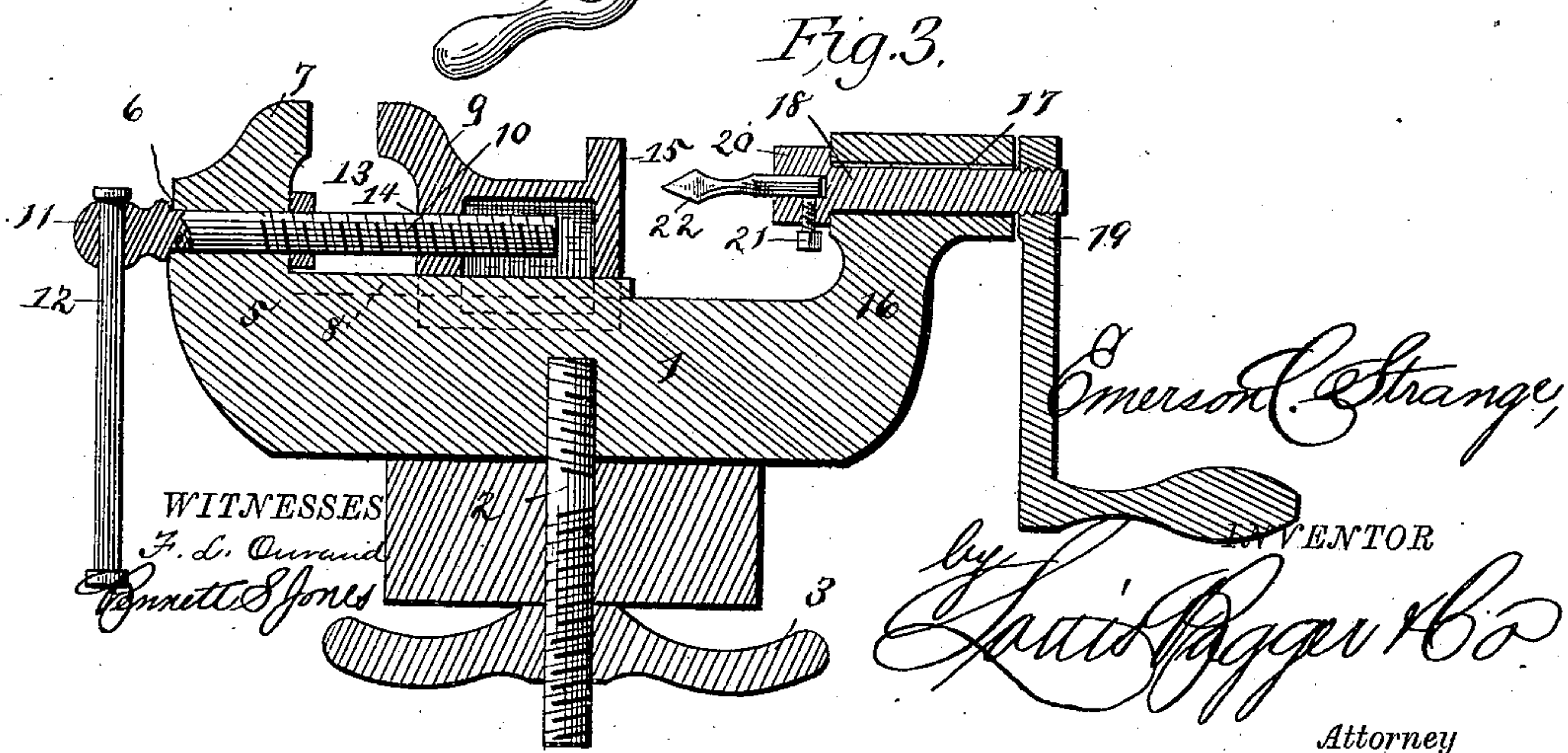
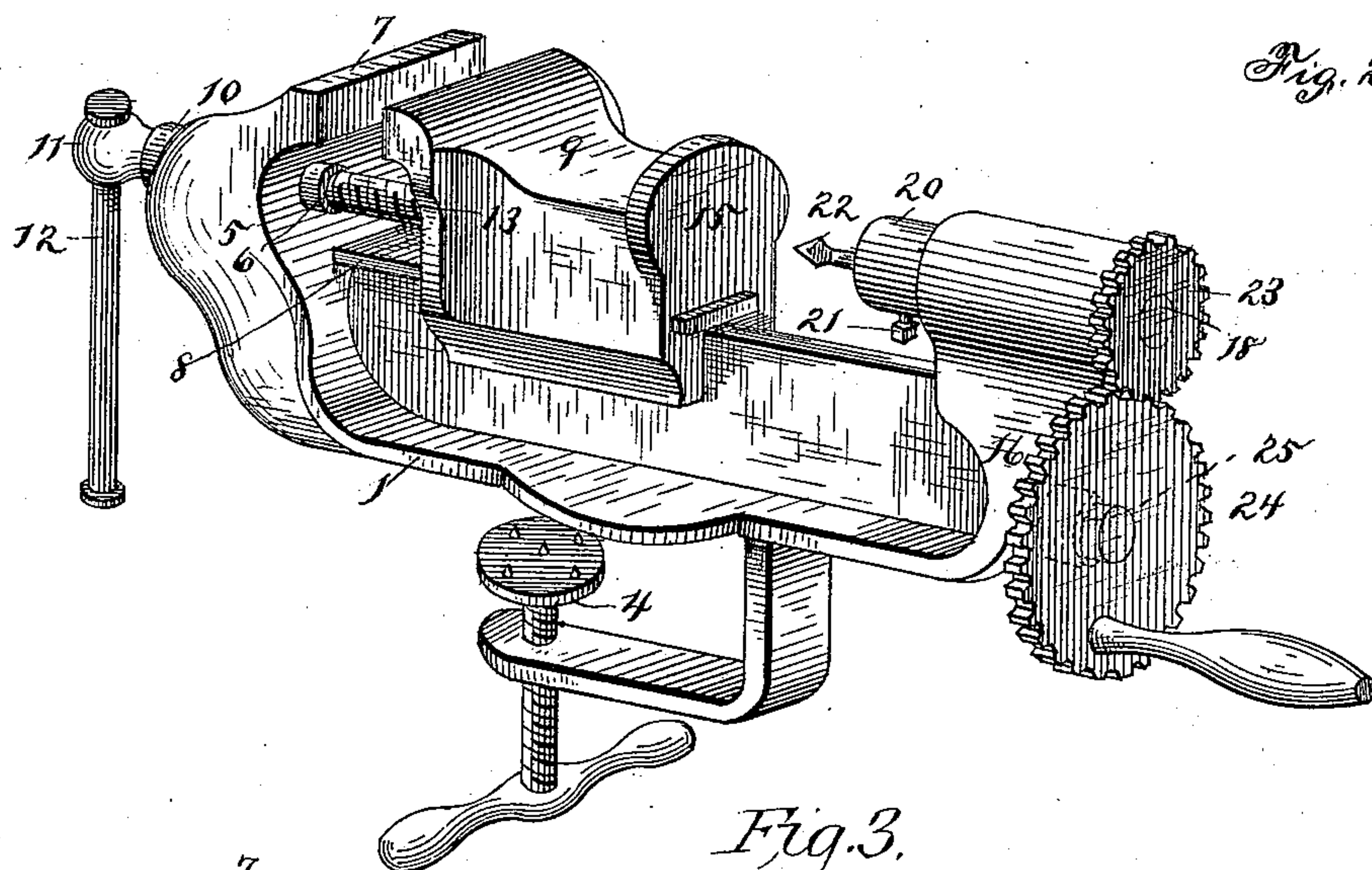
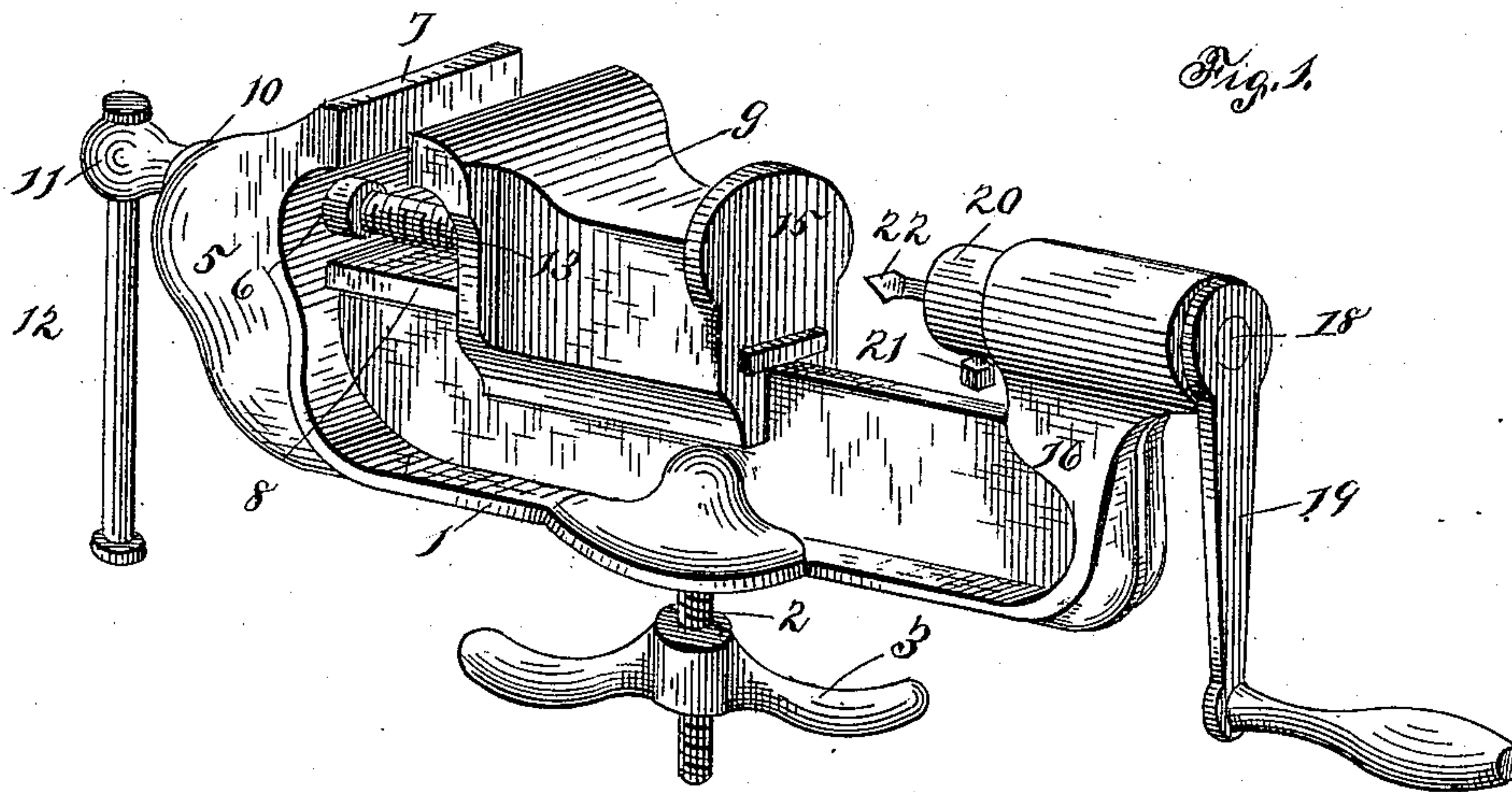


(No Model.)

E. C. STRANGE.  
COMBINED VISE AND DRILL.

No. 361,600.

Patented Apr. 19, 1887.



WITNESSES

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# UNITED STATES PATENT OFFICE.

EMERSON C. STRANGE, OF TAUNTON, MASSACHUSETTS.

## COMBINED VISE AND DRILL.

SPECIFICATION forming part of Letters Patent No. 361,600, dated April 19, 1887.

Application filed October 25, 1886. Serial No. 217,176. (No model.)

*To all whom it may concern:*

Be it known that I, EMERSON C. STRANGE, a citizen of the United States, and a resident of Taunton, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in a Combined Vise and Drill; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved combined vise and drill. Fig. 2 is a similar view of a slight modification of the same, and Fig. 3 is a longitudinal sectional view of the form shown in Fig. 1.

Similar numerals of reference indicate corresponding parts in all the figures.

My invention has relation to combined vises and drills; and it consists in the improved construction and combination of parts of a vise, in which the movable jaw forms a support for articles to be drilled, being opposite to the point of a drill journaled in a bearing formed by the vise-frame, so that the article to be drilled may be fed toward the drill by the same screw which draws the movable jaw toward or from the rigid jaw of the vise, as hereinafter more fully described and claimed.

In the accompanying drawings the numeral 1 indicates the frame, which is formed with a downwardly-projecting bolt, 2, upon the middle of its under side, upon which bolt a thumb-nut, 3, fits and turns, the said bolt serving to be inserted through a bench or table and to have the nut drawn up against the under side of the said bench or table, securing the frame to the same, although the frame may, if desired, be provided with a clamping-arm having a clamping-screw, 4, as shown in Fig. 2.

One end of the frame is formed with an upwardly-projecting arm, 5, which is formed with a longitudinal bearing, 6, near its upper end, and which is formed at its upper end into the rigid jaw 7 of a vise, and the upper edge of the frame at the portion near the said rigid jaw is formed with laterally-projecting flanges 8, forming a way upon which the movable jaw 9 slides, the said jaw having a correspondingly-shaped recess, with which it slides upon the

way. A screw, 10, is journaled in the bearing of the rigid jaw and has the usual perforated head, 11, having the handle or rod 12 passed through it, and the threaded portion 13 of the screw passes through a screw-threaded perforation, 14, in the movable jaw, so that the said jaw may be drawn toward and from the rigid jaw in the same manner as the movable jaw is operated in the usual construction of screw-vises. The rear face of the movable jaw, or the face opposite to the clamping-face, is plain and vertical, and the article to be drilled may be placed against this face, which is marked with the numeral 15. The other end of the frame of the device is formed with an upwardly-curved arm, 16, having a longitudinal bearing, 17, in its upper end, and a shaft, 18, is journaled in this bearing and is provided at one end with a crank, 19, for turning it, and at its inner end with a chuck, 20, having a set-screw, 21. The drill-bit 22 is secured in this chuck and is concentric with the flat rear face of the movable jaw.

If desired, the drill-shaft may be provided with a pinion, 23, which is engaged by a cog-wheel, 24, suitably journaled in an arm, 25, upon the bearing for the drill-shaft, and provided with the operating-crank, as shown in Fig. 2 of the drawings.

It will now be seen that the article to be drilled may be placed upon the rear face of the movable jaw of the vise and be fed toward the drill by the screw operating the movable jaw, while the drill is revolved by turning the crank.

The vise may be used in the usual manner, being similar to any usual screw-vise.

It will be seen that this device will not occupy much more space than a common vise, and that it will be of considerable utility to metal-workers and other persons engaged in the working of articles of metal, the vise being used in the usual manner and the drill-stand being at all times convenient for use without occupying the space an independent drill-stand would occupy.

By having the frame secured by the central bolt having the thumb-nut the vise or drill may be brought toward the person using it by loosening the thumb-nut and revolving the frame upon the bolt, so that either tool may be presented to the operator as it is to be used.

Having thus described my invention, I claim



and desire to secure by Letters Patent of the United States—

1. The frame having a rigid jaw at one end and an upwardly - curved arm at the other, jointly with a block adapted to be moved upon said frame, having one side formed into a jaw and its opposite side into a drill platen or rest, a drill journaled in said arm, and means, substantially as described, for moving said block.
2. The frame having a rigid jaw at one end and an upwardly-curved arm at the other, and having laterally-projecting flanges at the portion near said jaw, jointly with a block adapted to be moved upon said frame, having recesses adapted to engage with said flanges and having one side formed into a jaw and the opposite side into a drill-platen, a drill journaled in said arm, and a screw for moving said block.

3. The frame having a vise at one end and a drill journaled at its other, jointly with a screw-bolt projecting from the center of the under side of the frame and having a thumb-nut upon its lower end, the said bolt being adapted to be inserted into a perforation in a bench or table, with the nut bearing against the under side of the same.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

EMERSON C. STRANGE.

Witnesses:

JAMES H. DEAN,

JAMES Y. SUTHERY.