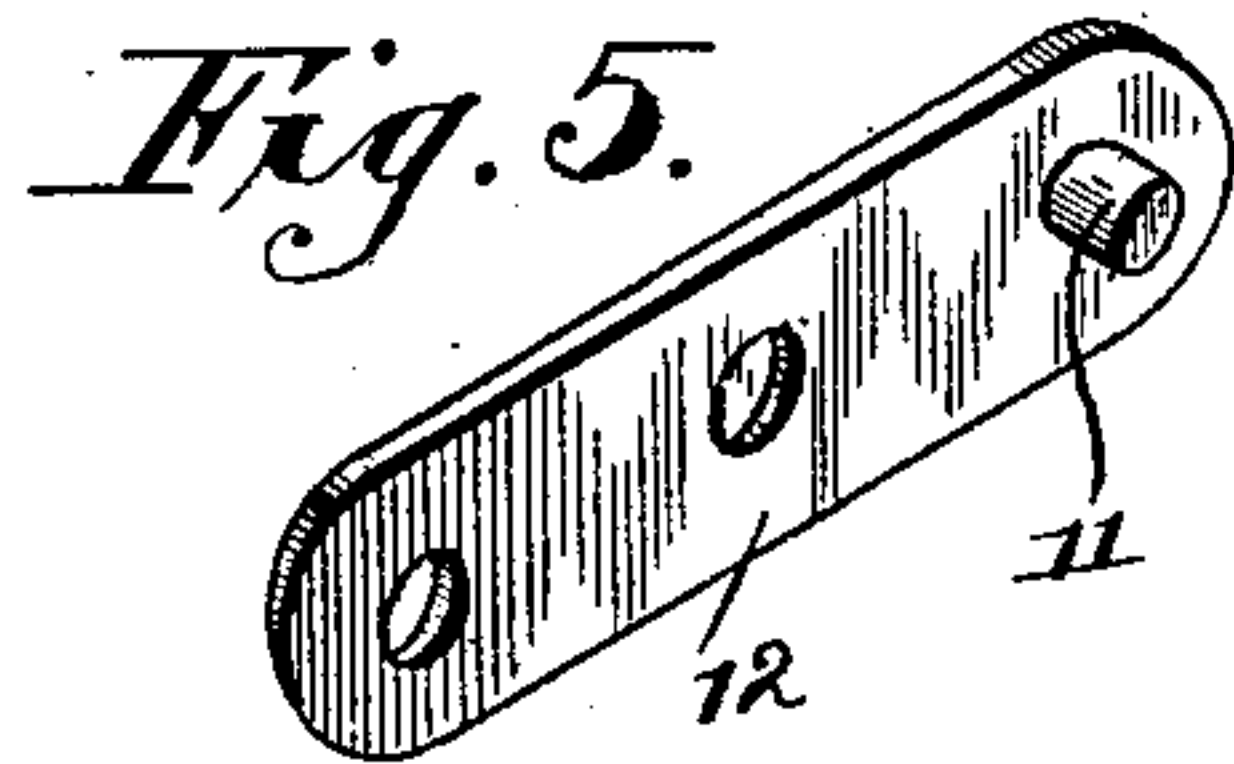
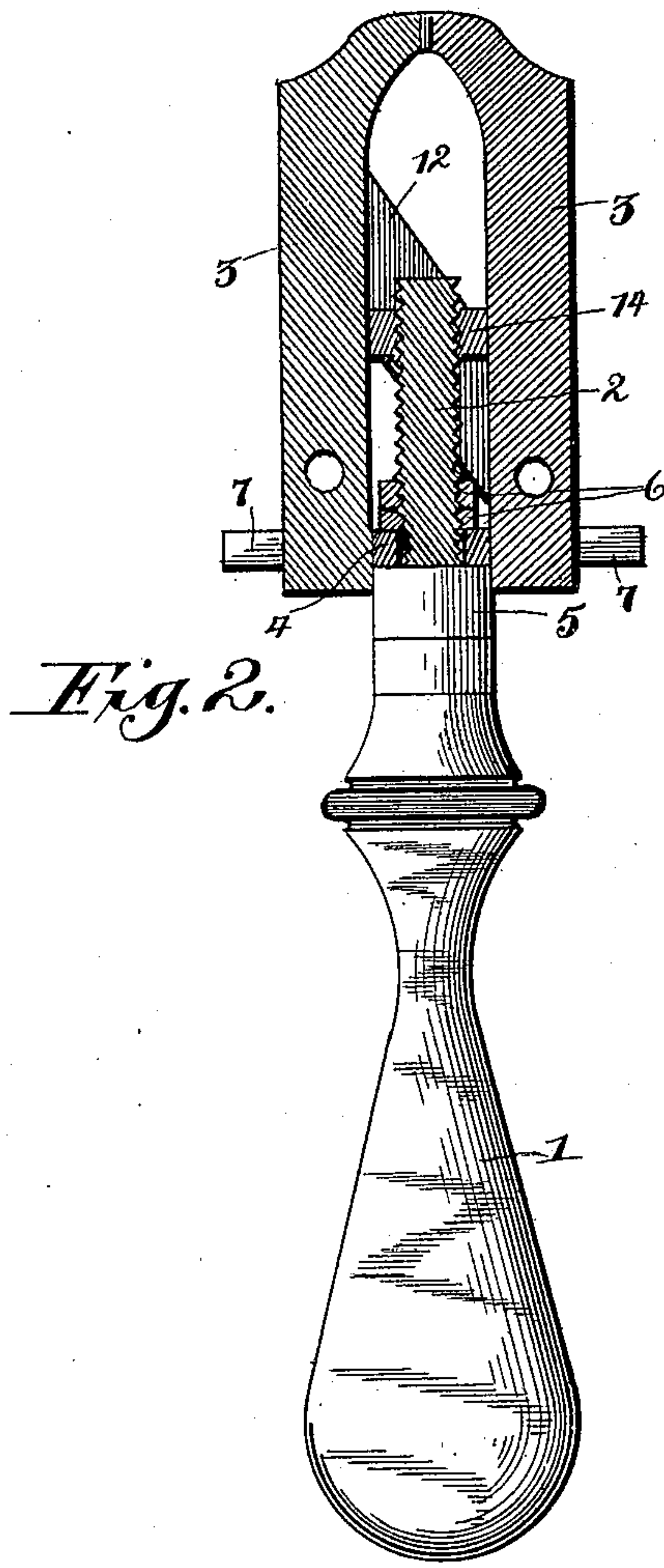
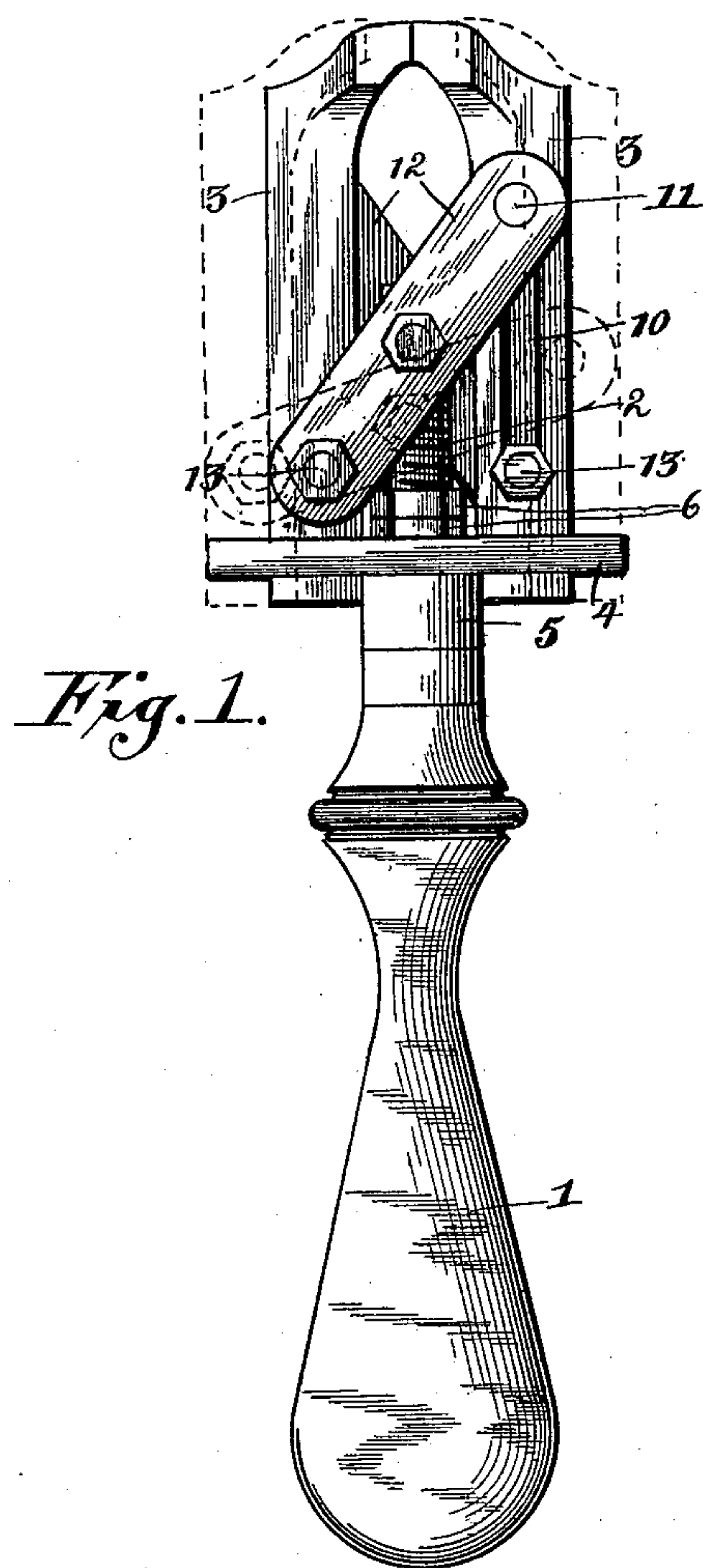


(No Model.)

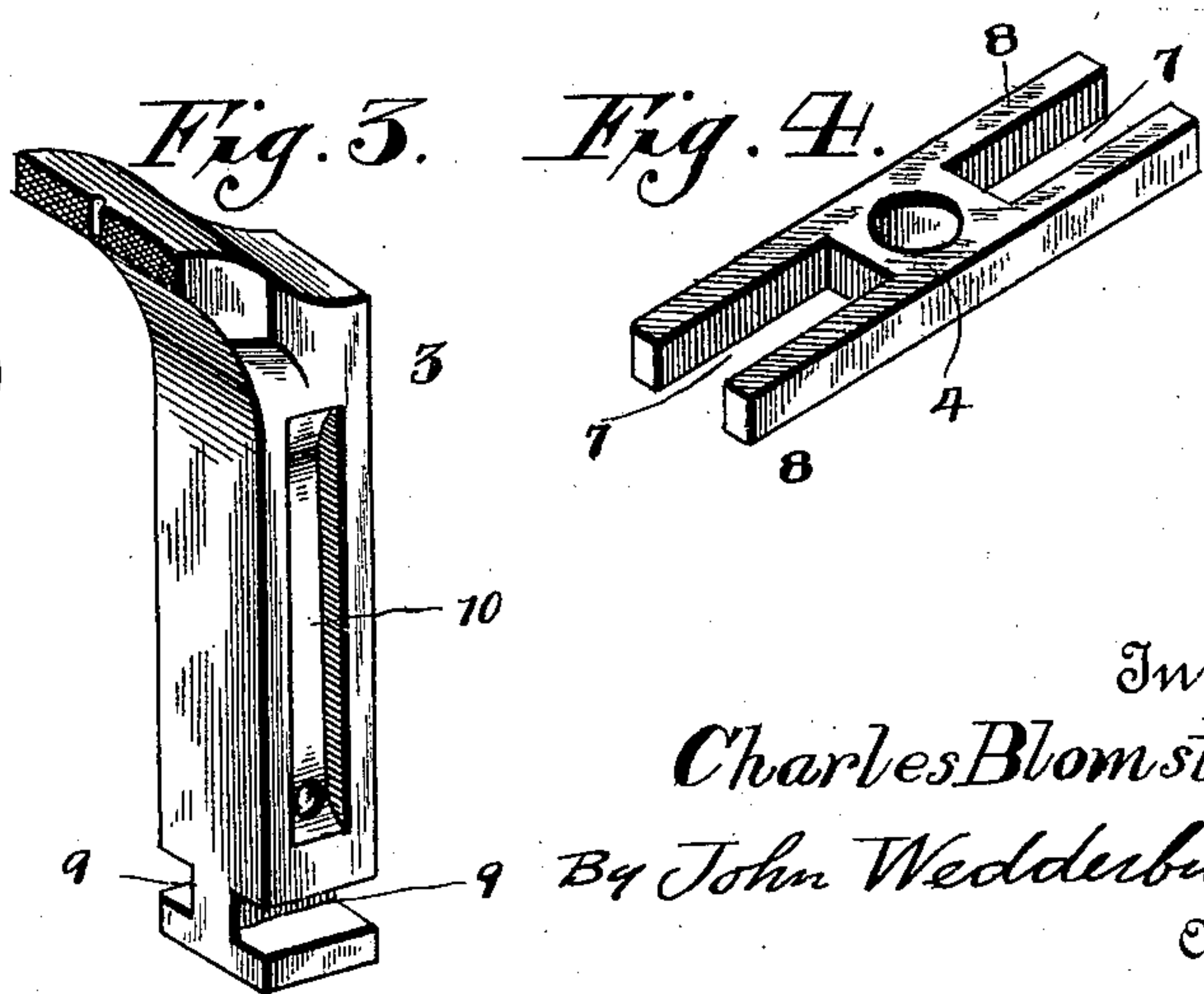
C BLOMSTROM.
HAND VISE.

No. 598,898.

Patented Feb. 15, 1898.



Witnesses
Jos. Gregory
Victor J. Evans



Inventor
Charles Blomstrom
By John Wedderburn
Attorney

UNITED STATES PATENT OFFICE.

CHARLES BLOMSTROM, OF MINNEAPOLIS, MINNESOTA.

HAND-VISE.

SPECIFICATION forming part of Letters Patent No. 598,898, dated February 15, 1898.

Application filed May 20, 1897. Serial No. 637,373. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BLOMSTROM, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Hand-Vises; 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 improvements in vises, and has more particular relation to hand-vises.

The invention consists of the combination, with a handle carrying a screw and a guide-plate, of sliding jaws mounted on said guide-plate and pivoted levers connecting said jaws and adapted to be engaged by said screw.

The invention also consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a side elevation of the device embodying my invention. Fig. 2 represents a central vertical section through the same. Fig. 3 represents an enlarged detail perspective view of one of the sliding jaws. Fig. 4 represents an enlarged detail perspective view of the guide-plate. Fig. 5 represents a detail perspective view of one of the operating-levers.

1 in the drawings represents the handle; 2, the screw mounted therein; 3 3, the sliding jaws, and 4 the guide-plate. Said handle 1 may be of any desired construction and material. The screw 2 passes through said handle and projects some distance beyond its inner end, for the purpose hereinafter more particularly described. A washer 5 is mounted upon this projecting end of the screw and contacts with the inner end of the handle 1. The guide-plate 4 is loosely mounted on the screw 2 above the washer 5 and is held in the proper position by two locking-nuts 6, also mounted on said screw. The outer ends of said plate 4 are slotted, as at 7, to form two guide-arms 8 8. The lower ends of each of the said jaws 3 are grooved upon the opposite sides, as at 9, so as to receive said arms 8 8 when the jaws are applied to the guide-plate through the ends of the slot 7. Each of said

jaws 3 is provided upon one side with a vertical groove 10, adapted for the reception of a stud 11, mounted upon a lever 12, the opposite end of which is pivotally connected to the opposite jaw by a screw-bolt 13. It will be observed by reference to the drawings that these levers 12 extend in opposite directions upon the opposite sides of the respective jaws, so that while the lever of one jaw is pivoted thereto by its bolt 13 upon one side the lever of the opposite jaw engages the groove upon the opposite side of the first-mentioned jaw by means of the stud 11.

The upper end of the screw 2 is provided with a screw-threaded block 14, which is pivotally connected upon its opposite side with the middles of the levers 12 by means of screw-bolts 15.

The upper or clamping ends of the jaws may be of any desired construction, but are preferably, as shown in the drawings, formed with milled faces.

It will be observed from the foregoing description that when it is desired to adjust the vise the handle 1 is simply rotated, thereby causing the screw 2 to turn within the block 14 and raise or lower the same in relation to the handle. This movement of said block 14 causes the respective levers 12 to move from either a vertical to a horizontal position, or vice versa, and thus spread or contract the jaws at will, said jaws being guided in their movements by the guide-plate 4. By this means the jaws 3 3 may be adjusted instantly to clamp any article desired firmly between them, or as readily moved to release the same. Considerable leverage may be gained by the peculiar construction of the handle and its connection with the levers 12 through the movement of the screw 2. The pressure is applied evenly upon both sides of the jaws, and there is no tipping or tilting of the latter, as would be caused were the pressure applied to one side only.

I do not care to limit myself to the application of my invention as a vise, as the same may be used equally well as a nut-wrench. In fact in some cases the construction would be particularly desirable in this latter connection, as nuts mounted in very confined spaces might be operated by simply rotating the handle until the jaws are tightened upon

the same, when any continued rotation of the handle will tighten the nut, as this rotation only seeks to clamp the jaws tighter upon said nut.

5 The construction and operation of the device are very simple and the parts so arranged as to avoid all injury from any unusual strain thrown upon them.

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

15 1. The combination with a handle having a suitable screw mounted thereon, of a guide-plate mounted on said handle, sliding jaws mounted in said plate and levers connecting said jaws and adapted to be moved by said screw to adjust said jaws to the desired position, substantially as described.

20 2. The combination with a handle having a suitable screw, of a guide-plate mounted thereon, sliding jaws mounted in said guide-plate, levers having their respective opposite ends pivoted to said jaws and working in slots formed in said jaws, and means for connecting said levers and said screw whereby the same are moved upon the rotation of said screw, substantially as described.

25 3. The combination with a handle containing a suitable screw, of a guide-plate mounted on said handle, sliding jaws mounted in said plate each formed with a vertical slot,

levers pivoted on the respective opposite sides of said jaws and each carrying a projecting stud adapted to enter the slot in the opposite jaw, and means connecting said levers and said screw, substantially as described. 35

4. The combination with a handle provided with a suitable screw, of a slotted guide-plate mounted thereon, grooved sliding jaws mounted in said guide-plate with the arms of the latter in the grooves of the former, pivoted levers connecting said jaws upon their opposite sides, a block mounted on said screw and pivotally connected to both of said levers, substantially as described. 40

5. The combination with a handle having a suitable screw, of a guide-plate mounted thereon, sliding jaws mounted in said plate and each formed with a vertical slot, a lever pivoted to each jaw and provided at its free end with a stud adapted to enter the slot of the opposite jaw, a screw-threaded block mounted upon said screw, and pivoted pins connecting said levers and said block, substantially as described. 45

In testimony whereof I have signed this specification in the presence of two subscribing witnesses. 50

CHARLES BLOMSTROM.

Witnesses:

DEVEREAUX N. NILES,
ALVIN FURNESS.