

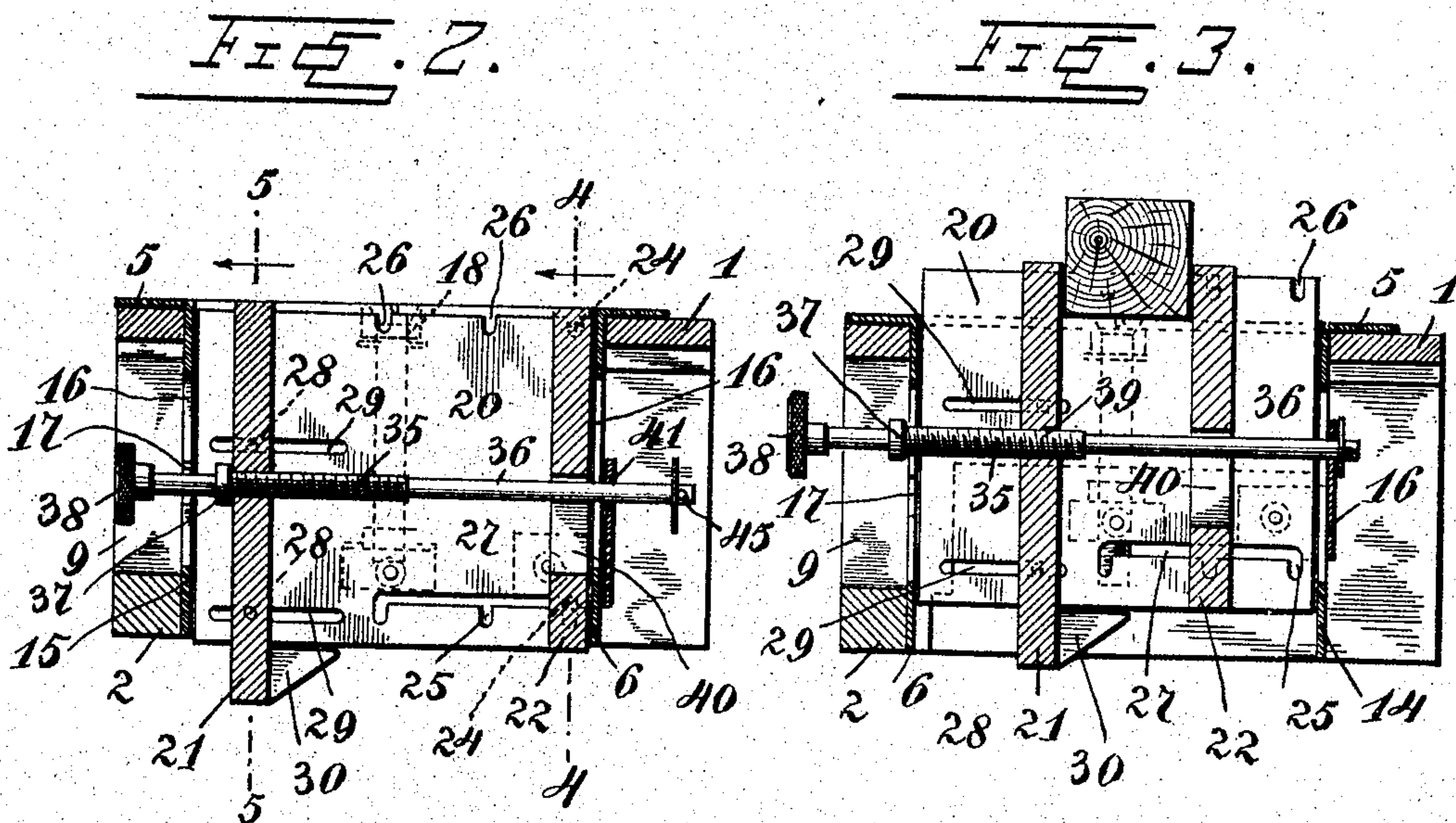
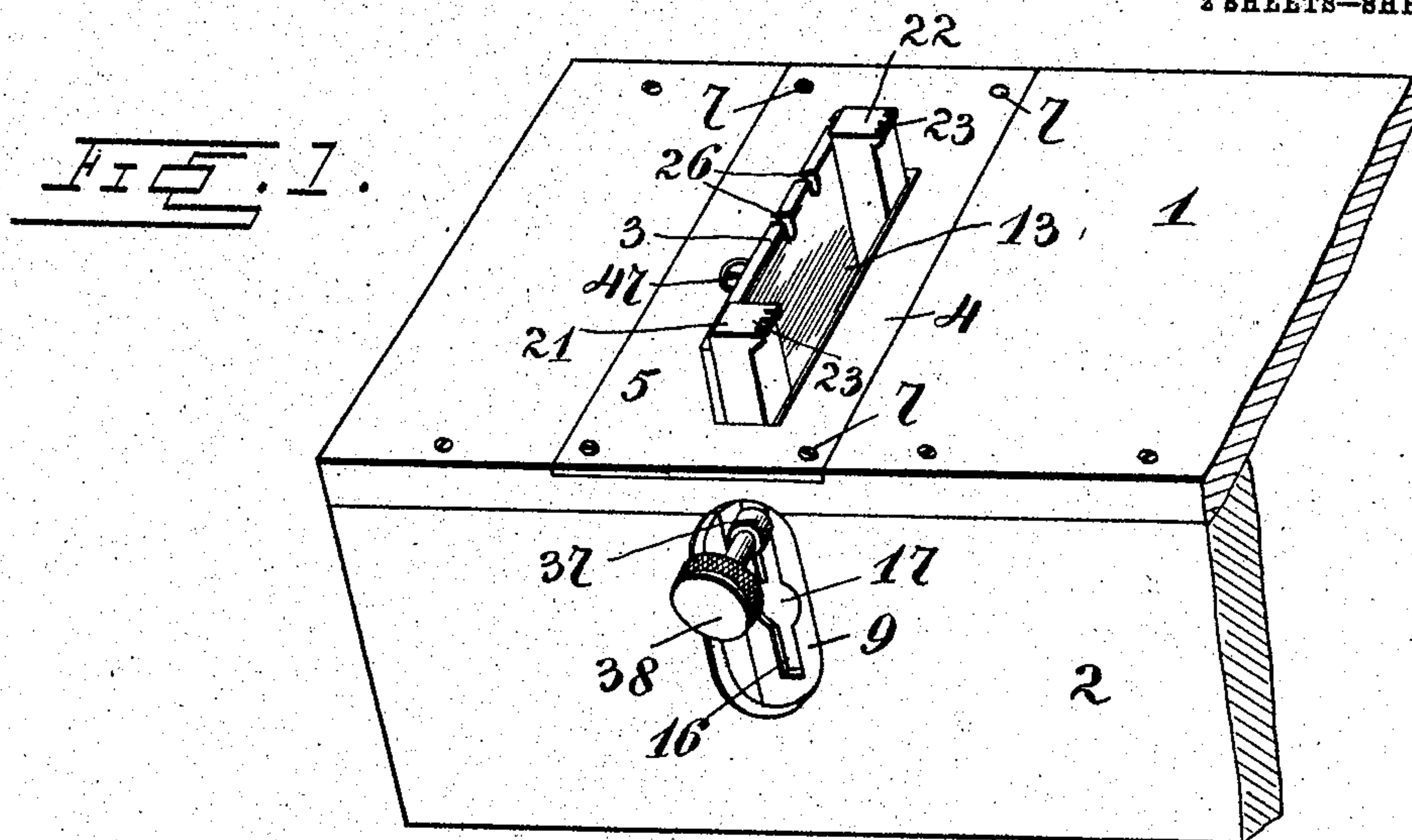
No. 781,183.

PATENTED JAN. 31, 1905.

W. W. BROWNELL.
BENCH STOP.

APPLICATION FILED JULY 21, 1904.

2 SHEETS—SHEET 1.



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FIG. 4.

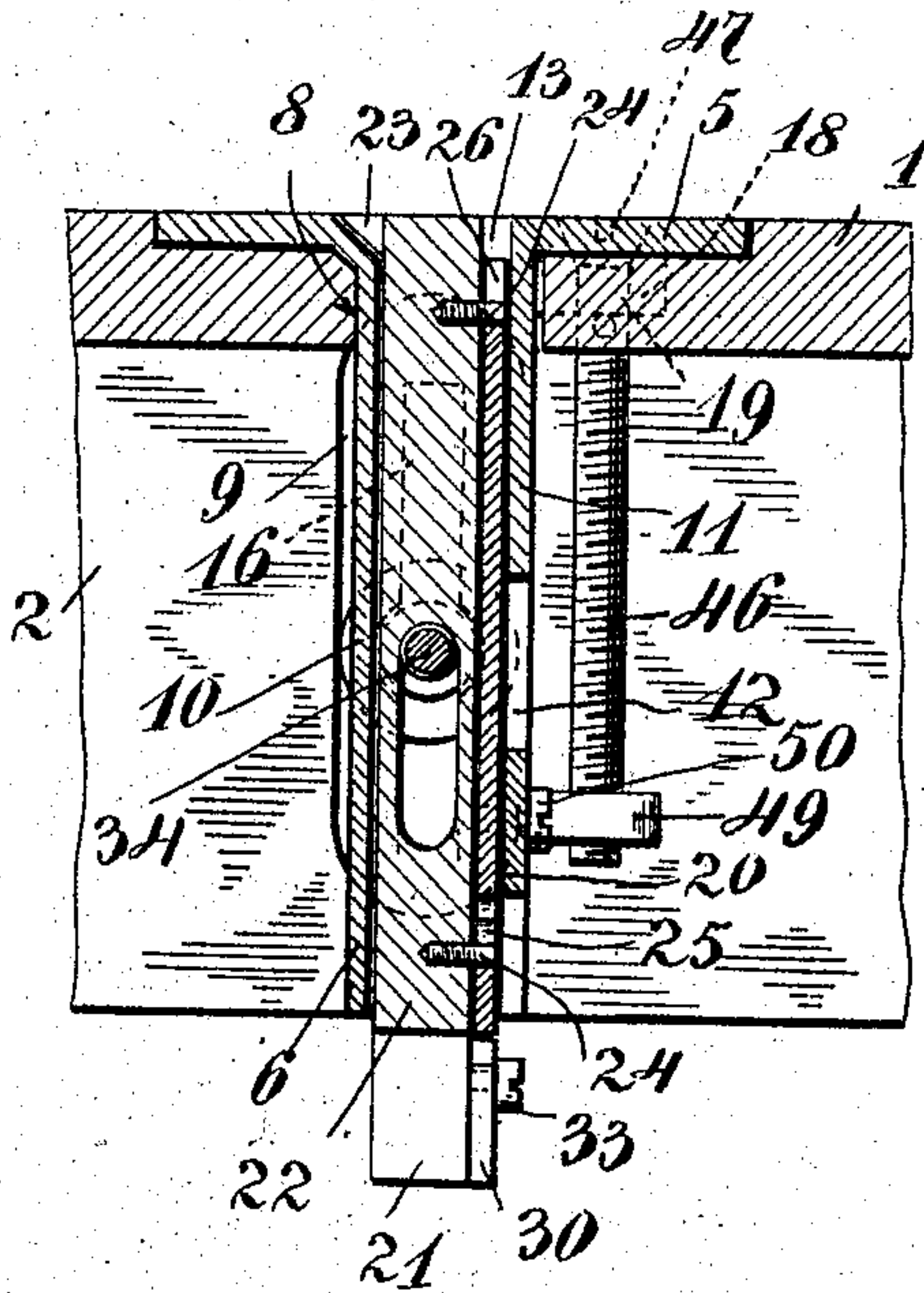


FIG. 5.

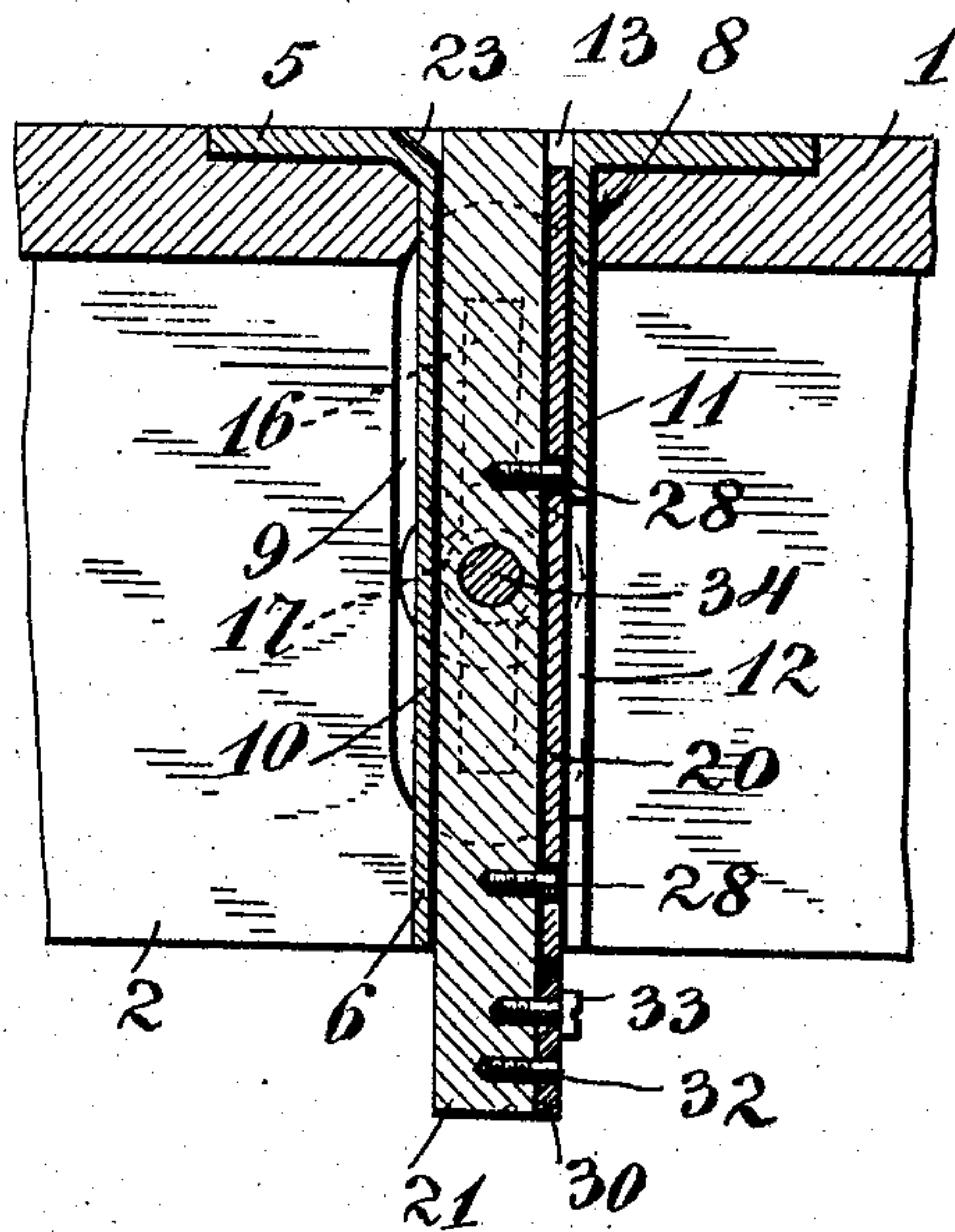
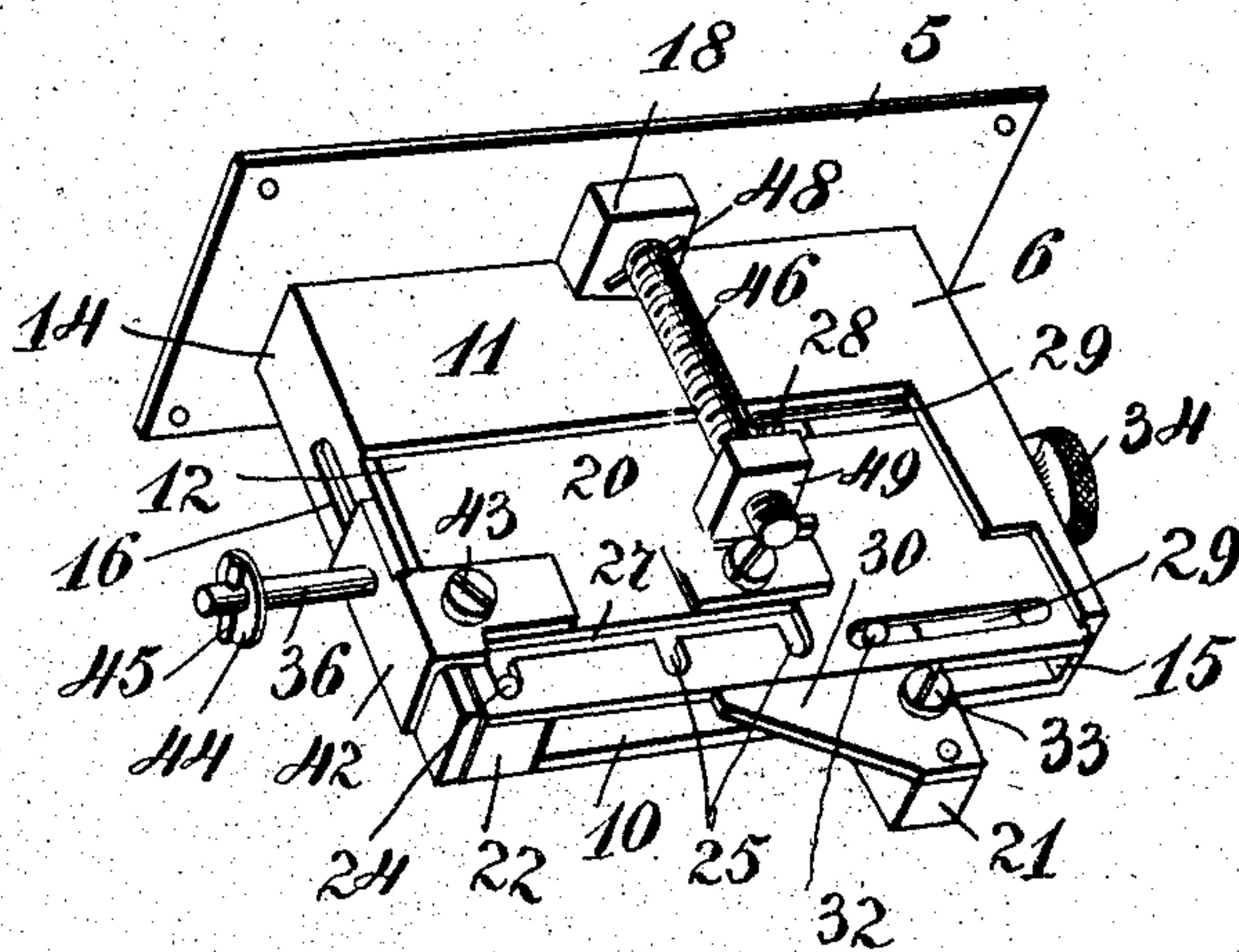


FIG. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM W. BROWNELL, OF LAKE PLACID, NEW YORK.

BENCH-STOP.

SPECIFICATION forming part of Letters Patent No. 781,183, dated January 31, 1905.

Application filed July 21, 1904. Serial No. 217,530.

To all whom it may concern:

Be it known that I, WILLIAM W. BROWNELL, a citizen of the United States, residing at Lake Placid, in the county of Essex and State of New York, have invented certain new and useful Improvements in Bench-Stops; and I do 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.

My invention relates to improvements in stops or hooks for woodworkers' benches; and it consists in the peculiar construction, combination, and arrangement of devices hereinafter fully described and claimed.

One of the objects of my invention is to provide a simple, durable, and efficient device of this character which will be quickly and easily adjusted and adapted to work of various kinds.

A further object of my invention is to provide means whereby the jaws or dogs of the device may be used as a vise or clamp.

The above and other objects, which will appear as the nature of the invention is better understood, I accomplish by the embodiment of my invention illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a woodworker's bench, showing my improved stop or hook applied thereto, its jaws being in their raised or elevated position. Fig. 2 is a vertical transverse sectional view through the same, the jaws of the bench-stop being in their lowered position. Fig. 3 is a view similar to Fig. 2, showing the jaws of the device adjusted for use as a vise or clamp. Fig. 4 is a vertical sectional view taken on the line 4 4 of Fig. 2. Fig. 5 is a vertical sectional view taken on the line 5 5 of Fig. 2. Fig. 6 is a perspective view of the under side of the device, showing it removed from the bench.

Referring to the drawings by numeral, 1 denotes a portion of the top, and 2 a portion of the front, of a woodworker's bench to which my improved stop or hook 3 is applied. The latter comprises a frame 4, which consists of a rectangular plate 5 and a depending rectangular casing 6. The plate 5, which

may be of any suitable form, is adapted to be screwed or otherwise secured, as shown at 7, in a recessed portion of the top 1, so that it lies flush with the same, and its depending casing 6 extends vertically downward through an opening 8, formed in said top, and has its front portion disposed in alinement with a vertically-disposed slot or opening 9, formed in the side 2 of the bench. The side 10 of the casing 6, which is preferably rectangular in form, is entirely closed, and its side 11 is cut away or open, as shown at 12. The top and bottom ends of said casing are also open, the top opening through a rectangular slot 13, formed in the plate 5. Each of the ends 14 and 15 of said casing 6 is formed with a vertically-disposed slot 16, and in the center of the slot 16 in the front end 15 is an enlarged portion 17, which is circular in form and provided for a purpose presently explained.

Upon the under side of the plate 5, adjacent to the front 11 of the casing 6, is an enlarged portion 18, which is formed with a vertically-disposed opening 19, the purpose of which will presently appear.

Mounted to slide vertically in the casing 6 in contact with its front side or wall 11 is a rectangular plate 20, which carries two jaws or dogs 21 and 22. Said jaws are in the form of rectangular blocks which are secured upon the front face of the plate 20 and occupy a space between it and the rear side 10 of the casing 6, so that said plate 20 fits snugly within the latter. Each of the upper ends of said jaws is formed with a series of forwardly-projecting teeth 23, which are disposed slightly above the upper edge of the plate 20, as shown. The jaw 22 is adjusted laterally upon the plate 20, preferably by providing its front face with two or more studs 24, which are adapted to engage pairs of recesses 25 and 26, formed in the plate 20. The recesses 26 are formed in the upper edge of said plate and may be arranged in any desired manner. The recesses 25 are formed in the lower wall of a longitudinally-disposed slot 27, formed in the plate 20 adjacent to its bottom, and they are arranged at intervals corresponding to the intervals between the

recesses 26, any number of which may be provided. It will be seen that by sliding the jaw 22 outwardly upon the plate 20 said lugs 24 may be disengaged from one pair of the
 5 recesses 25 and 26 and engaged with another pair at a different point upon the said plate 20. The jaw 21 is slidably and adjustably mounted upon the plate 20, so that it may be moved laterally toward and from the jaw 22.
 10 This mounting of the jaw 21 is preferably effected by providing upon its front face two or more studs 28, which project into and slide in longitudinally-disposed slot 29, formed in the plate 20, as shown, and by providing upon
 15 the lower end of said jaw 21, which projects below the bottom of the plate 20, a guide-plate 30, which is adapted to bear against and slide upon the bottom of said plate 20 to prevent any twisting or turning of the jaw
 20 upon the plate 20. The connection between the guide-plate 30 and the jaw 21 is preferably effected by forming upon the latter a stud 32, which projects into an opening in the former and by passing a screw 33 through
 25 threaded openings formed in said guide-plate and said jaw.

In order to move the jaw 21 toward and from the jaw 22, so that the bench-stop may be adjusted according to the width of the piece of
 30 wood being operated upon and so that said jaws may be used as a vise to clamp a piece of wood between them, I provide a screw 34, which extends longitudinally through said casing 6 and said jaws 21 and 22. Said screw or screw-
 35 shaft comprises a threaded portion 35, extending about one-third of its length, a smooth portion 36 at one end of this threaded portion, a collar or sleeve 37 upon the opposite end of this threaded portion, and a finger-piece 38 dis-
 40 posed a short distance from said collar 37 and upon the outer end of the screw-shaft. The threaded portion 35 of the screw works in the screw-threaded opening 39, formed in a jaw 21, and the smooth portion 36 extends through a
 45 longitudinally-disposed slot 40, formed in the jaw 22, and also through the slot 16 in the rear end 14 of the casing 6 and through an opening 41, formed in an angle-bracket 42, which is secured by a screw 43 upon the front
 50 face of the plate 20 and slides with said plate in the cut-away portion 12 of the front side 11 of the casing 6 and in contact with the said end 14, as clearly shown in Fig. 6 of the drawings. The extreme rear end of the screw-
 55 shaft 34 is provided with a collar or washer 44 and a cross-pin or key 45, which prevents the removal of the screw-shaft from the device. The front portion of the screw-shaft 34 extends through the opening 9 in the side 2
 60 of the bench and through the slot 16 in the front end 15 of the casing 6 and normally has its collar 37 in engagement with the front face of said end 15, so that when the nut or finger-piece 38 on the outer end of the screw-
 65 shaft is turned the jaw 21 will be moved later-

ally toward or from the jaw 22 after the washer 44 is brought into contact with the bracket 42, as shown in Fig. 3 of the drawings. When the jaws of the bench-stop are in their lowered position and the latter is not
 70 in use, the collar 37, which is of slightly less diameter than the enlarged portion 17 of the recess 16, but of greater diameter than said recess, aligns with said portion 17, so that the screw-shaft may be moved inward in a longi-
 75 tudinal direction, so that its outer end or knob 34 will be disposed within the opening 9 in the front side 2 of the bench, as clearly shown in Fig. 2 of the drawings. When the parts
 80 are in this position, it will be seen that no portion of the device projects beyond the surface of the top 1 or front side 2 of the bench, so that the latter may be used for ordinary pur-
 85 poses, the same as if the bench-stop was not applied thereto.

In order to adjust the sliding plate 20, and hence its jaws 21 and 22, vertically in the casing 6, I provide in the said bearing 18 a ver-
 90 tically-disposed screw 46, the upper end of which is swiveled in said block by having its head 47 countersunk in the plate 5 and by
 95 passing a cross-pin or key 48 through said screw beneath said block 18. The lower screw-threaded portion of said screw works in a screw-threaded opening formed in a nut 49,
 100 which is secured upon the front face of the plate 20 by a screw 50. It will be seen that when the screw 46 is rotated by means of a screw-driver or similar tool inserted in the
 105 groove in its head 47 the nut 49 will travel upon the screw and move said plate and its jaws into and out of the casing 6, as it will be readily understood. If desired, the head of the screw may be formed with a knob or finger-
 110 piece countersunk in the plate 5 and block 18, so that said screw may be turned without the use of a screw-driver or other tool.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the construction, operation,
 115 and advantages of my invention will be readily understood without an extended explanation. It will be seen that by means of the screw 46 the jaws may be adjusted vertically according to the thickness of the piece of
 120 wood to be operated upon and that by means of the screw 34 said jaws may be adjusted laterally toward and from each other, according to the width of said piece of wood. By means of the lateral adjustment of both of
 125 the jaws 21 and 22 it will be seen that the device may be used as a vise or clamp, as illustrated in Fig. 3 of the drawings.

While I have shown and described the preferred embodiment of my invention, it will
 130 be understood that I do not limit myself to the precise construction herein set forth, as various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the princi-

ple or sacrificing any of the advantages of this invention.

5 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

10 1. A bench stop and vise comprising a rectangular casing, a vertically-movable element in said casing, jaws upon said element, one of said jaws being laterally adjustable toward and from the other to serve as a vise, and said casing being secured in a recess in a bench, substantially as described.

15 2. A bench stop and vise comprising a rectangular casing, a slidably-mounted element in said casing, means for adjusting said sliding element vertically, a stationary jaw upon said element, a movable jaw upon said element, said jaws serving as bench-dogs and means for adjusting said movable jaw toward and from said stationary jaw to serve as a vise, substantially as described.

20 3. A bench stop and vise comprising a casing secured in a recess in a woodworker's bench, a slidably-mounted element in said casing, means for adjusting said sliding element vertically, a stationary jaw upon said element, a movable jaw upon said element, said jaws serving as bench-dogs, and a screw for adjusting said movable jaw toward and from

said stationary jaw to serve as a vise, substantially as described.

4. A bench stop and vise comprising a casing secured in a recess in a bench, a slidably-mounted plate in said casing, means for adjusting said sliding plate vertically, a stationary jaw upon said plate, a laterally-movable jaw upon said plate, said jaws having bench-dogs at their ends, and a screw for adjusting said movable jaw toward and from said stationary jaw to serve as a vise, substantially as described.

5. A bench stop and vise comprising a casing secured in a recess in a work-bench, a slidably-mounted plate in said casing, a screw for adjusting said sliding plate vertically, a laterally-adjustable jaw upon said plate, bench-dogs on said jaws, a slidably-mounted jaw upon said plate, and a screw for moving said sliding jaw toward and from said adjustable jaw to serve as a vise, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM W. BROWNELL.

Witnesses:

HENRY J. KAISER,
E. L. WARE.