-third of its length, and this slotted portion forms the two parallel arms 12 as clearly shown in Fig. 3.

Slidable in the groove 4 is the relatively stationary jaw 13 which comprises the body 14. This member 13 is provided with the upwardly extending inclined portion 15 which terminates in the jaw face 16, which coöperates with the movable jaw which will be more fully hereinafter described. Extending downwardly from the body 14 is provided the portion 17, the lower end of which is provided with the lateral flanges 18 which are designed to travel in the grooves 6 hereinbefore described. It will thus be seen that the portion 5 and the bottom wall of the groove 4 form a guide in which the portions 18 extend and are slidable. The body 14 hereinbefore referred to is provided with the longitudinal, rectangular aperture 19 extending throughout its entire length, and this body is also provided with the dove-tail groove 20 which opens into the lower portion of the rectangular aperture 19 and is designed to receive the block 21 which is provided with suitable screw threads 22 on its upper face. These threads 22 are designed to engage the threads carried by the adjusting bar which will be more fully hereinafter described.

Extending below the bottom of the extension 17 is the toothed rack member 23 which is designed to mesh with the teeth carried by the gear 24, which gear is secured to the shaft 25 and rotatable in the chamber 10 hereinbefore mentioned. This shaft 25 is journaled in the aperture 26 formed transversely of the body 3 and is provided at its outer end with the squared portion 27 which projects through the squared aperture 28

at the lower end of the crank lever 29 so that when the crank lever is turned the shaft will be rotated and thereby cause the gear wheel 24 to move the relatively stationary jaw to the desired position.

The movable jaw, which is designated generally by the numeral 30, comprises the body 31 having formed thereon the upwardly extending member 32 which is provided with the jaw face 33. This jaw face 33 is designed to cooperate with the jaw face 16 of the jaw 13 to hold the article which is to be drilled in place. The body 31 of the movable jaw member is provided with the axial bores 34 and 35 which are separated by the web 36 having formed therein the aperture 37 which communicates at each end with the bores 34 and 35 above mentioned. This aperture 37 is designed to form a bearing for the shaft 38 which is provided at one end with the enlargement 39 having formed thereon the squared portion 40 which is designed to receive a suitable means for rotating the shaft. The opposite end of the shaft is screw threaded as at 41 and the threads thereon are designed to engage the threads of the block 21 hereinbefore mentioned.

The shaft 38 is provided with a suitable collar 44 which is designed to limit the movement of said shaft with relation to the jaw member 3 and thus hold said jaw member upon rotation of the shaft. In order to form an auxiliary guide for the movable jaw member there is provided the rectangular extension 45 which projects in the direction of the face 33 and is arranged to fit within the rectangular aperture 19 in the relatively stationary jaw member 14. This rectangular extension is provided with the central longitudinal bore 46 which is designed to aline with the bore 35 and receive the shaft 38 hereinbefore referred to. In order to permit the rectangular member 45 to slide past the block 21 the said rectangular member is provided with a slot 47 through which the block 21 extends, and it will thus be seen that the movable jaw may be moved with relation to the relatively stationary jaw without danger of interference.

It will be apparent from the foregoing that in use the body is secured to the post 1 in any suitable manner and adjusted to the proper height, whereupon the article which is to be drilled is placed between the jaw faces of the vise and the same tightened. The crank is then rotated so as to move the jaws to the desired position beneath the drill and upon moving the drill in the

proper position it will be evident that the article will be apertured. With the use of this device it will be clearly apparent that any danger of the work being misplaced or slipping from proper position is eliminated due to the fact that it is firmly clamped in the vise and thereby much saving is effected from the loss of material.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that such changes may be made in the combination and arrangement of parts as will fall within the spirit and scope of the invention as defined in the appended claims.

What is claimed is:

1. An attachment for post drills including a base member, said base member having a groove in its upper surface, means to secure the base member to the support of a post drill, a relatively stationary jaw slidable within the groove, means to hold the jaw in adjusted positions on the base member, a movable jaw slidable in the groove, the relatively stationary jaw being provided with a rectangular aperture, a hollow rectangular extension on the movable jaw slidable in the aperture in the relatively stationary jaw, a threaded block secured to the relatively stationary jaw, and means extending through the movable jaw to engage the block and adjust the movable jaw with relation to the relatively stationary jaw.

2. An attachment for post drills including a base member, said base member being provided with a vertical aperture, said aperture being arranged to receive the support of the drill, the base member being provided with a groove in its upper edge, tongues extending into the groove for a short distance, a relatively stationary jaw slidable in the groove, the base member having a chamber intermediate its ends, the chamber communicating with the groove, a gear wheel within the chamber to engage the under side of the relatively stationary jaw to hold the same in various adjusted positions on the base member, a movable jaw slidable in the groove, and means engaging the relatively stationary jaw to hold the movable jaw in adjusted position with relation to the relatively stationary jaw.

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

MERLIN A. DOROTHY.

Witnesses:

A. H. BECKLEY,
WM. SCHOEPPACH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."