

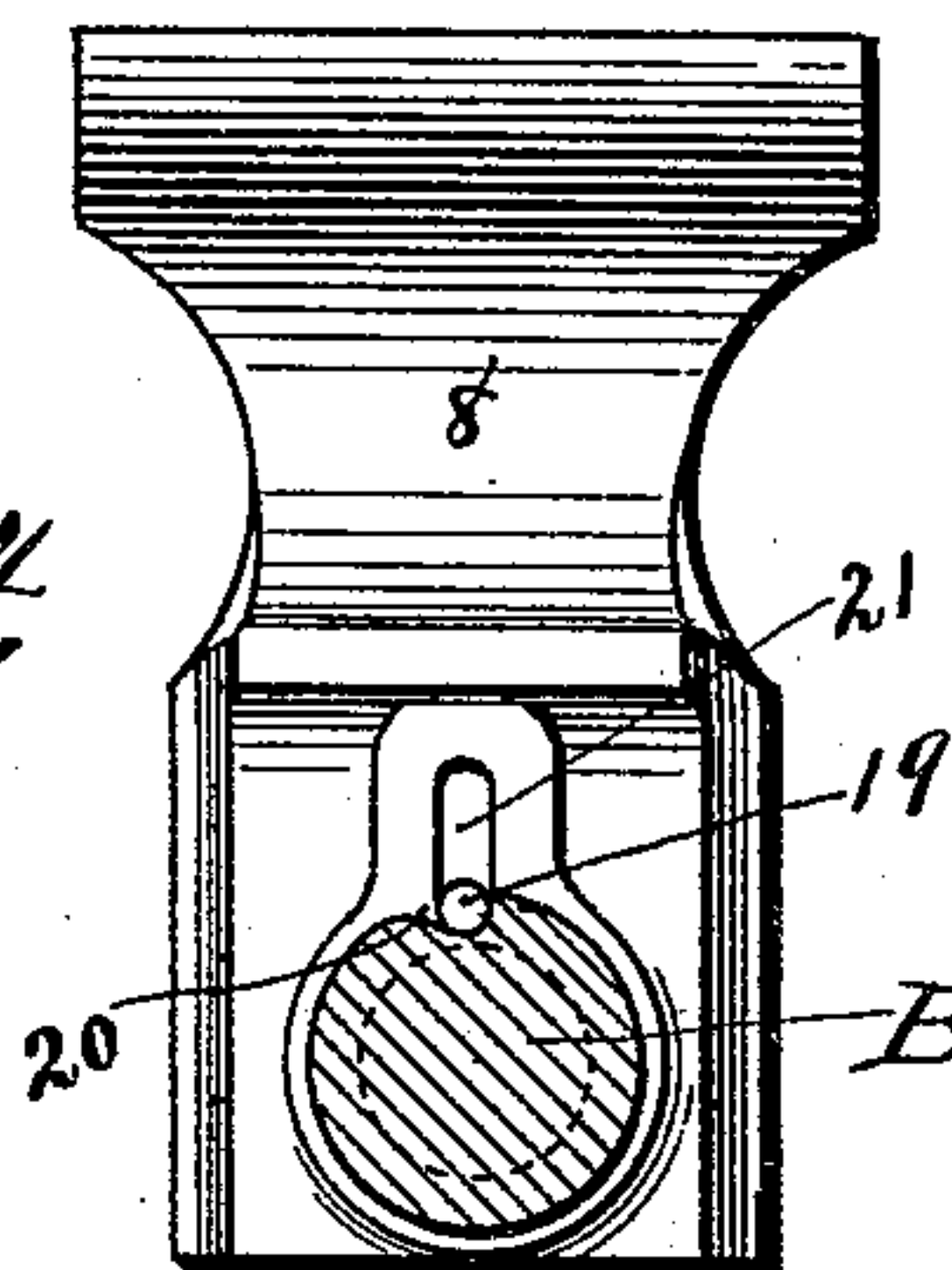
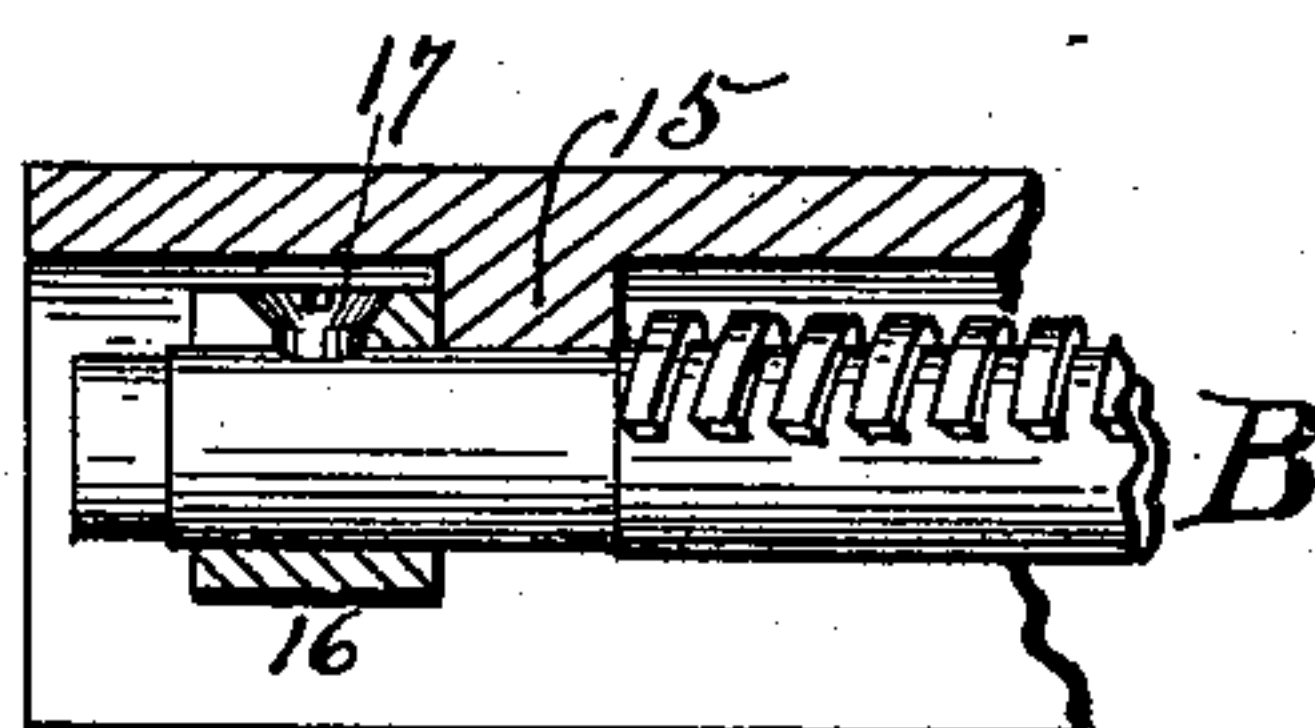
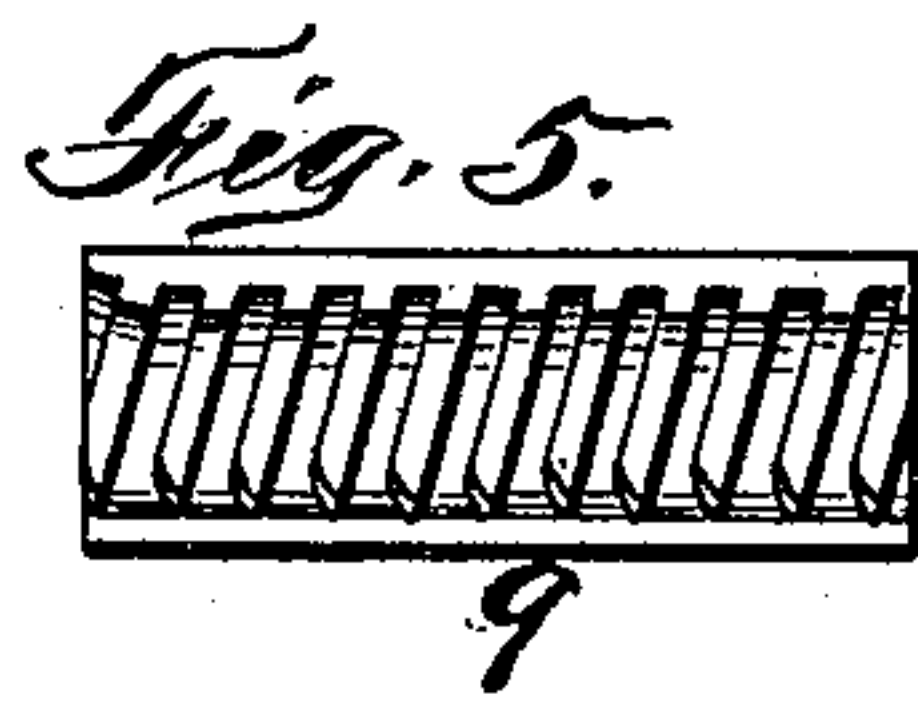
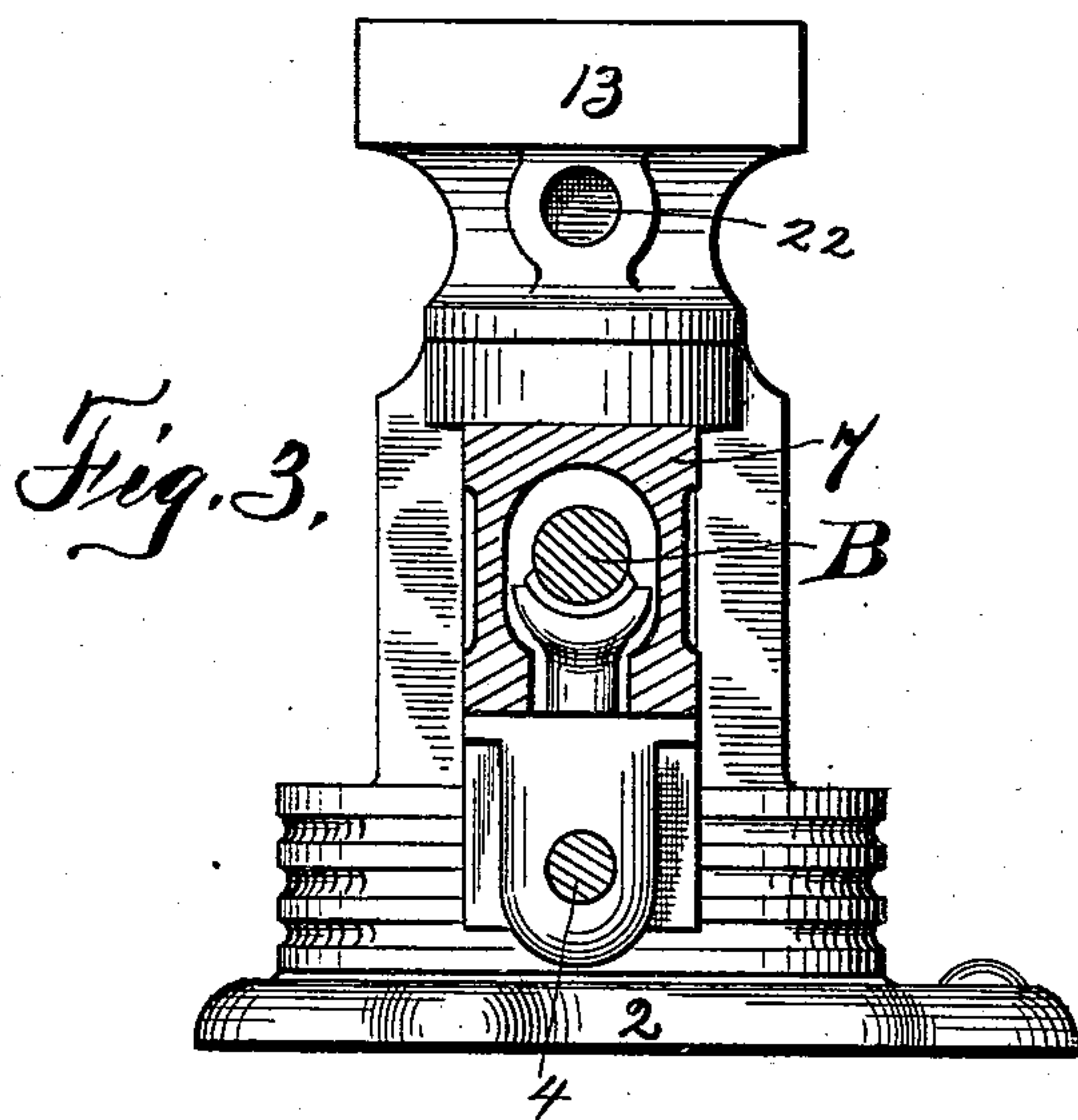
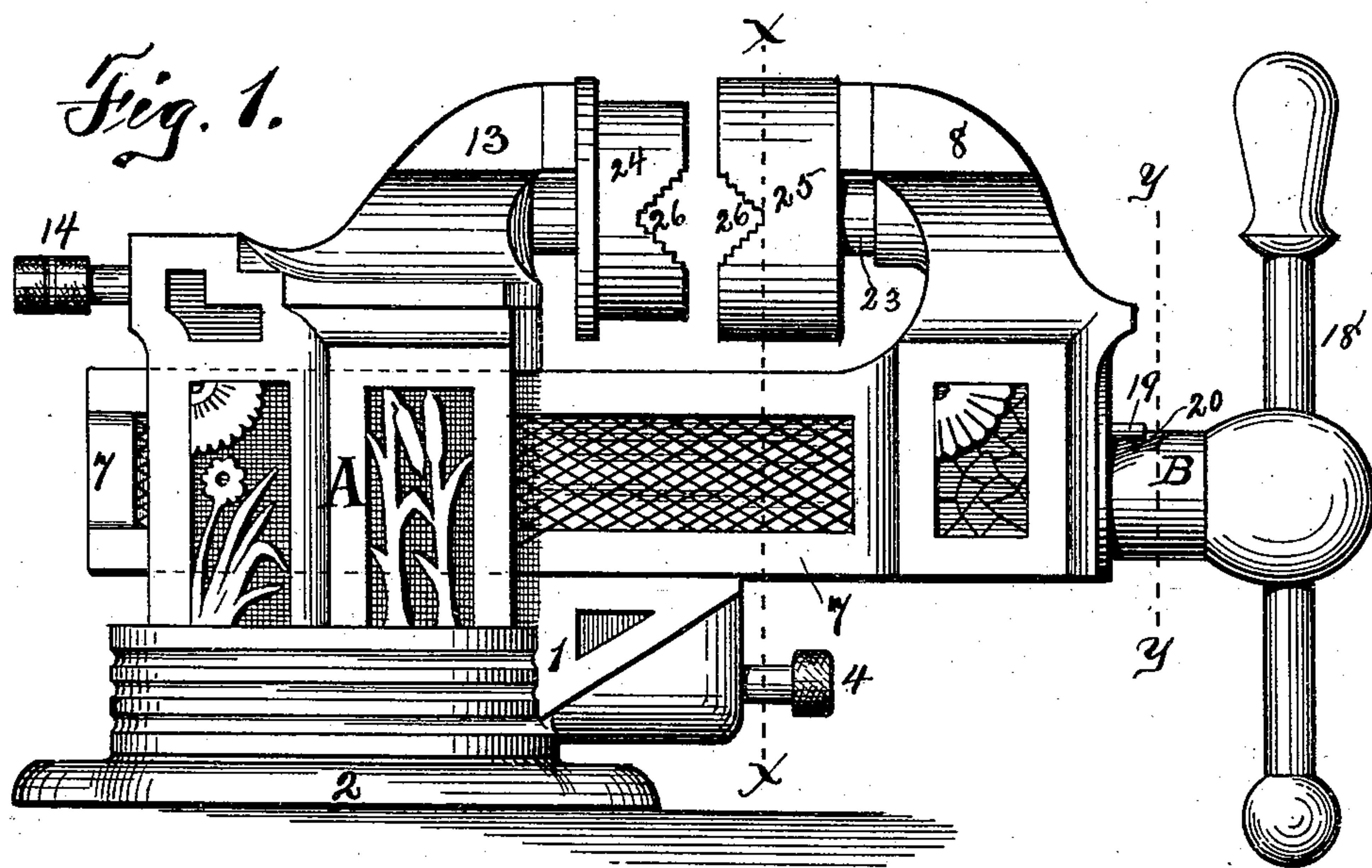
(No Model.)

2 Sheets—Sheet 1.

J. J. COWELL.  
VISE.

No. 488,600.

Patented Dec. 27, 1892.



WITNESSES:

*H. A. Carhart*  
*Geo. M. Blumers.*

INVENTOR

*Julius J. Cowell,*

BY *Smith & Benson*

ATTORNEYS.

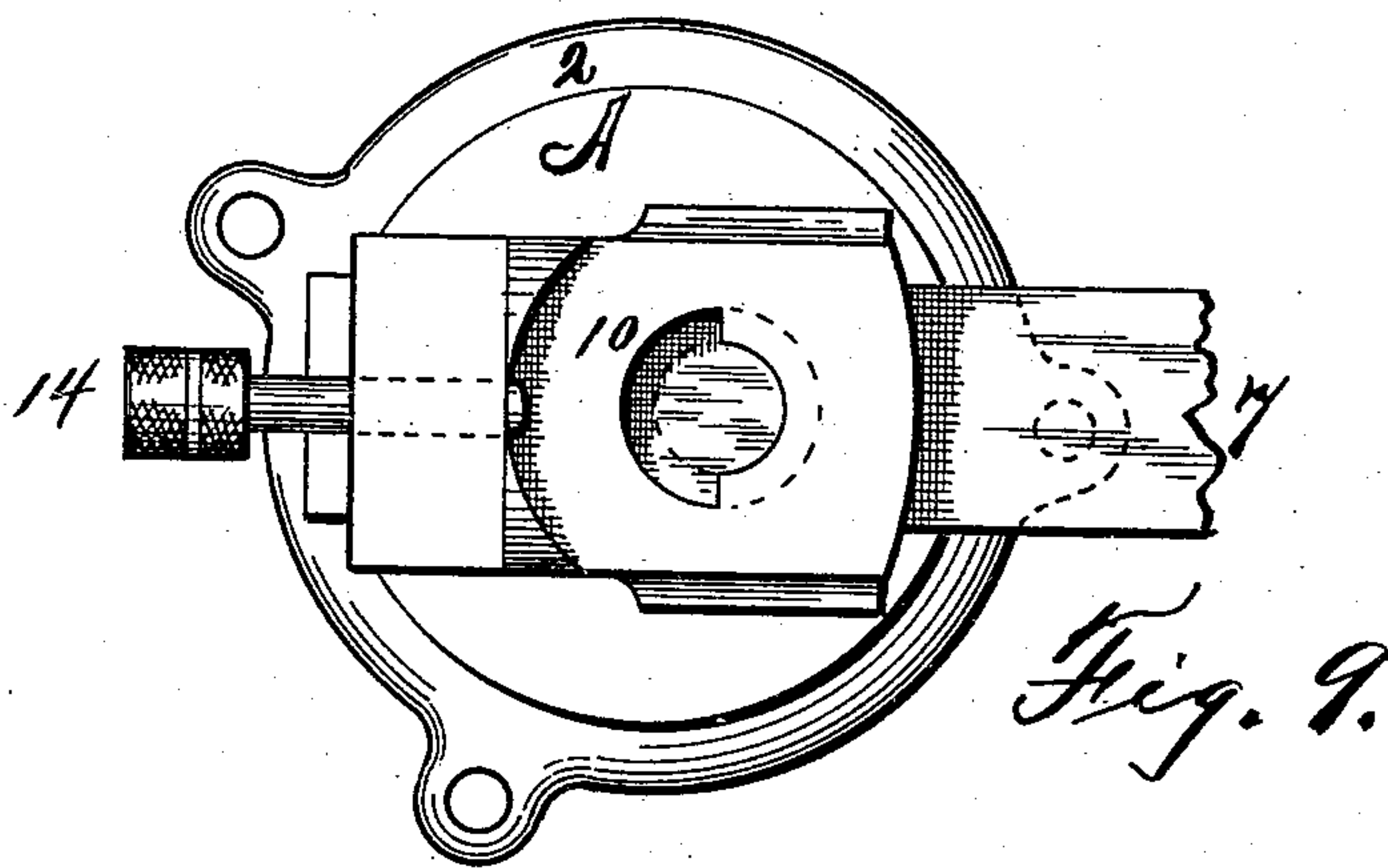
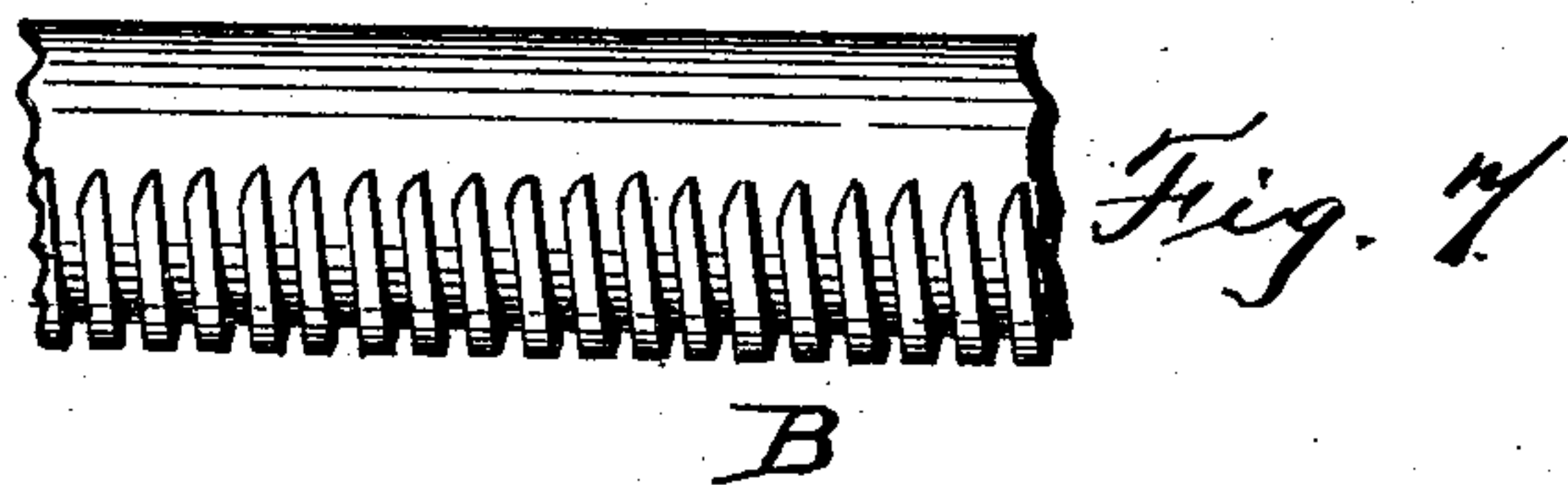
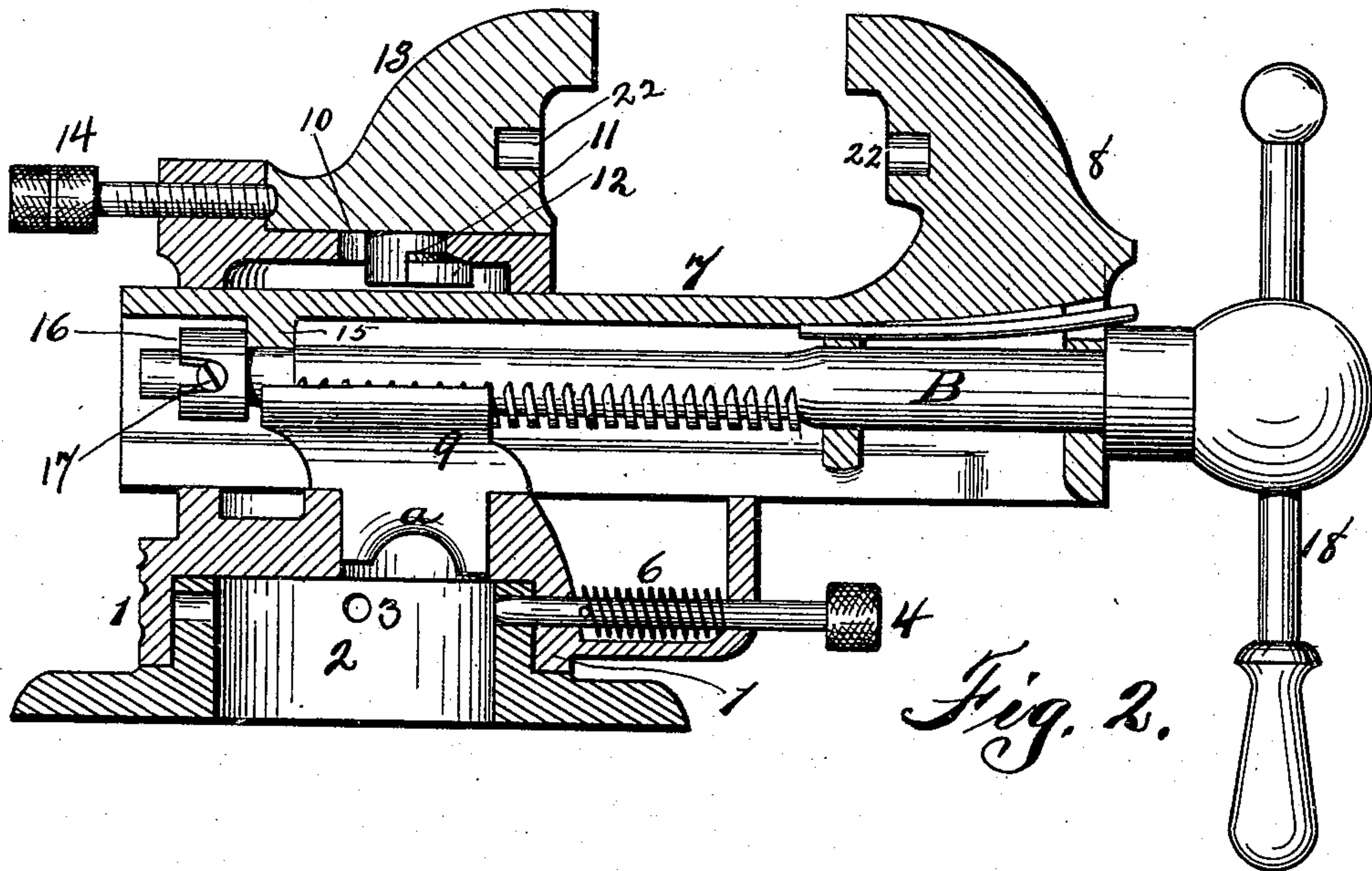
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2 Sheets—Sheet 2.

J. J. COWELL.  
VISE.

No. 488,600.

Patented Dec. 27, 1892.



WITNESSES:

*H. A. Carhart,*  
*Geo. M. Blower*

INVENTOR

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# UNITED STATES PATENT OFFICE.

JULIUS J. COWELL, OF WEEDSPORT, NEW YORK.

## WISE.

SPECIFICATION forming part of Letters Patent No. 488,600, dated December 27, 1892.

Application filed July 15, 1892. Serial No. 440,132. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS J. COWELL, of Weedsport, in the county of Cayuga, in the State of New York, have invented new and useful Improvements in Vises, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to vises, and particularly to that class which are "quick acting," and in which the jaws are parallel, or can be shifted to receive a tapered piece; in which a half nut and half screw are used for quick adjustment of the jaws, and which are provided with auxiliary detachable jaws for gripping round or half round bars or pipes.

My object is to produce an universal vise, with parallel jaws adapted to be shifted out of parallelism, and with auxiliary jaws for holding pipe or rounded bars, and of quick adjustment as to the jaws on account of having a half nut and a half screw, said screw, or said screw and nut, being provided with a beveled entrance for the thread of one into that of the other; and also having a spring catch for holding the screw out of engagement with the nut.

My invention consists in the several novel features of construction and operation herein-after described and which are specifically set forth in the claims hereunto annexed. It is constructed as follows reference being had to the accompanying drawings in which—

Figure 1, is a side elevation of the vise complete, with the pipe jaws in position. Fig. 2, is a vertical longitudinal section, omitting the pipe jaws. Fig. 3, is a sectional elevation on line *xx* omitting the pipe jaws (Fig. 1.) Fig. 4, is a like view on line *yy*, Fig. 1. Fig. 5, is a top plan of the half nut. Fig. 6, is an end elevation thereof. Fig. 7, is an elevation of part of the screw enlarged. Fig. 8, is a sectional elevation of part of the screw, the adjusting collar and screw, and the slide carrying the outer jaw. Fig. 9, is a top plan of the body of the vise with the rear jaw removed, showing the semi-circular locking mortise to receive the like shaped tenon upon the base of said jaw.

A, is the body of the vise, provided with a flange 1, around its lower end, which fits onto a base block 2, provided with countersinks 3,

receiving the point of the stop pin 4, provided with a spring 6, whereby the body is swiveled upon the base, and can be set at any point and held there by said pin. This body is provided with the usual horizontal mortise to receive the slide 7, which carries the front jaw 8. It is also provided with a vertical mortise opening upward into the slide mortise, and which receives the shank "a" of the half nut 9. In the top it is also provided with a mortise 10, of the shape of two semi-circles of unequal radii, adapted to receive the post 11, and flange 12, upon the bottom of the rear jaw 13, so that the flange can be turned under the over hang of the mortise. The rear face of this jaw body is provided with a central countersink to receive the point of the screw 14, by which it is held in parallelism with the outer jaw, when that is set upon the center; and has also a series of lateral concavities or countersinks like unto and on each side of the one shown in Fig. 2 adapted to also receive said screw, and said jaw is held in any position thereby, as for taper work. And when the rear jaw is so shifted, the front one is shifted to the like or necessary degree of taper by means of the swivel mounting upon the base block 2.

B, is the half screw, with a square cut thread, of ordinary construction except that the ends of the risers of the thread are beveled or scarfed off; and the threads of the half nut are also beveled off in like manner, so that in no case can two ends of threads abut against each other, and quick and sure entrance is provided for the screw threads into those of the nut, and closer jaw adjustment is permitted before the threads are brought into engagement. When the threads are out of engagement the front jaw and slide are free to move forward and back.

In the rear of the slide through which the screw passes, is a shoulder 15, and 16, is a collar upon the screw, slotted longitudinally for adjustment and abutting against said shoulder, and secured in position by the screw 17, through said slot, whereby all wear upon the screw can be taken up. The front end of the screw is provided with a handle 18, through a head which abuts against the front end of the slide. A spring rod 19, is secured in the slide and extends outward to engage



with a notch 20, in the screw head (Fig. 4) and is adapted to play vertically in the slot 21, and to hold the screw in place when it is out of engagement with said nut.

5 Each jaw below its working face is provided with a socket 22, adapted to receive the stems 23, of the sections of the pipe jaws 24 and 25, which are tubular and of unequal size so that one can slide into the other, so that a  
10 pipe or rod of any size can be gripped in the notches 26.

What I claim as my invention and desire to secure by "Letters Patent" is:—

1. In a vise the combination with the jaws,  
15 of a slide carrying one jaw, and passing through a mortise in the rear jaw, a square threaded half screw within the slide, having the ends of its threads beveled off, and a half nut provided with a shank fitting in a mor-  
20 tise in the body of the rear jaw, and having the ends of its threads beveled off.

2. In a vise the combination with the jaws, of a slide carrying one jaw and passing through a mortise in the rear jaw, a square  
25 threaded half screw within the slide, and having the ends of its threads beveled off, a

half nut provided with a shank fitting in a mortise in the body of the rear jaw, and having the ends of its threads beveled off, and having a spring secured in the slide and adapted to engage with a groove in said screw and hold it out of engagement with said nut. 30

3. The combination with the rear jaw swiveled upon a body, and a pin adapted to engage with it, said body being adjustably swiv-  
35 eled upon a base, and a front jaw mounted upon a slide passing through a mortise in said body, a half screw through said slide, and a half nut mounted in a mortise within said body. 40

4. The combination with the jaws of a vise, and means to vary the distance between them, of tubular auxiliary jaws of unequal radii, provided with notches in their ends, and con-  
45 nected to the main jaws.

In witness whereof I have hereunto set my hand this 16th day of June, 1892.

JULIUS J. COWELL.

In presence of—

HERBERT A. CARHART,  
HOWARD P. DENISON.