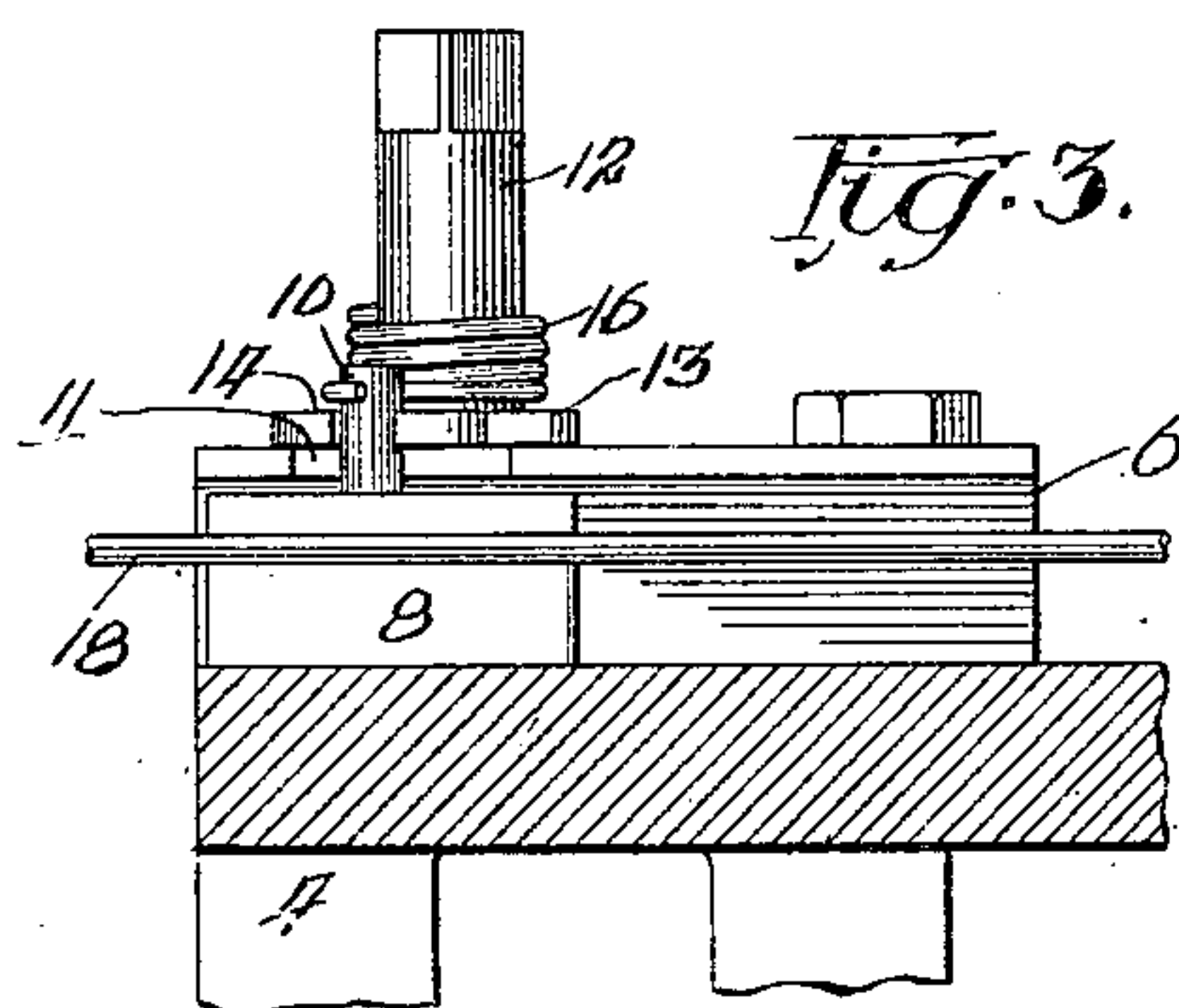
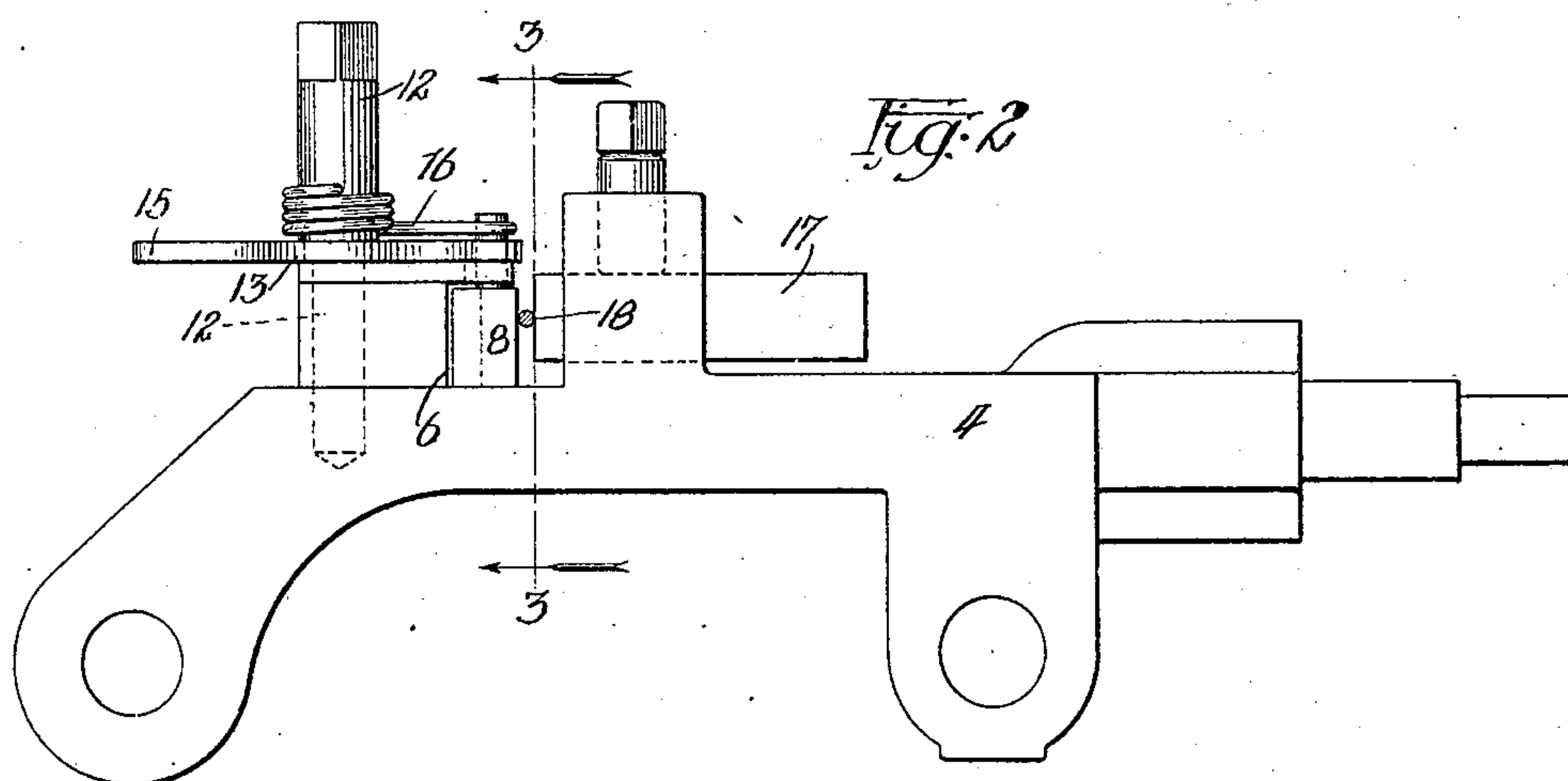
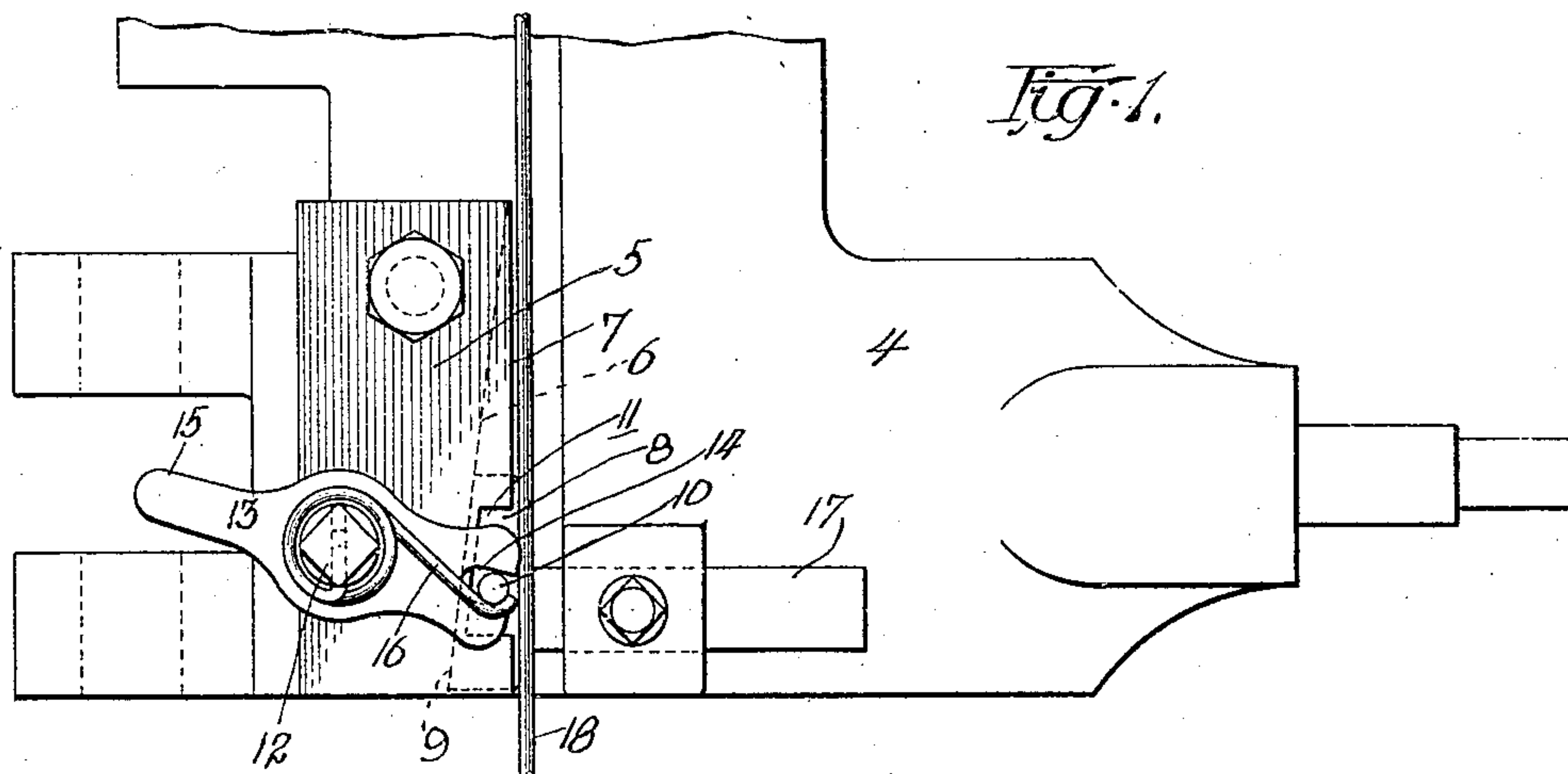


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Witnesses:

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UNITED STATES PATENT OFFICE.

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WIRE-CLAMPING MECHANISM.

969,546.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, EDWARD LEWIS, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, and FRANK H. NULLMEYER, a citizen of the United States, residing at Struthers, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Wire-Clamping Mechanism, of which the following is a specification.

This invention relates to wire clamping mechanism used in connection with machines in which a certain amount of wire is fed in at each operation of the machine, as, for example, nail or staple forming machines.

The object of the present invention is to construct a wire clamping mechanism which will be positive and quick of action; which will be extremely simple and durable of construction; which will accommodate itself to the wear that is bound to occur on the gripping surface; and which will be capable of attachment and operation with any form of machine designed, without a rearrangement of any of the parts of the feed mechanism.

The invention consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a front view of the device of the present invention in operative position; Fig. 2, a plan view of the parts shown in Fig. 1; and Fig. 3, a section taken on line 3—3 of Fig. 2.

As shown in Fig. 1, the device is attached to a casting 4 which, in the form shown, is a portion of a nail machine. This particular form of casting, however, is shown merely for the purpose of illustrating some form of mounting for the clamping device, and it is not desired in any way to limit the invention to use with a nail machine. The clamping mechanism consists of a body portion 5 adapted to be fixedly secured upon a suitable mounting. The body portion is provided with a guideway 6 formed in one of the faces thereof, and said guideway is of beveled or tapered formation as indicated at 7.

Traveling in the guideway 6 is a movable clamping member 8, which has one of its faces 9 beveled at an angle to correspond to the bevel of the guideway 6; and its oppo-

site face extends parallel with the wire and forms a gripping surface which impinges against the wire when the movable clamping member is moved to proper position. Affixed to the clamping member is a pin 10 which lies within a recess 11 formed in the body portion 5. Pivotaly mounted upon a stem 12 affixed in the body portion is a lever 13 having a forked end 14 and a handle 15. Attached to the pin 12 is a spring 16 which, after being coiled around the stem 12, extends forward and bears against the under side of the pin 10 and holds the clamping member 8 upward under spring tension. Attached to a suitable support is a fixed clamping member 17, which may be of the form shown or of any other well known and suitable construction; and lying in a position between the adjacent faces of the fixed and the movable clamping member is a wire 18 which is adapted to be impinged by the clamping members.

The operation is as follows: When the handle 15 of the lever 13 is raised upward, the lever will be swung around the stem 12 as a pivot and the forked end will be thrown downward, and as the forked end is in engagement with the pin 10 on the movable clamping member 8, such movement will carry with it the movable clamping member, and because of the beveled or tapered formation of the guideway 6 and the corresponding taper on the face 9 of the sliding member, the carrying downward of the movable member will draw it inward, causing the gripping surface thereon to move away from impingement with the wire. This will allow the wire to be drawn forward into the position desired, and, when a sufficient quantity of wire has been thus fed, the operator will release the handle 15 and the spring will act to throw the forked end upward, carrying with it the movable clamping member. As the clamping member 8 moves up in the guideway 6, the tapered formation of said guideway will tend to force the clamping member outward and toward the fixed clamping member. This will result in the wire becoming impinged between the adjacent faces of the fixed and the movable clamping members, and the wire will be clamped in such a manner that any additional strain placed thereon will result in moving the clamping member 8 fur-

ther up the guideway and forcing it into tighter impingement against the wire; thus the more strain that is placed on the wire the tighter it will be clamped, making any further movement of the wire impossible after the handle 15 has been released by the operator.

A wearing away of the acting surface of the movable clamping member will merely result in the member moving a trifle further up the guideway before it becomes impinged against the wire, and will not impair in any way its effectiveness as a clamp.

We claim:

1. In a wire clamping mechanism, the combination of a fixed body portion having a tapered guideway formed therein, a movable clamping member slidable within said guideway and having one of its faces beveled to conform to the bevel of the guideway, and having one of its opposite faces extending in a plane parallel with the wire and forming a gripping surface adapted to be impinged against the wire, a fixed clamping member, and means for sliding the movable member up and down the guideway to move its clamping surface toward and from the fixed clamping member, substantially as described.

2. In a wire clamping mechanism, the combination of a fixed body portion having a tapered guideway formed therein, a movable clamping member slidable within the guideway and having one of its faces beveled to conform to the bevel of the guideway, and having one of its opposite faces extending in a plane parallel with the wire and forming a gripping surface adapted to be impinged against the wire, a pin on the movable clamping member, the fixed body portion having a recess in which said pin travels, a fixed clamping member, and means for sliding the movable clamping member up and down the guideway to move its clamping surface toward and from the fixed clamping member, substantially as described.

3. In a wire clamping mechanism, the combination of a fixed body portion having a tapered guideway formed therein, a movable clamping member slidable within said guideway and having one of its faces beveled to conform to the bevel of the guideway, and having one of its faces extending in a plane parallel with the wire and forming a gripping surface adapted to be impinged against the wire, a pin on the movable clamping member, the fixed body portion having a recess in which said pin travels, means for sliding the movable clamping member up and down the guideway to move its clamping surface toward and from the fixed clamping member, and means for

maintaining an upward spring tension upon the movable clamping member, substantially as described.

4. In a wire clamping mechanism, the combination of a fixed body portion having a tapered guideway formed therein, a movable clamping member slidable within said guideway, a pin on the movable clamping member, the body portion having a recess in which said pin travels, a fixed clamping member, an arm pivotally mounted upon a bearing secured to the fixed body portion, one end of the arm being forked to receive the pin, and the other end of the arm serving as a handle to be grasped in actuating the arm, and a spring secured to the bearing and extending forward and contacting the under surface of the pin, the movement of the arm in one direction forcing the movable clamping member toward the fixed clamping member, substantially as described.

5. In a wire clamping mechanism, the combination of a body portion having a guide-way therein, one wall of said guide-way having an angled face, a movable clamping member in said guide-way in the form of a block, having an angle face and a solid, flat, straight face, said movable clamping member lying to one side of the wire, a fixed clamping member lying to the opposite side of the wire, means for actuating the movable clamping member up and down the guide-way, the movement in one direction wedging the clamping member between the face of the guide-way and the wire, to clamp the wire between the fixed clamping member and the straight face of the block, substantially as described.

6. In a wire clamping mechanism, the combination of a body portion having a guide-way therein, one wall of said guide-way having an angled face, a movable clamping member in said guide-way in the form of a block, having an angled face and a solid, flat, straight face, said block lying to one side of the wire, a fixed clamping member lying to the opposite side of the wire, tension mechanism for actuating the movable clamping member in one direction, the angled faces cooperating during such movement to wedge the clamping member between the face of the guide-way and the wire and clamp the wire between the fixed clamping member and the straight face of the block, and means for returning the movable clamping member to normal position, substantially as described.

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Witnesses:

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