

No. 607,750.

Patented July 19, 1898.

W. H. JONES.
WIRE STRETCHER.

(Application filed May 6, 1898.)

(No Model.)

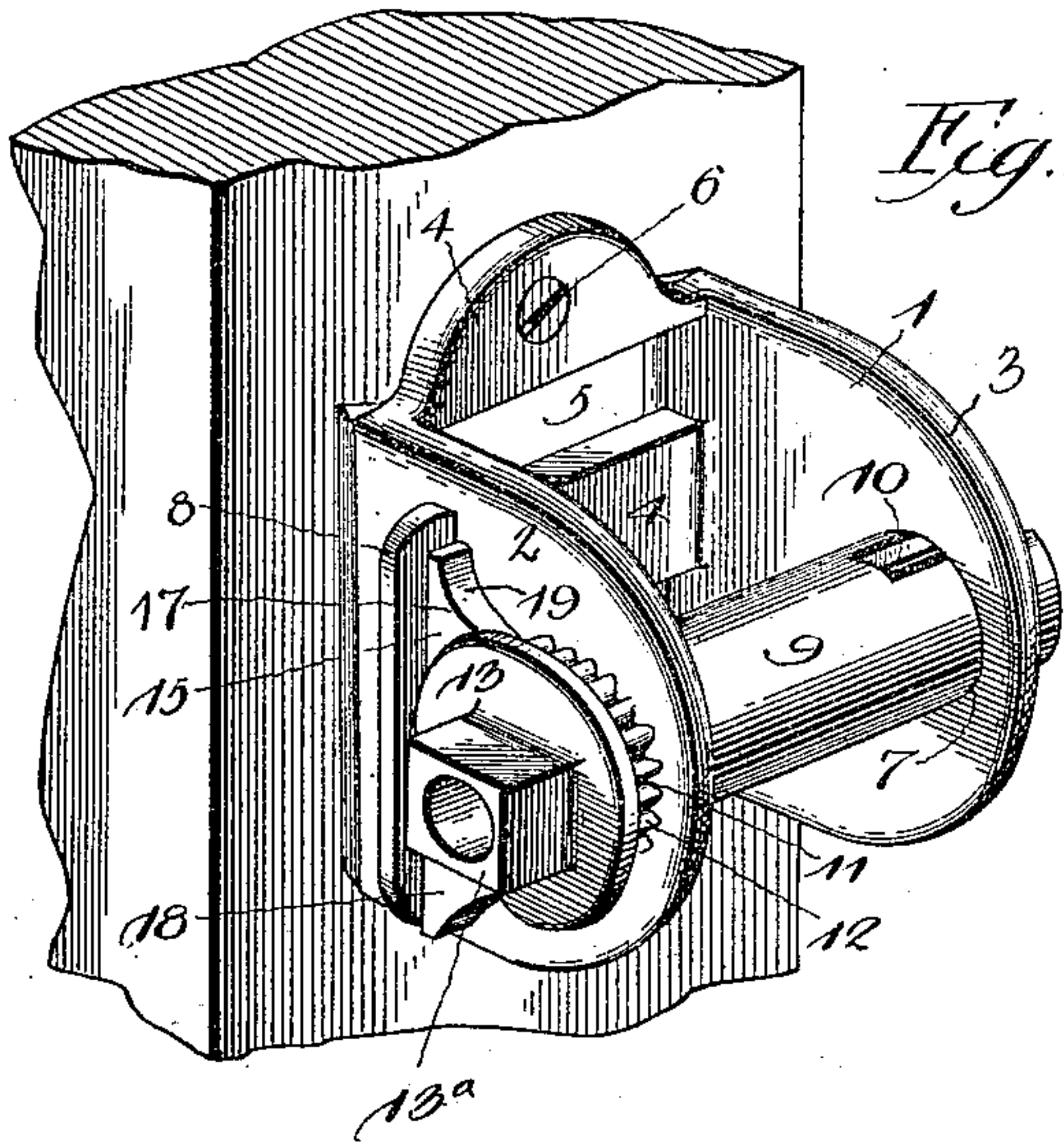


Fig. 1.

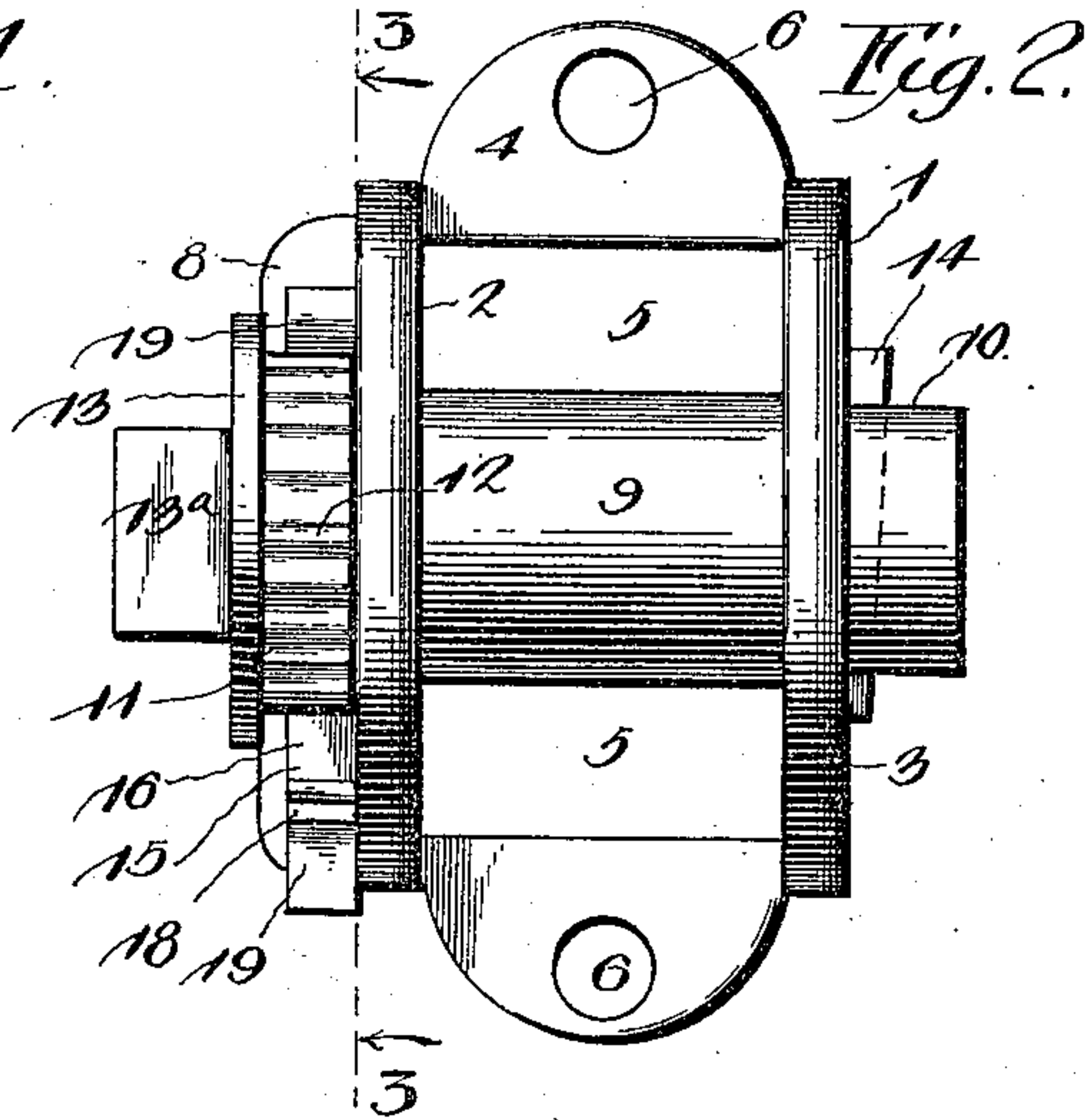


Fig. 2.

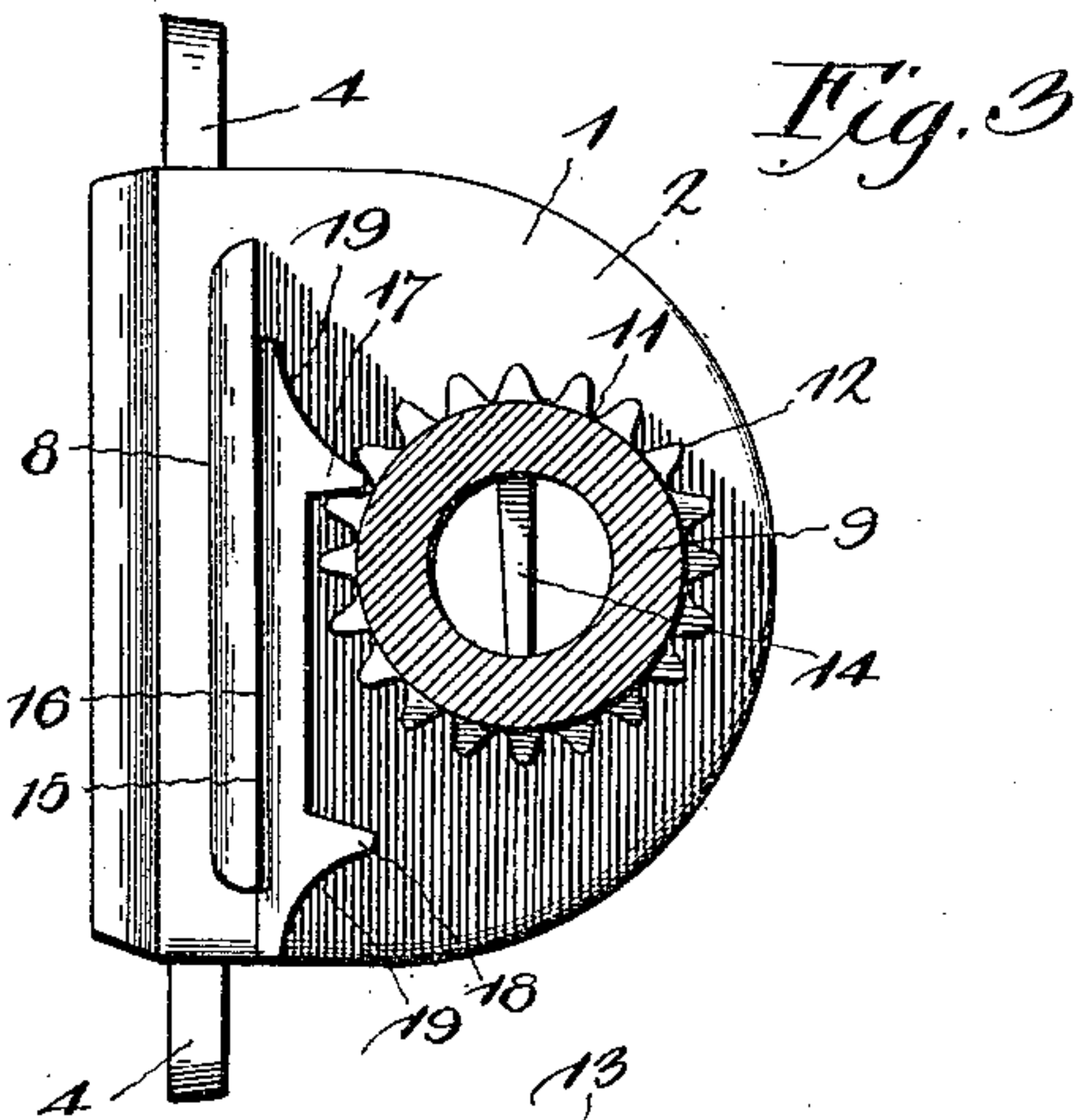


Fig. 3.

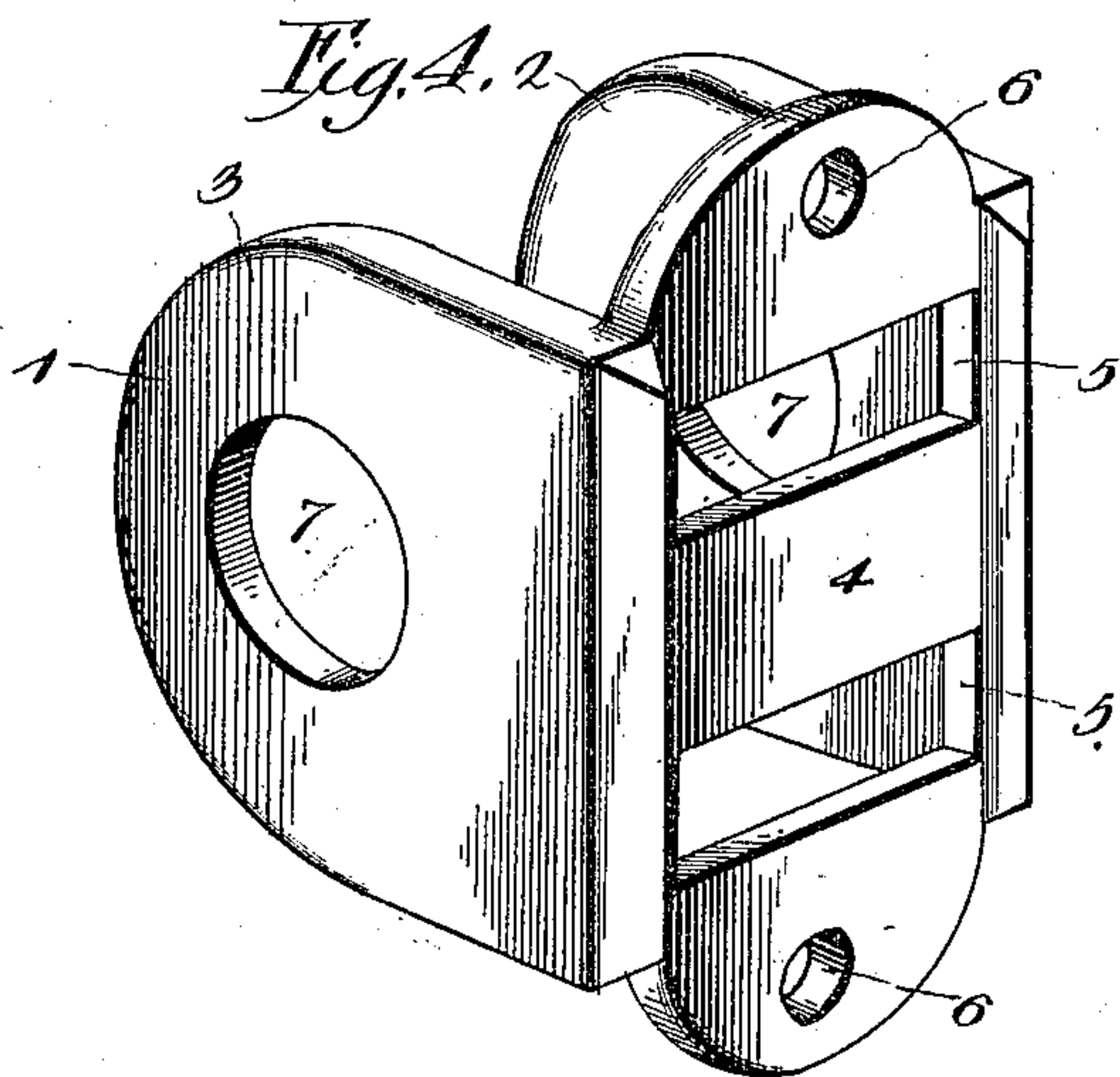


Fig. 4.

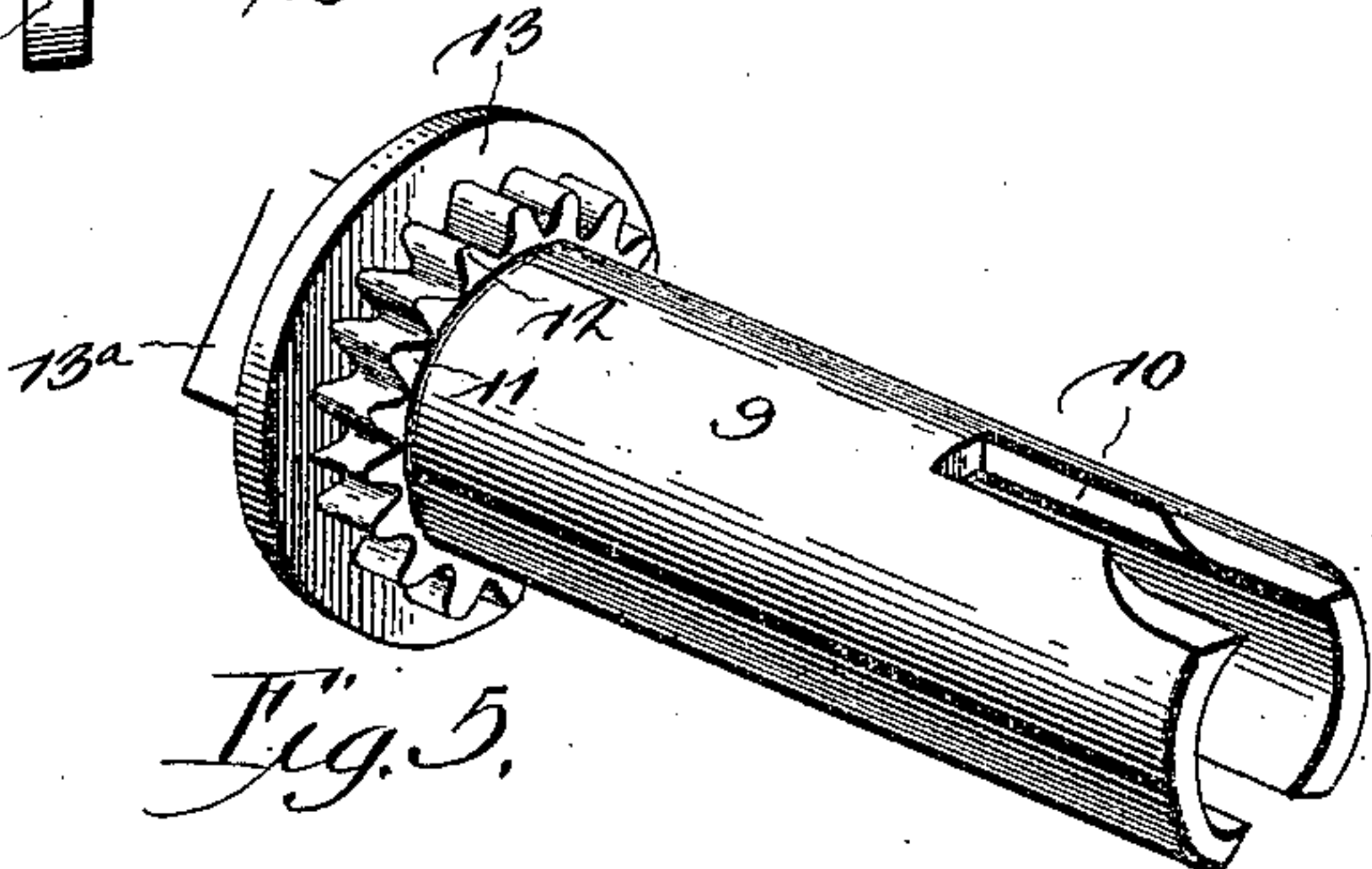


Fig. 5.

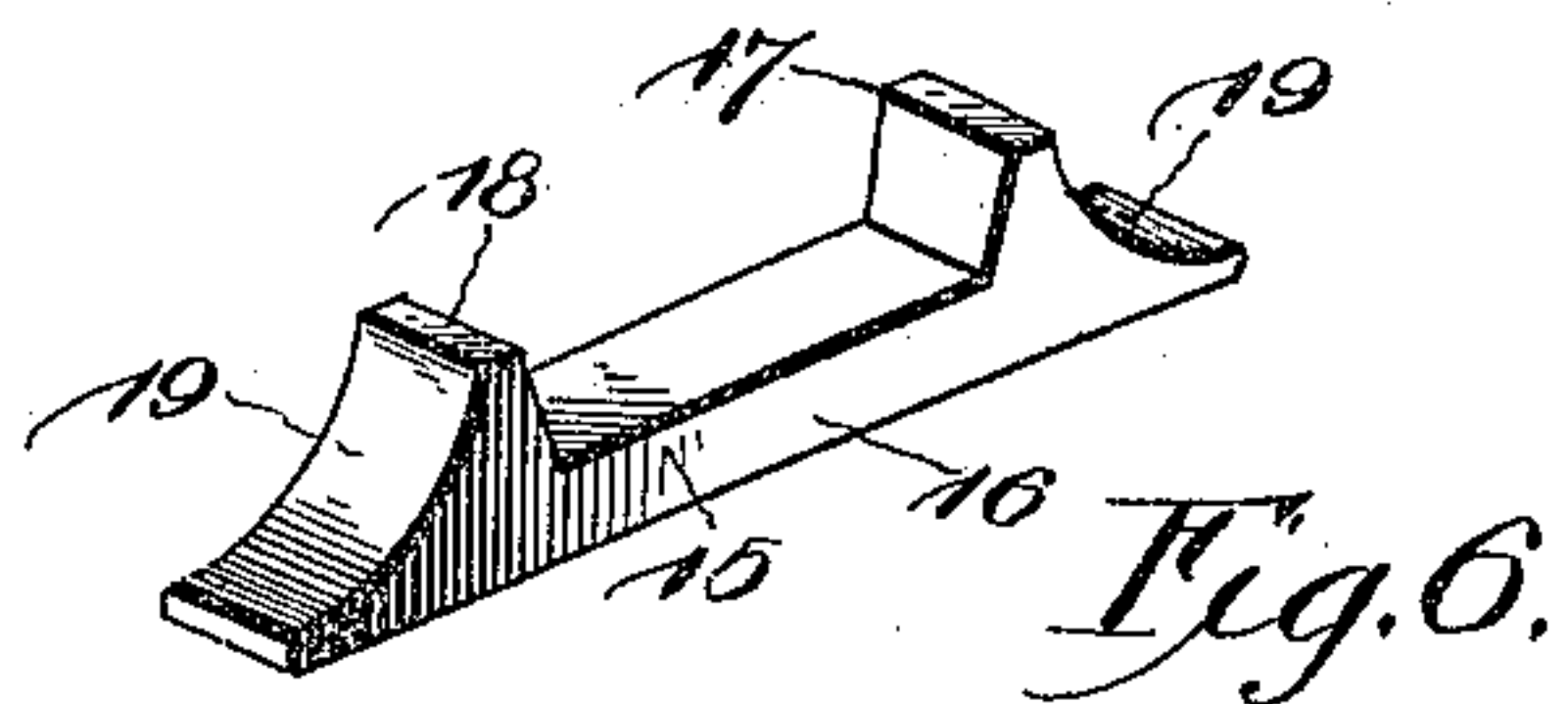


Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

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WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 607,750, dated July 19, 1898.

Application filed May 6, 1898. Serial No. 679,923. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. JONES, a citizen of the United States, residing at Liberty, in the county of Union and State of Indiana, have invented a new and useful Wire-Stretcher, of which the following is a specification.

My invention relates to improvements in wire-stretchers for use in connection with the posts and runners or strands of a wire fence; and the object in view is to provide an improved construction which is adapted for use advantageously in either of two positions in which it may be applied to a fence-post—that is to say, the device may be used in one position or inverted and applied in another position without affecting the efficiency thereof.

A further object of the invention is to provide an improved stretcher which shall be simple and durable in construction, efficient and reliable in operation, easy of application to a fence-post and of adjustment or control to take up the slack in a fence-wire, and cheap of manufacture.

With these ends in view the invention consists of a wire-stretcher comprising a bracket, a drum journaled in the bracket and provided with a notched rim having a series of radial teeth, and a double slidable pawl engaging loosely with the bracket and adapted to have one nose or the other in operative engagement with the radially-toothed rim of the drum, whereby the pawl is in operative relation to the drum without respect to the position in which the bracket may be applied and fastened to a fence-post.

The invention further consists in the novel construction and arrangement of parts, which will be hereinafter fully described and claimed.

To enable others to understand the invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of a fence-post with my improved wire-stretcher applied thereto. Fig. 2 is a front elevation, on an enlarged scale, of the improved stretcher. Fig. 3 is a vertical transverse section through

the stretcher on the plane indicated by the dotted line 3 3 of Fig. 2. Fig. 4 is a detail perspective view of the bracket. Fig. 5 is a like view of the rotatable drum, and Fig. 6 is a similar view of the double-acting pawl.

Like numerals of reference denote like and corresponding parts in each of the several figures of the drawings.

1 designates the frame of the structure, which is made in the form of a bracket and cast in a single piece of metal for simplicity and strength of construction and cheapness of manufacture. This bracket-frame consists of the side plates 2 and 3 and the back plate 4, said side plates being parallel to each other and at right angles to the back plate. In the back plate slots 5 are formed in the process of casting a bracket, and at its ends the back plate 4 has transverse holes 6, through which are passed bolts or screws for rigidly fastening the bracket to a fence-post. In the parallel side plates 2 3 are formed circular openings 7, which are in alinement with each other and constitute the bearings for a rotatable drum forming a part of the structure, and on the outside or exposed face of the side plate 2 is a vertical rib or flange 8, which protrudes a suitable distance beyond the plate 2 and serves as a guide for the double-acting pawl, which is adapted to engage with a part of the rotatable drum to hold the latter normally in a fixed position and prevent it from rotating under the strain or pull of the fence strand or runner, which is attached to and coiled on said drum.

The drum 9 is in a single piece of metal and it is of cylindrical form. The diameter of the drum is such as to insure its loose fitting in the bearing-openings 7 of the side plates 2 3, and said drum is thus adapted to rotate freely in the plates when force is applied thereto by a crank, a wrench, or other suitable implement for the purpose of coiling the strand or runner on the drum and taking up the slack therein. At one end this drum is provided with an elongated slot 10, which is formed transversely in the drum and extends from one end thereof inwardly toward the imperforate part of the drum for a suitable distance. Near its other end the cylindrical drum is

formed with an integral notched rim 11, the notches in which form a series of radial closely-disposed teeth 12. The drum is furthermore provided with an imperforate annular flange 13, which is situated outside of the toothed rim 11 and is of a diameter greater than said toothed rim, so that the edge of the flange protrudes beyond the circumference of the rim, and this imperforate protruding flange 13 serves as a retainer for the double pawl, which is fitted loosely to the bracket and is adapted to slide or play freely therein when lifted by hand for disengagement from the drum preparatory to rotating the latter on its axis to take up the slack in the fence wire or runner. Beyond the annular imperforate flange 13 of the drum is a polygonal stud 13^a, to which may be easily applied a wrench or other implement for the application of power to the drum sufficient to place the fence-wire under tension; but this particular construction of the drum for receiving the implement is not essential, as equivalent means may be provided for the reception of the operating device.

The toothed rim, the annular flange, and the polygonal stud are formed on the cylindrical drum at the end opposite to the longitudinal slot 10 therein, and said drum is adapted to be easily and quickly placed in the bracket by sliding the same endwise through the bearing-openings 7 in the plates 2 and 3. The slotted end 10 of the drum is adapted to project beyond the plate 3, while the toothed rim 11 lies close to or against the plate 2 of the bracket. To hold the drum attached to the bracket and prevent the same from having endwise movement, while allowing free rotation to said drum, I employ a key or pin 14, which passes transversely through the slot 10 in the drum outside of the bracket-plate 3. This key or pin may be tapered slightly, so as to wedge itself in the slotted end of the drum; but the particular means for fastening the key in place is not material.

One of the important features of my invention resides in the double pawl 15, which is slidably fitted to the bracket to travel against the rib or flange 8 thereof and to be held in place by the protruding annular flange 13 of the drum, said pawl arranged to engage with the radially-toothed rim 11 of the drum without respect to the position in which the stretcher may be attached to the fence-post. This double pawl is made in a single piece or casting, and it consists of a straight shank or bar 16, a lip or nose 17 at one end, and another lip or nose 18 at the opposite end. The lips 17 18 are of corresponding form and size, so that the pawl operates efficiently in checking the rotation of the drum when either lip engages with the toothed rim, and the ends of the pawl, beyond the working edges of the lips thereof, are preferably beveled and curved, as at 19, to provide finger-rests against which the operator may press to release the pawl from engagement with the

drum preliminary to rotating the latter in the practical service of the structure. The straight shank or bar 16 of the pawl is fitted loosely against the vertical flange or rib 8 of the bracket, and the pawl thus occupies a position in the angle or corner formed by the side plate 2 and the flange 8. In assembling the parts of the structure into operative relation the pawl is first fitted in the angle formed by the side plate 2 and the flange 8, the slotted end of the drum is thrust through the openings in the plates to bring the toothed rim 11 in the vertical plane of the pawl and cause the imperforate protruding flange 13 to bear against the outside of the pawl, and the key or pin 14 is thrust through the slotted end of the drum. It will thus be seen that the pawl is confined loosely in place between the bracket and drum and that it is retained against displacement by the flange 8, the plate 2, and the annular flange 13 of the drum. The lips 17 18 of the pawl lie on opposite sides of the horizontal axis of the drum, and said pawl is adapted to drop or fall by gravity, so as to have its uppermost lip drop into engagement with one of the teeth of the notched rim 11. The lips of the pawl are spaced apart a distance greater than the diameter of the notched rim, and the pawl is thus adapted to have a certain amount of vertical play with respect to the drum, whereby the pawl may be moved by hand to a position where both of the lips thereof are free from engagement with the toothed rim, thus permitting the wrench or implement to turn the drum without hindrance from the pawl; but when the drum has been rotated to take up the slack in the wire and the pawl is released it drops or falls automatically into engagement with one of the teeth of the rim 11, and thereby checks or holds the drum from rotation under the strain or pull of the strand or runner which is coiled thereon.

I attach special importance to the construction of the drum with the radially-toothed rim and to the slidable pawl having working lips at its opposite ends and adapted to engage with said toothed rim of the drum. This construction and adaptation of parts is important in my invention, because the stretcher may be applied in either of two positions on the fence-post. It is evident that the device may be attached to the fence-post to bring the pawl to a position where its lip 17 is uppermost, or the device may be inverted and the pawl made to assume a position where the lip 17 is at the lower end thereof and the lip 18 is at its upper end. In either of these positions of the bracket and drum the pawl acts efficiently to restrain the drum from rotation, and by reason of such construction and operation of the parts the operator or builder is not required to exercise an undue amount of care in applying or fastening the stretcher to a fence-post. My improved bracket may thus be readily and quickly applied to the post, on which it is firmly held by the bolts or screws,

and the device is efficient and reliable in operation, as well as meeting the demands of the trade for a cheap construction.

5 It is evident that changes in the form and proportion of parts may be made by a skilled mechanic without departing from the spirit or sacrificing the advantages of the invention.

Having thus described the invention, what I claim is—

10 1. A reversible wire-stretcher consisting of a frame or bracket, a radially-toothed drum journaled therein, and a double slidable pawl confined within the bracket for engagement with said toothed drum in either of two positions in which the stretcher may be applied, 15 substantially as described.

2. A reversible wire-stretcher consisting of a bracket or frame, a take-up drum journaled therein, and provided with a radially-toothed 20 rim and with an imperforate flange which protrudes beyond said rim, and a double pawl slidably fitted to the bracket and held in place by said bracket and the flange of the drum, substantially as described.

25 3. A reversible wire-stretcher consisting of a flanged bracket, a flanged and toothed drum journaled therein, and a slidable pawl loosely fitted to the bracket and confined thereon by its flange and the flange of the drum, said 30 pawl provided with similar lips at its opposite ends, and having a limited vertical play with respect to the toothed section of the drum

for giving the pawl-lips sufficient clearance for the drum-teeth and enable the drum to rotate without hindrance from the pawl, substantially as described. 35

4. A wire-stretcher consisting of a bracket having a vertical flange or rib on the outside of one of its plates, a drum journaled in the bracket and provided with a toothed rim and 40 an imperforate flange which protrudes beyond said rim, and a slidable pawl provided at opposite ends with similar lips and fitted against the flange of the bracket to slide freely thereon, said pawl being confined in place by the 45 flange of the drum and the bracket, and the distance between the lips of said pawl being greater than the diameter of the toothed drum-rim, substantially as described.

5. A reversible wire-stretcher comprising a 50 bracket having a guide-flange on one side, a drum slotted at one end and provided near its other end with a radially-toothed rim, a key or pin passing transversely through the slotted end of the drum, and a double pawl 55 slidably confined between the bracket-flange and the drum, substantially as described.

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

WILLIAM H. JONES.

Witnesses:

J. H. BELL,

C. M. KITSELMAN.