

No. 722,677.

PATENTED MAR. 17, 1903.

J. W. CRIPPEN & H. F. KELLEMAN.

MACHINE VISE.

APPLICATION FILED APR. 14, 1902.

NO MODEL.

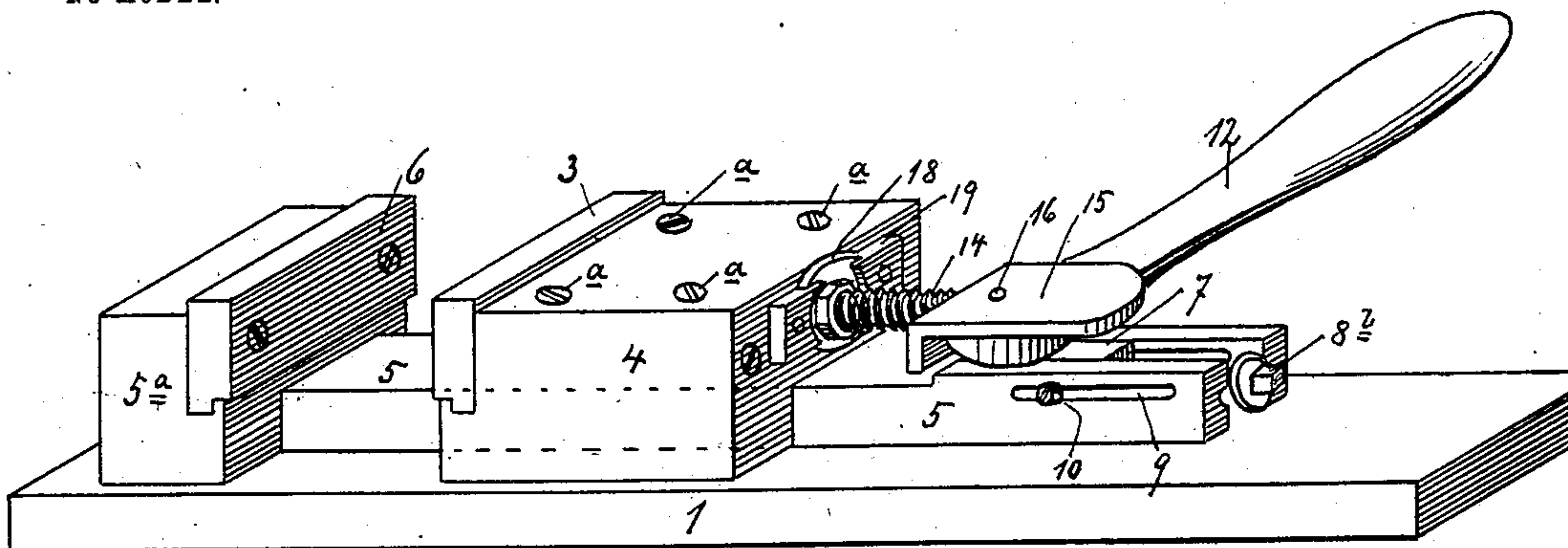


Fig. 1.

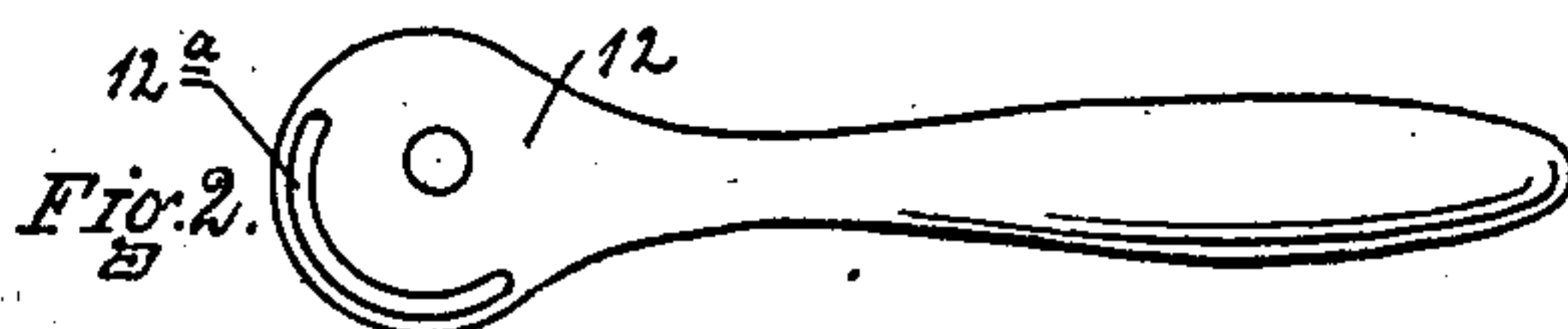


Fig. 2.

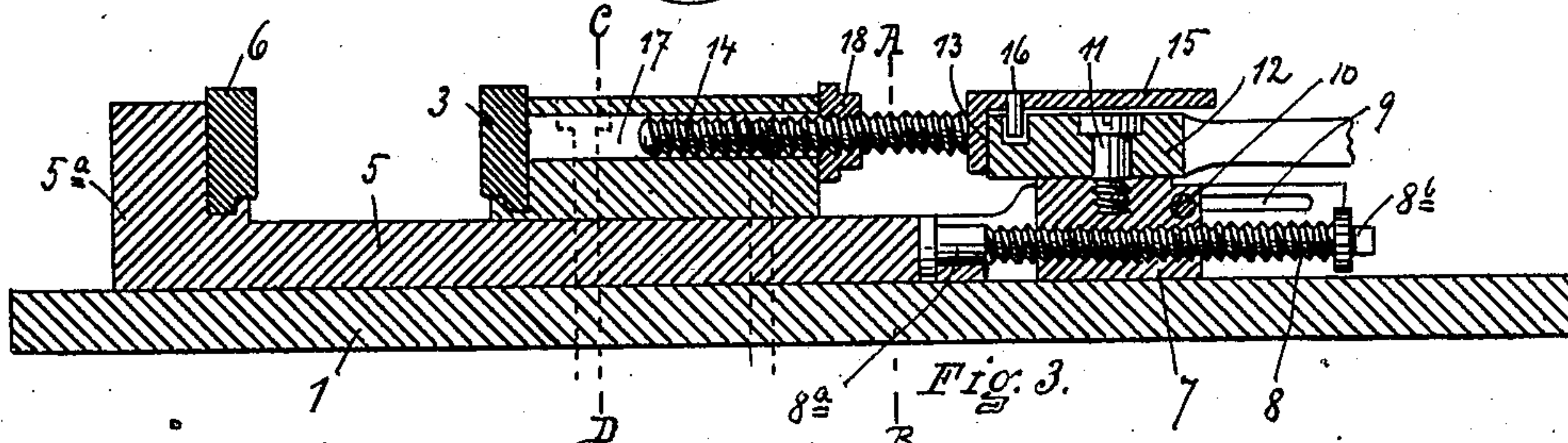


Fig. 3.

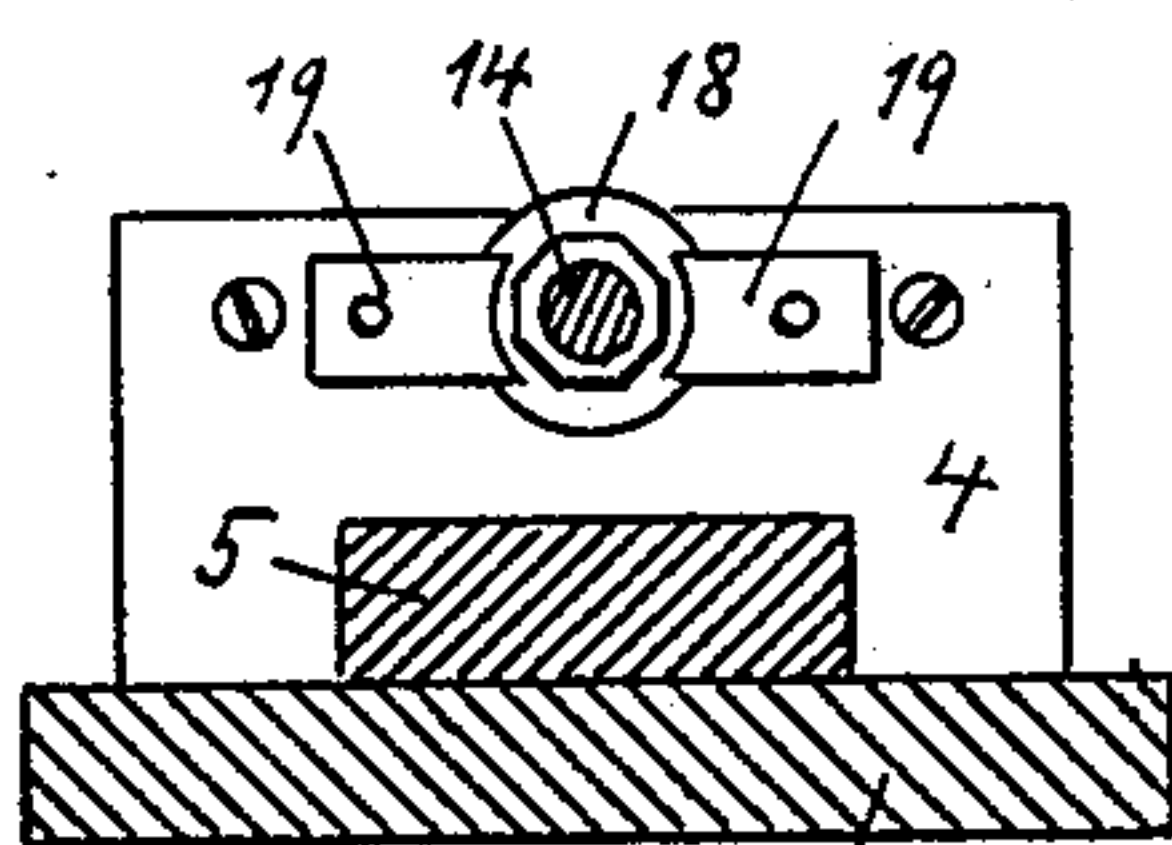


Fig. 4.

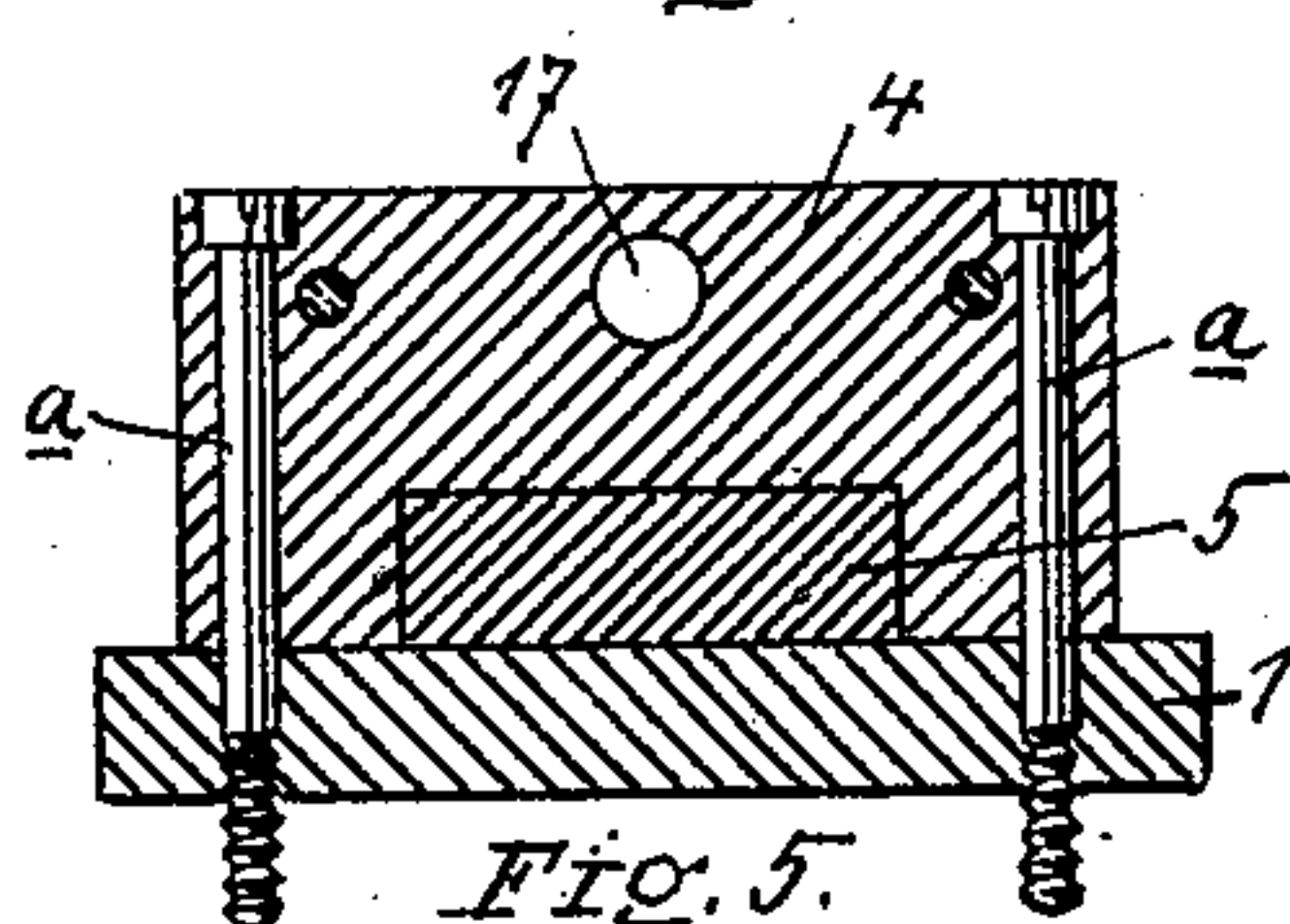


Fig. 5.

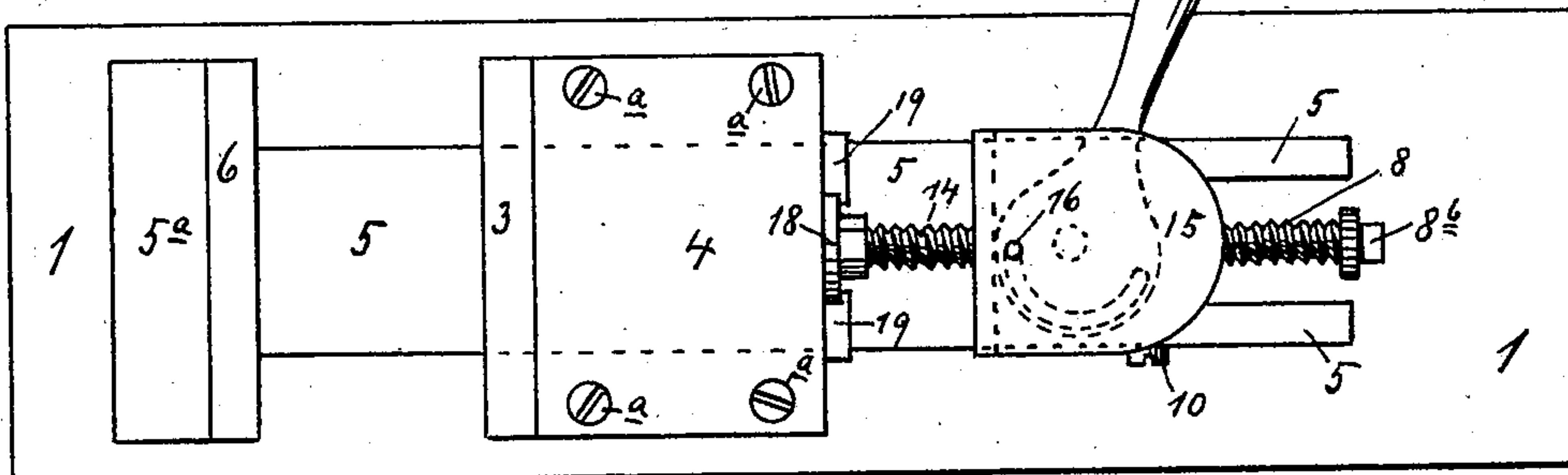


Fig. 6.

WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN W. CRIPPEN AND HENRY F. KELLEMAN, OF UTICA, NEW YORK,  
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## MACHINE-VISE.

SPECIFICATION forming part of Letters Patent No. 722,677, dated March 17, 1903.

Application filed April 14, 1902. Serial No. 102,713. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN W. CRIPPEN and HENRY F. KELLEMAN, of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Machine-Vises; and we 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, and to the letters and figures of reference marked thereon, which form part of this specification.

The object of our invention is to provide an adjustable quick-loading vise particularly adapted for use with milling and similar machines.

In the drawings, Figure 1 shows a perspective view of a vise embodying the features of our construction. Fig. 2 is a plan view of a cam-lever employed in the construction. Fig. 3 is a longitudinal central section. Fig. 4 shows a cross-section taken on a line with A B of Fig. 3. Fig. 5 shows a section taken on a line with C D of Fig. 3. Fig. 6 is a plan view.

Referring to the reference letters and figures in a more particular description of the device, 1 indicates a base-plate which is adapted to lie directly on the table or platform of a milling or similar machine when the device is so employed.

The stationary jaw 3 of the device is mounted directly on a block 4, which in turn is mounted on the plate 1, and the two when the device is in operation are secured together and preferably to the table or platform by screws *a a*, passing through the block 4 and the plate 1 and securing them together. These screws *a* may be inserted in the opposite direction from that in which they are shown in the drawings and employed simply to secure the parts 4 and 1 together, and other means may be provided to secure the plate 1 on the table of a milling-machine when it is desired to thus use it. In the under side of the block 4 there is provided a groove which receives and provides a guide or way for the sliding bar 5. The under side of the bar 5 lies directly on the upper surface of the plate 1, which plate affords a support for the same throughout its length. On one

end of the bar 5 there is provided a head 5<sup>a</sup>, to which is secured the movable jaw 6. The opposite end of the bar from the jaw 5<sup>a</sup> is forked and provided with guides or ways receiving the sliding block 7. The block 7 is adjusted in its ways by means of a screw 8. The screw 8 is secured against lateral movement by the end 8<sup>a</sup> engaging in the bar 5, and it passes through a screw-threaded opening in the sliding block 7. The screw 8 may be provided with a head 8<sup>b</sup>, adapted to receive a wrench or other tool by means of which it may be operated. There may also be provided passing through the block 7 and slotted openings 9 in either side of its ways a transverse bolt 10, by means of which the block 7 may be firmly secured.

Pivotaly mounted on the block 7 by means of the screw-pin 11 is the cam-lever 12. The working face of the lever 12 operates on a shoulder 13, provided on the end of the screw 14. In addition to the shoulder 13 the screw 14 also carries a plate 15, which covers the cam portion of the cam-lever 12 and protects it from chips and dirt. The cam-lever 12 is provided with a groove 12<sup>a</sup>, parallel to its working face, which receives the end of a pin 16, fixed in the plate 15. The screw 14 extends into a smooth or plane hole 17 in the block 4, and at the entrance to this opening the screw is provided with a flange-nut 18, capable of rotation by means of a tool or otherwise and held against the end of the block 4 by means of keepers 19 or other suitable means.

By means of the screw 8 and the ways in the end of the slide 5 the relative position of the cam 12 and the movable jaw 6 may be adjusted. By means of the screw 14 and the nut 18 the relative position of the shoulder 13 and the stationary jaw 3 may be adjusted. Under certain circumstances one of these means of adjustment may perhaps be omitted. By means of either or both of these adjustments, as circumstances may require, the distance apart and positions of the jaws 3 and 6 may be adjusted to closely fit the work in hand. By operating the cam-lever 12 a limited amount of opening-and-closing movement of the jaws may be secured, and by this means the piece may be quickly and



tightly gripped or released, depending on the direction of the movement of the lever. The pin 16, engaging in the groove 12<sup>a</sup>, connects the cam to the screw 14 in such manner that when the cam-lever is moved in the proper direction the jaws will be opened and no other or separate hand manipulation is required to open the jaws after the pressure of the cam has been released. It will be noted that the movable jaw 6 is closed with a draw-pull on the bar 5, whereby better results are secured than where the movable jaw is closed by a thrust. It is evident, however, that our cam-lever mechanism and adjustments may be arranged for a vise in which the movable jaw is operated by thrust.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination in an adjustable, quick-loading vise of a base or body, the fixed jaw, the movable jaw, a cam-lever and an adjusting means all connected together successively whereby the cam-lever serves to both positively close and positively open the jaws and the jaws may be adjusted independently of the cam, substantially as set forth.

2. The combination in a quick-loading machine-vise of the base or body, the fixed jaw mounted thereon, the movable jaw, the slide on which the movable jaw is mounted, a cam-lever for opening and closing the jaws, a part having a shoulder on which said cam-lever

operates and means for adjusting said shoulder part, substantially as set forth.

3. The combination in a quick-loading vise of the base-plate, the stationary block portion 4 carrying the fixed jaw, the sliding bar 5 lying directly on said plate passing through a guide-opening in the part 4, and carrying the movable jaw, a cam-lever mounted on the bar, an adjustable shoulder part mounted on the block 4 on which the cam is adapted to operate, and the plate overlaying the cam, substantially as set forth.

4. The combination in a quick-loading vise, of the base-plate 1, the stationary part 4, the sliding bar 5 lying directly on the base-plate and passing through a guiding-opening in the stationary part 4, the fixed jaw mounted on said stationary part 4, the movable jaw mounted on said sliding bar 5, the cam-lever adjustably mounted on the bar 5, a shoulder part on which the cam-lever is adapted to operate adjustably mounted on the part 4, substantially as set forth.

In witness whereof we have affixed our signatures, in presence of two witnesses, this 2d day of April, 1902.

JOHN W. CRIPPEN.  
HENRY F. KELLEMAN.

Witnesses:

E. WILLARD JONES,  
H. LAURENCE WHITE.