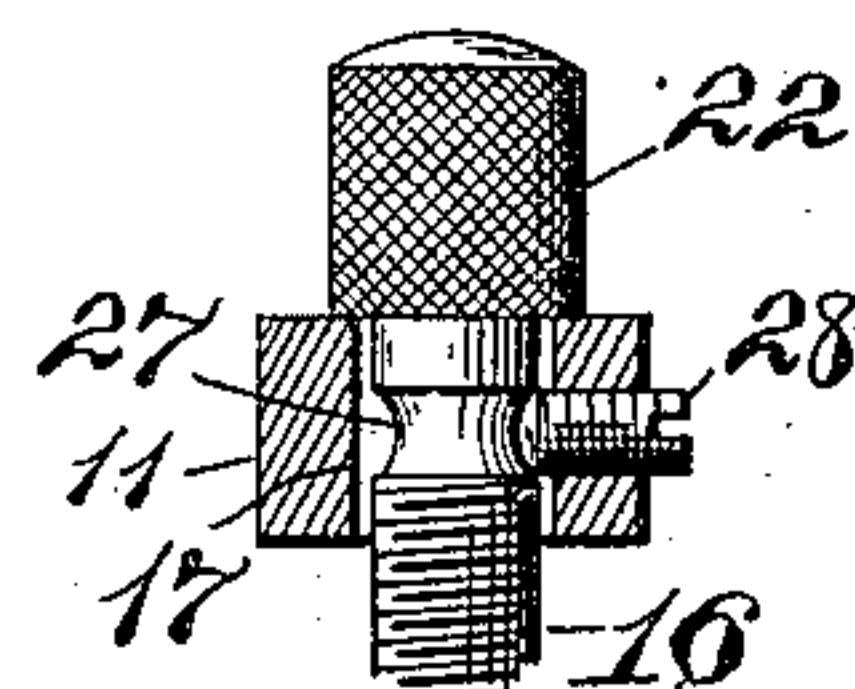
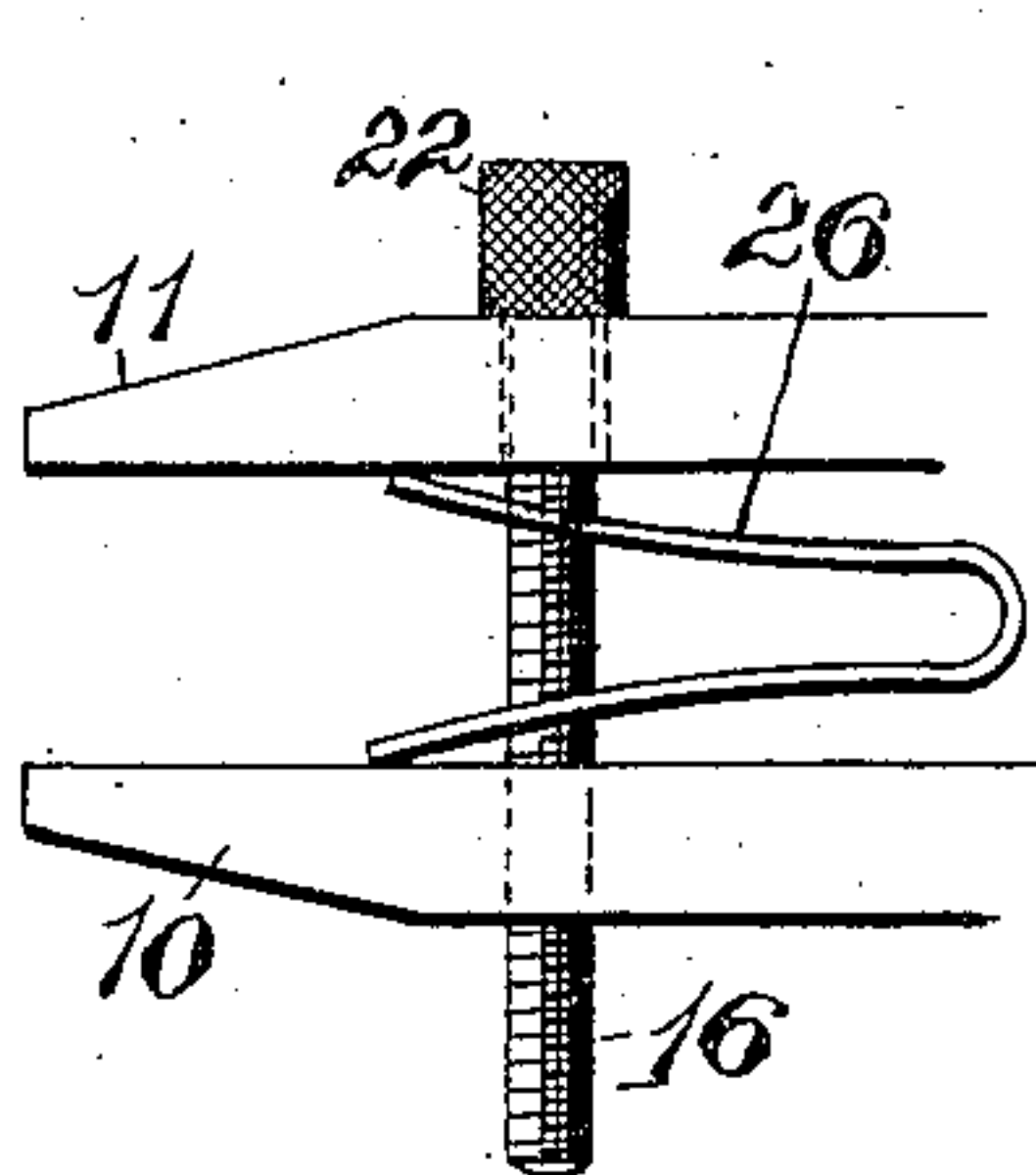
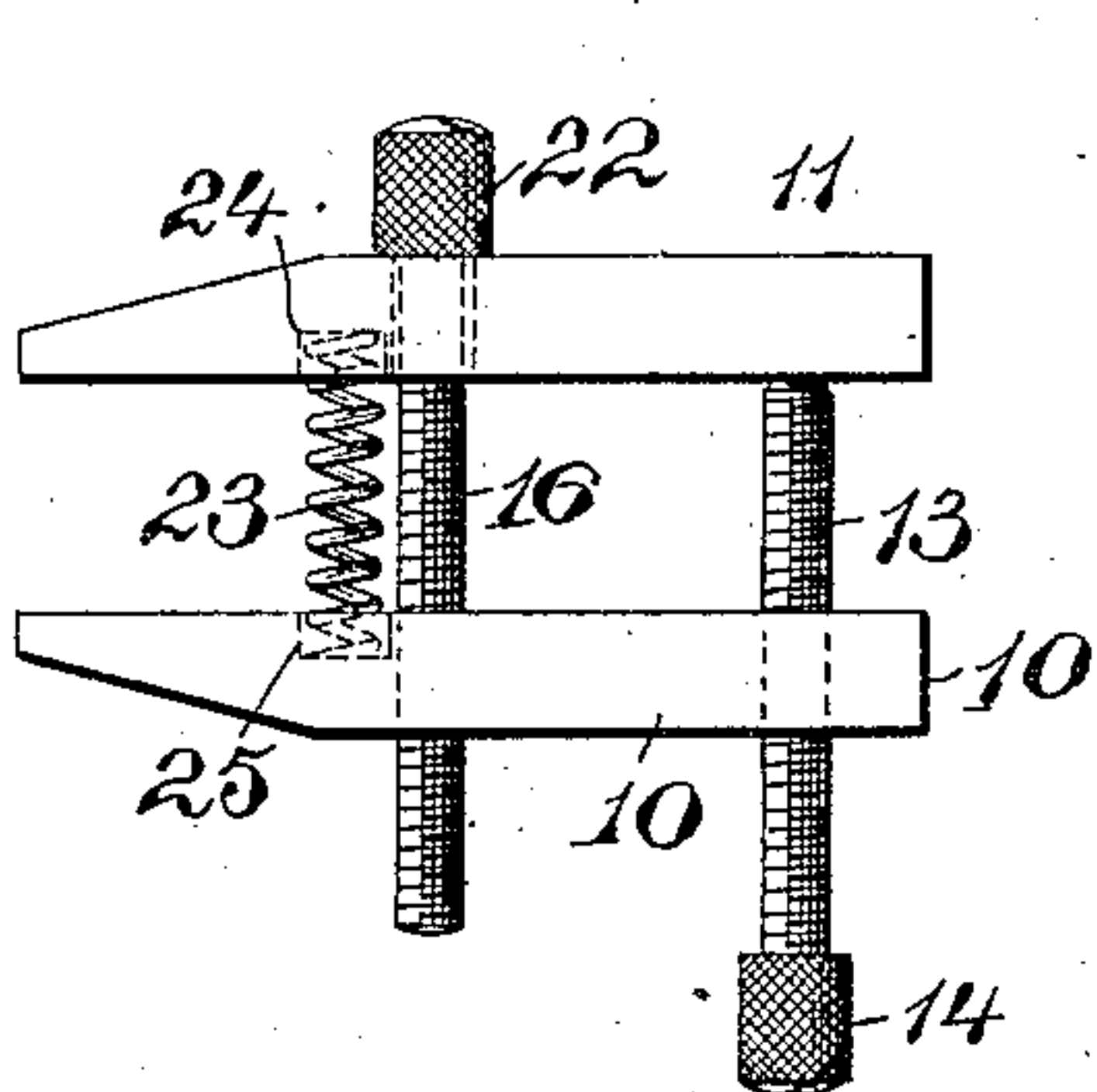
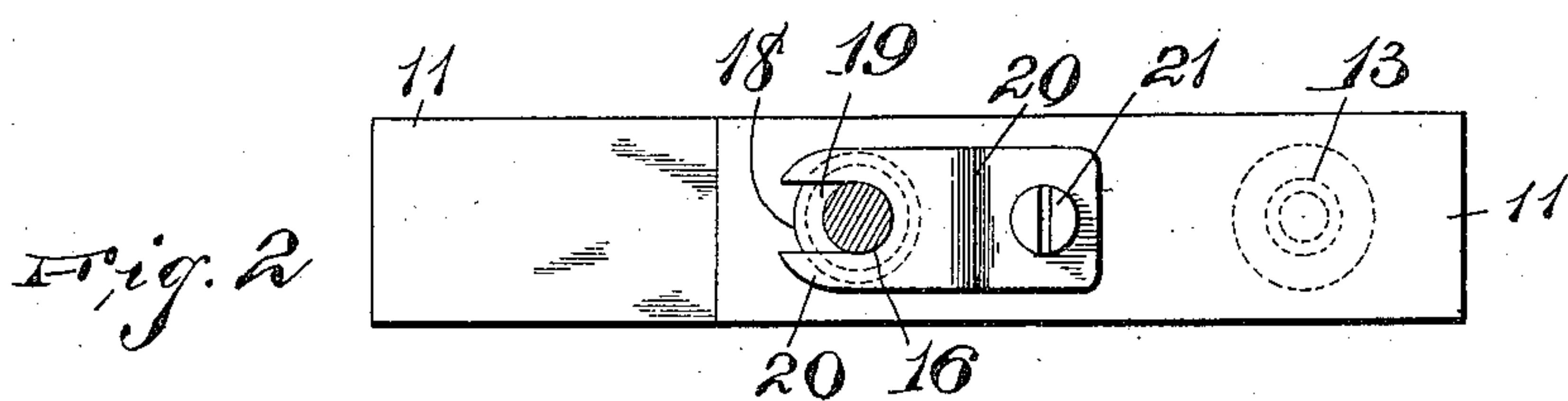
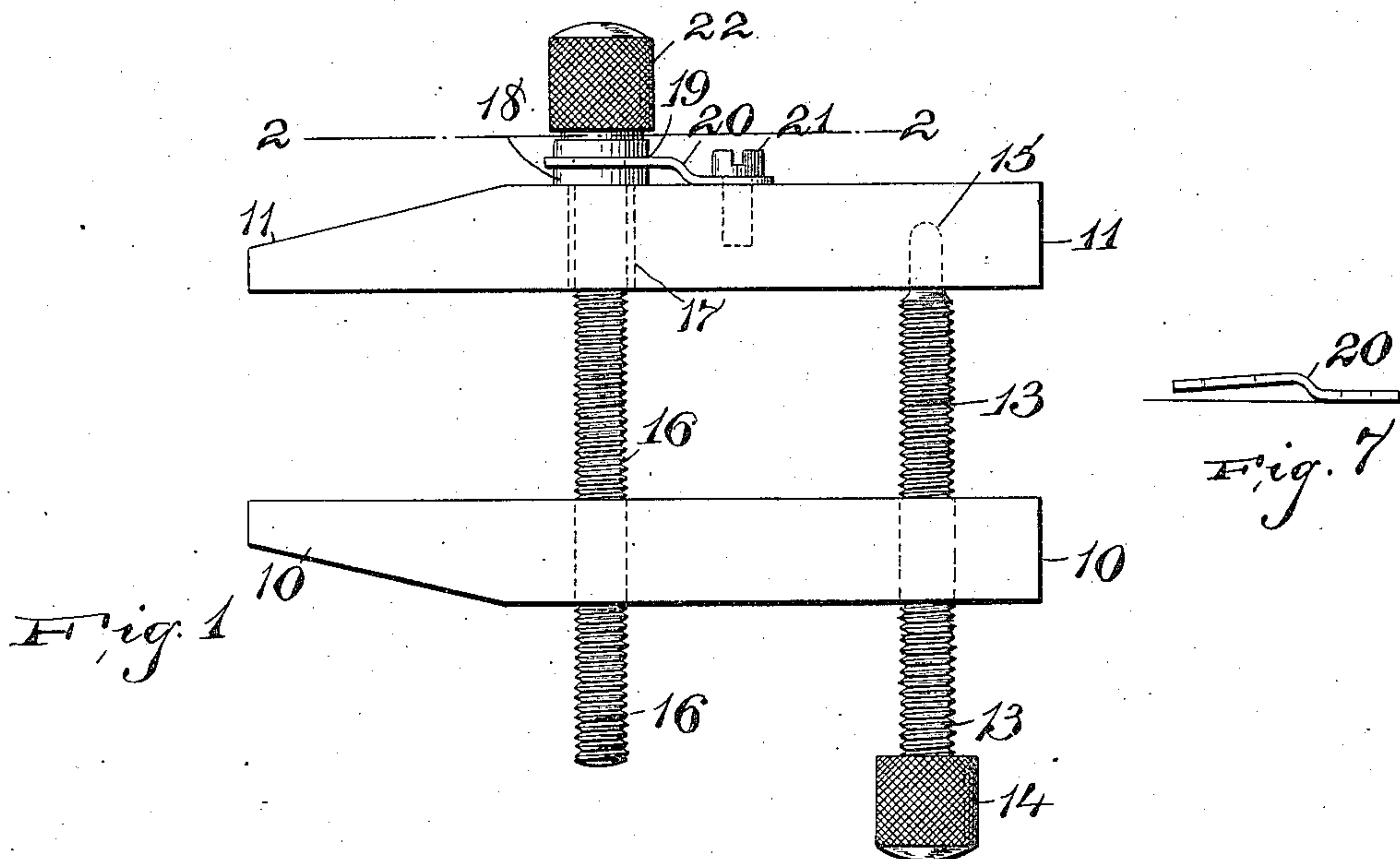


No. 876,908.

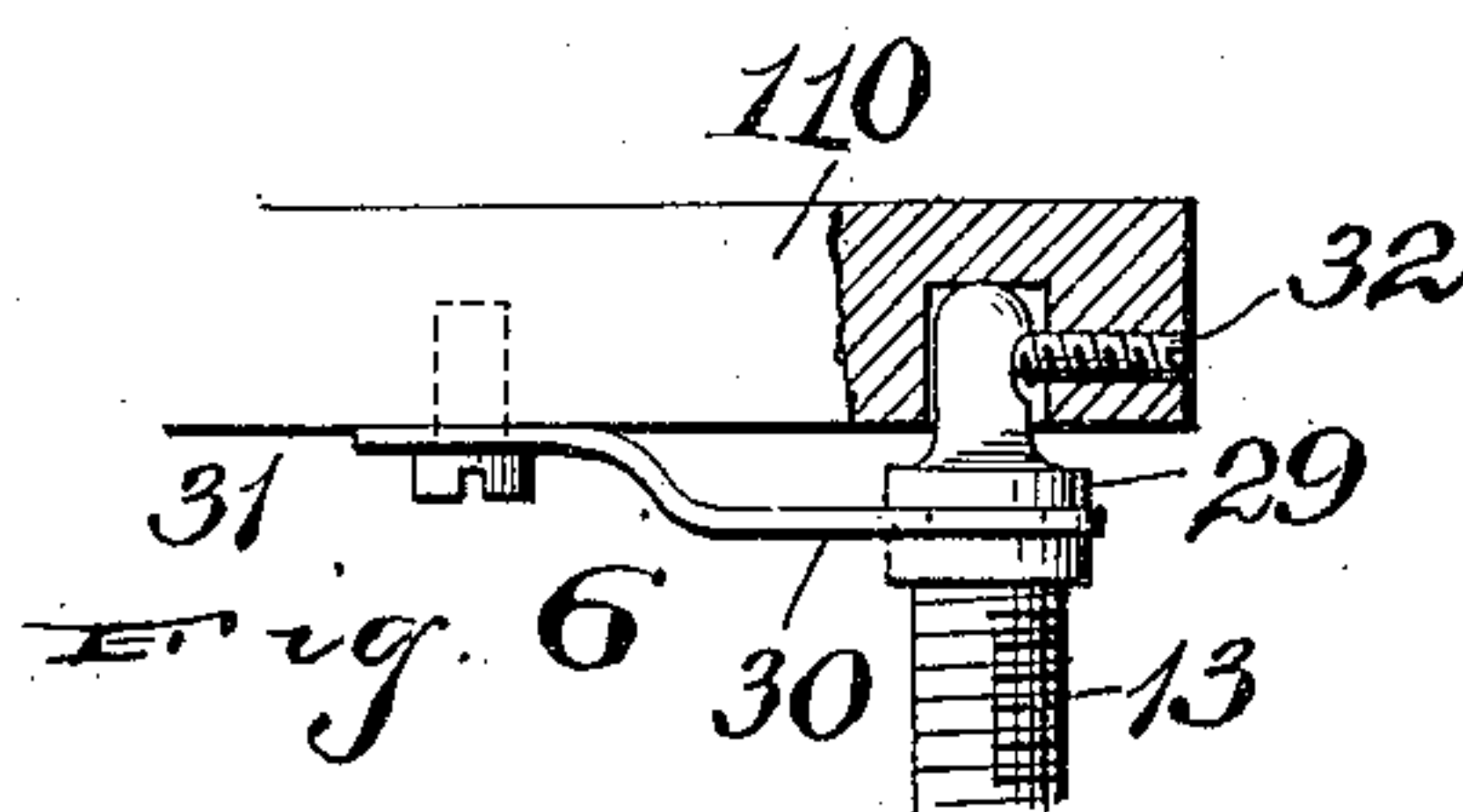
PATENTED JAN. 14, 1908.

L. LJUNGLOF.  
CLAMP.

APPLICATION FILED MAY 9, 1907.



WITNESSES:  
E. A. Pell  
J. A. Rogers.



INVENTOR  
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# UNITED STATES PATENT OFFICE.

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## CLAMP.

No. 876,908.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed May 9, 1907. Serial No. 372,827.

*To all whom it may concern:*

Be it known that I, LUDVIG LJUNGLOF, a subject of the King of Sweden, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Clamps; 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, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to a clamp, and is designed for a clamp that is used by carpenters, machinists, and in similar trades, and is designed to hold articles by means of a pair of parallel bars which are actuated by screws, and this invention is designed to provide a clamp, of this kind, with means for normally tending to hold the jaws apart, as far as permitted by the screws, and thus prevent the jaws falling together on the holding end, and maintains them so that a great deal of time is saved and the clamp is used with more facility.

The invention is illustrated in the accompanying drawing, in which

Figure 1 is a side view of a clamp with my improved device, and Fig. 2 is a section on line 2, 2, in Fig. 1. Figs. 3 and 4 are modified forms showing different kinds of springs installed in the clamp, and Fig. 5 is still another modification. Fig. 6 is a modification showing the attachment secured to the upper jaw of the clamps, but being secured to the screw in the rear of the clamp to cause a spring action of the holding end of the jaws to throw them apart. Fig. 7 is a detail view of the spring shown in Fig. 1 when it is removed from the clamp.

When clamps are used without the device shown herein, it is necessary to hold the jaws apart, on their clamping ends, while inserting an article between them, as one of the jaws is in sliding relation with the screw next the clamping ends, and there is nothing to prevent the jaws falling together. In the case of very small clamps, such as machinists use, it is inconvenient to hold one, two or three elements together with one hand and insert them in the clamp, and find it necessary to hold the clamp jaws apart, and it is to obviate

such difficulties that the present improvement has been made.

In the drawings I show a pair of parallel clamping bars 10 and 11 which have the usual screw 13 with a finger piece 14 on one end and bearing on the other end, 15, to force the jaws apart when the screw is operated. Near the other and holding end of the clamping bars is a screw 16 that fits in a screw-threaded perforation in the bar 10 and is arranged in sliding relation to the bar 11, passing loosely through a perforation 17 in the bar. The screw 16 has a collar 18 on the top thereof which bears on the top of the bar 11, and has a slotted portion 19 into which fits a plate 20 which preferably has a slight spring action and is held by a screw 21. A finger piece 22 serves to operate the screw 16. It will thus be seen that while it has a slight action, due to the spring of the plate 20, the jaw 11 will be held in the same constant relation with the finger piece 22, in fact with the screw 16, and no matter what relation the bars 10 and 11 bear to each other, they will be normally held apart and are ready to grasp an article to be clamped at any time they are picked up.

If desired, I can install, instead of the plate 20, a spring 23 setting in recesses 24 and 25 in the plates 11 and 10, respectively, this spring performing the same service, by forcing the jaws normally apart, that is furnished by the plate 20 in Fig. 1. If desired, I may substitute a spring 26, as in Fig. 4, this providing a cheap structure, and one that is positive in its action.

In Fig. 5 is shown still another modification, the view showing a cross-section through the bar 11, and in this structure I form the screw 16, near its upper end, with an annular groove 27, and a screw 28 passes through one side of the bar 11 and has its end engage this screw 27, so that the clamping bar 11 is always held up on one end of the screw 16.

In Fig. 6 I show a device attached to the top end of the screw 13 and bearing on the upper bar 10. The screw 13 has a collar 29 which is slotted, and a spring 30 has a forked end fitting in the collar, and a screw 31 to secure it to the upper jaw 11. A screw 32 can be screwed into the back of the jaw to prevent that end of the jaw from riding away from the screw, but the screw 32 bears lightly on the screw 13 so as not to interfere with its



turning, the end of the screw 13 thereby becoming a fulcrum for the jaw in its spring action.

In Fig. 7 I show a detail of the spring 20 when it is removed from Fig. 1, which shows that the spring 20 is made in the form shown in Fig. 7, indicating that there is a constant spring action when the spring is straightened out as in Fig. 1, the plate therefore not only holding the jaw up rigidly, but holding it up tightly by a spring action, and thereby showing that the jaw has a little play on the screw.

These devices are positive in their action, and all tend to produce the same result, that is to hold the jaws 10 and 11 apart, on their clamping ends, as far as permitted by the location of the screws, and the clamping end of the bar 11 will not fall down on the screw 16, as it will do in the ordinary form of clamp. The various devices shown herein also cause a positive joint or contact between the rear end of the jaw 11 and the end of the screw 13.

Having thus described my invention, what I claim is:—

1. A clamp comprising a pair of parallel bars, a pair of screws, both screws being in threaded engagement with one bar, and one

screw bearing on the abutting face of the second bar, the second screw passing loosely through the second bar and engaging the opposite side of the second bar, whereby the second bar is caused to tilt in one direction by the action of the screws, and a spring bearing on one of the screws, and the second bar eccentric thereto tending to force a tilting of the second bar in opposition to the action of the screws.

2. A clamp comprising a pair of parallel bars, a screw passing through one bar and bearing on the abutting face of the second bar, a second screw passing through one bar and being in screw engagement therewith and being arranged in sliding relation to the second bar, a collar on the outside of the second bar, and a plate secured to the second bar, the second screw having an annular groove with which the plate is in engagement.

In testimony that I claim the foregoing, I have hereunto set my hand this 4th day of May, 1907.

LUDVIG LJUNGLOF.

Witnesses:

WM. H. CAMFIELD,  
E. A. PELL.