

No. 744,406.

PATENTED NOV. 17, 1903.

B. C. RIBLET.
ROPE CLIP.

APPLICATION FILED DEC. 8, 1902. RENEWED OCT. 12, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

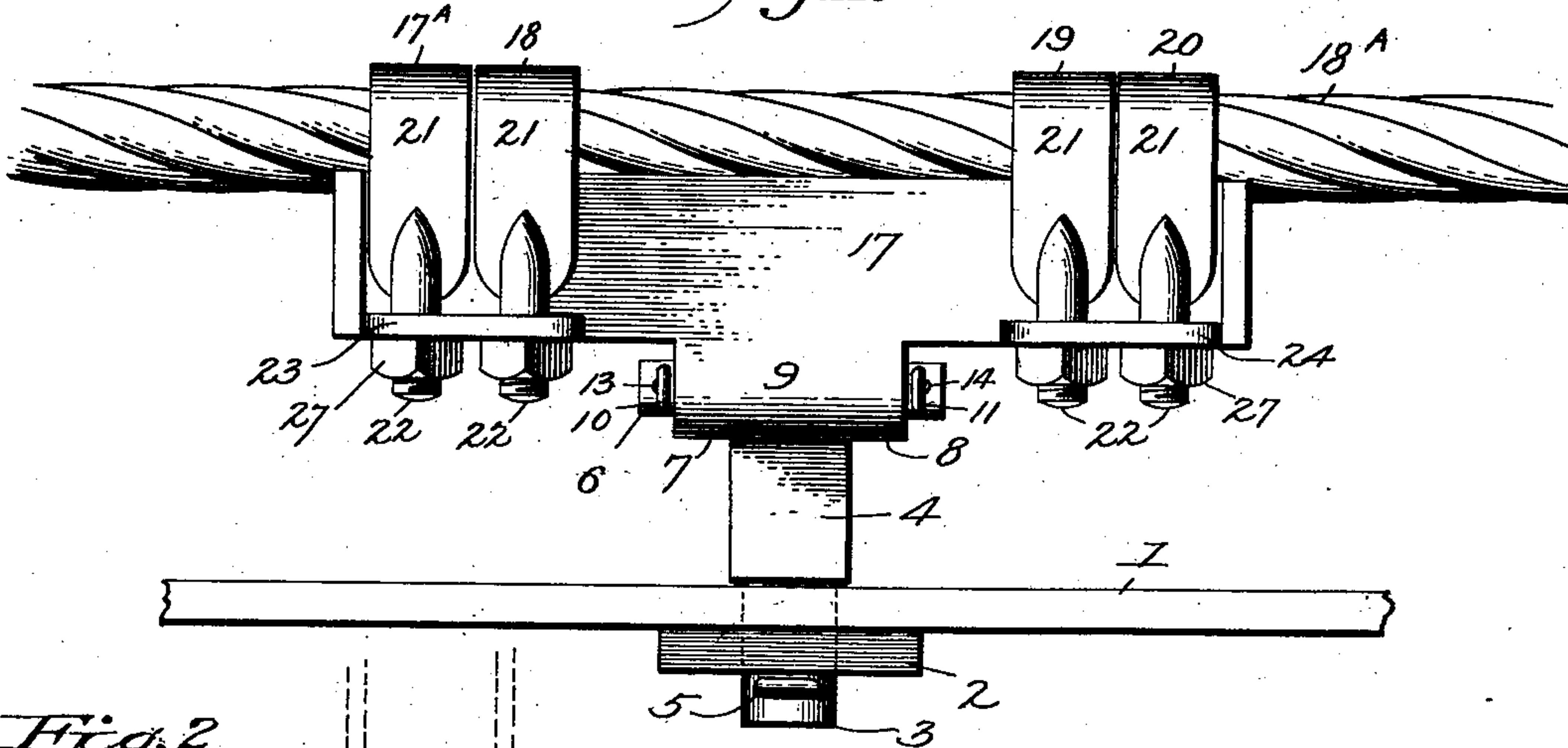


Fig. 2.

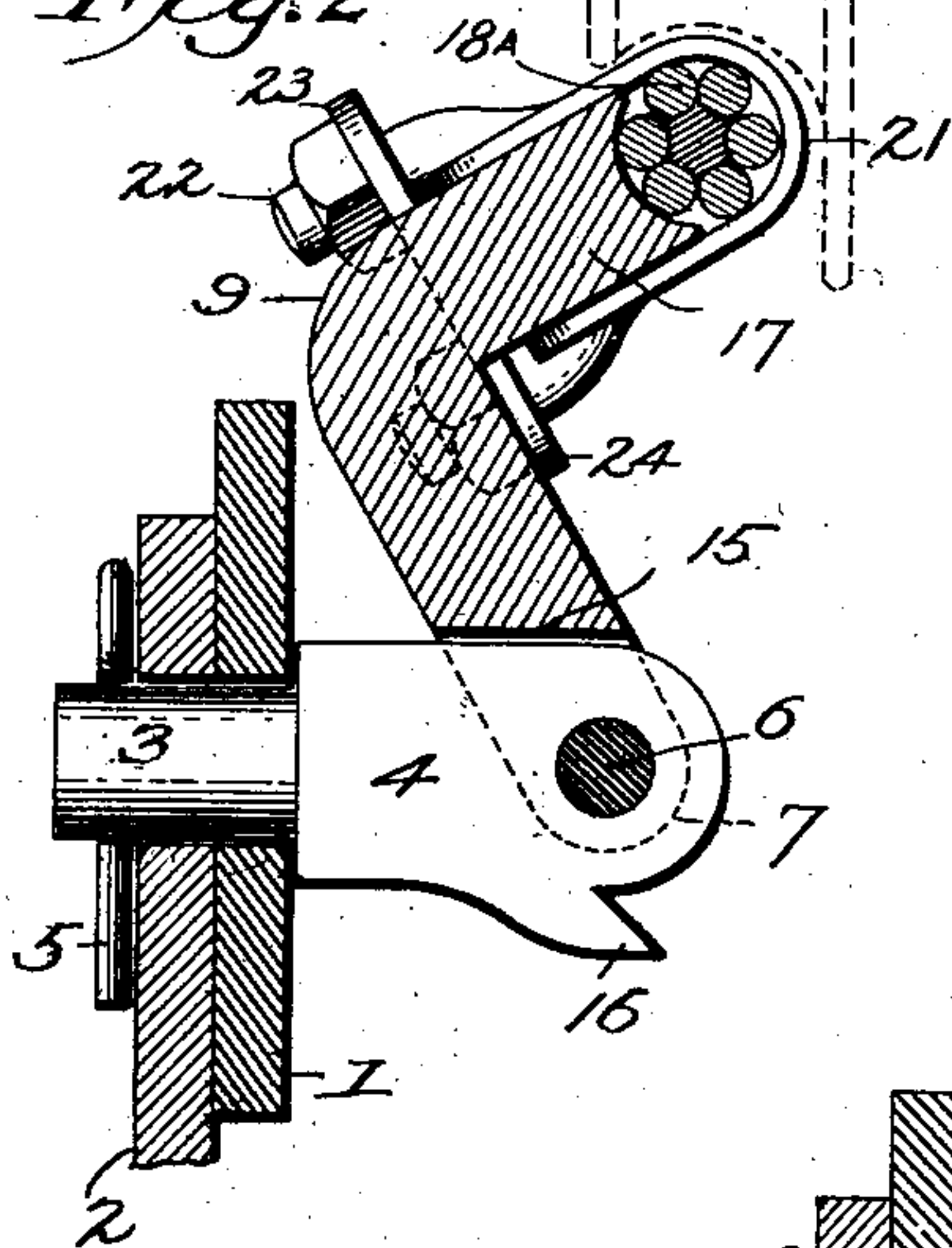


Fig. 3.

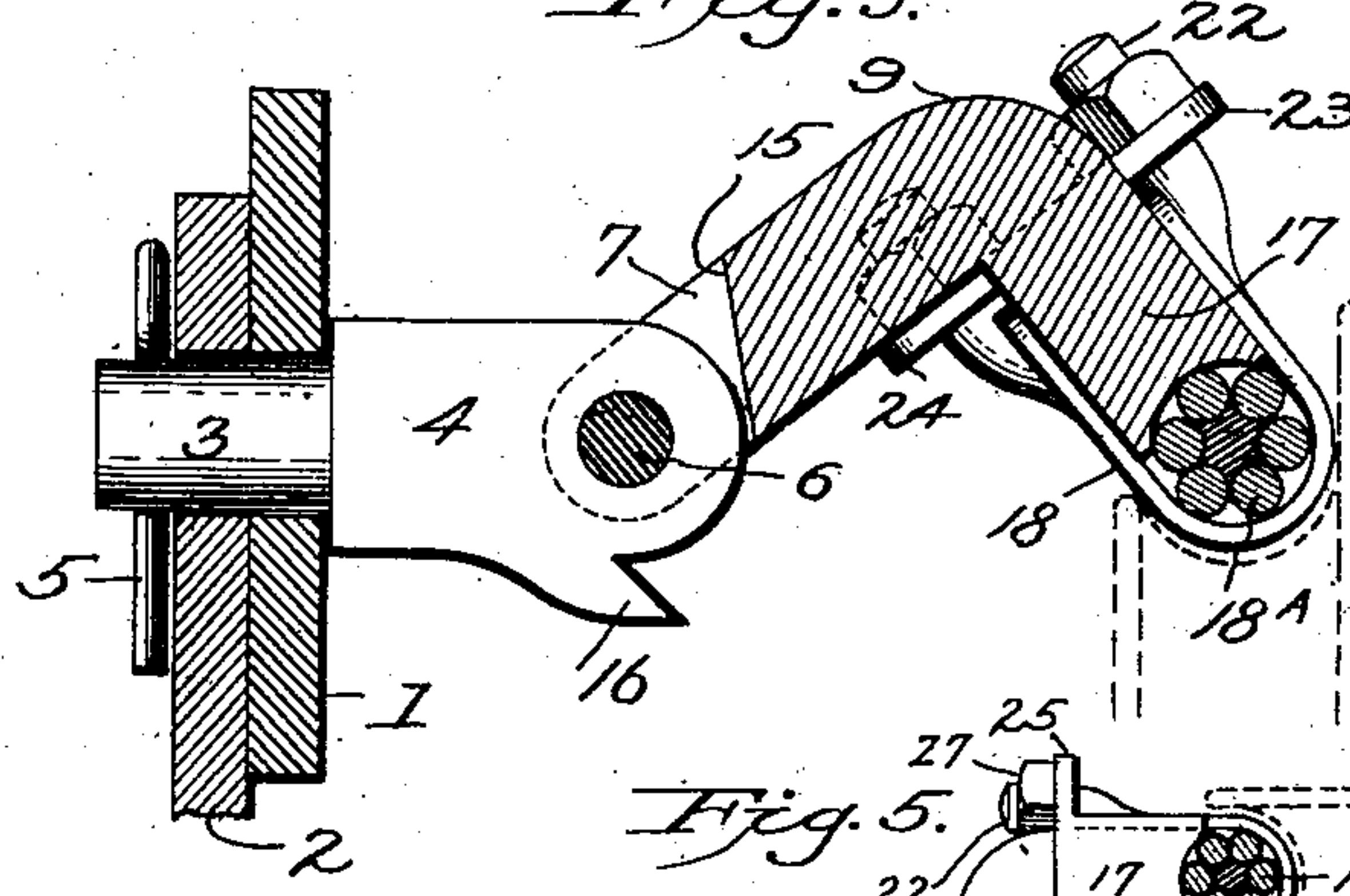


Fig. 5.

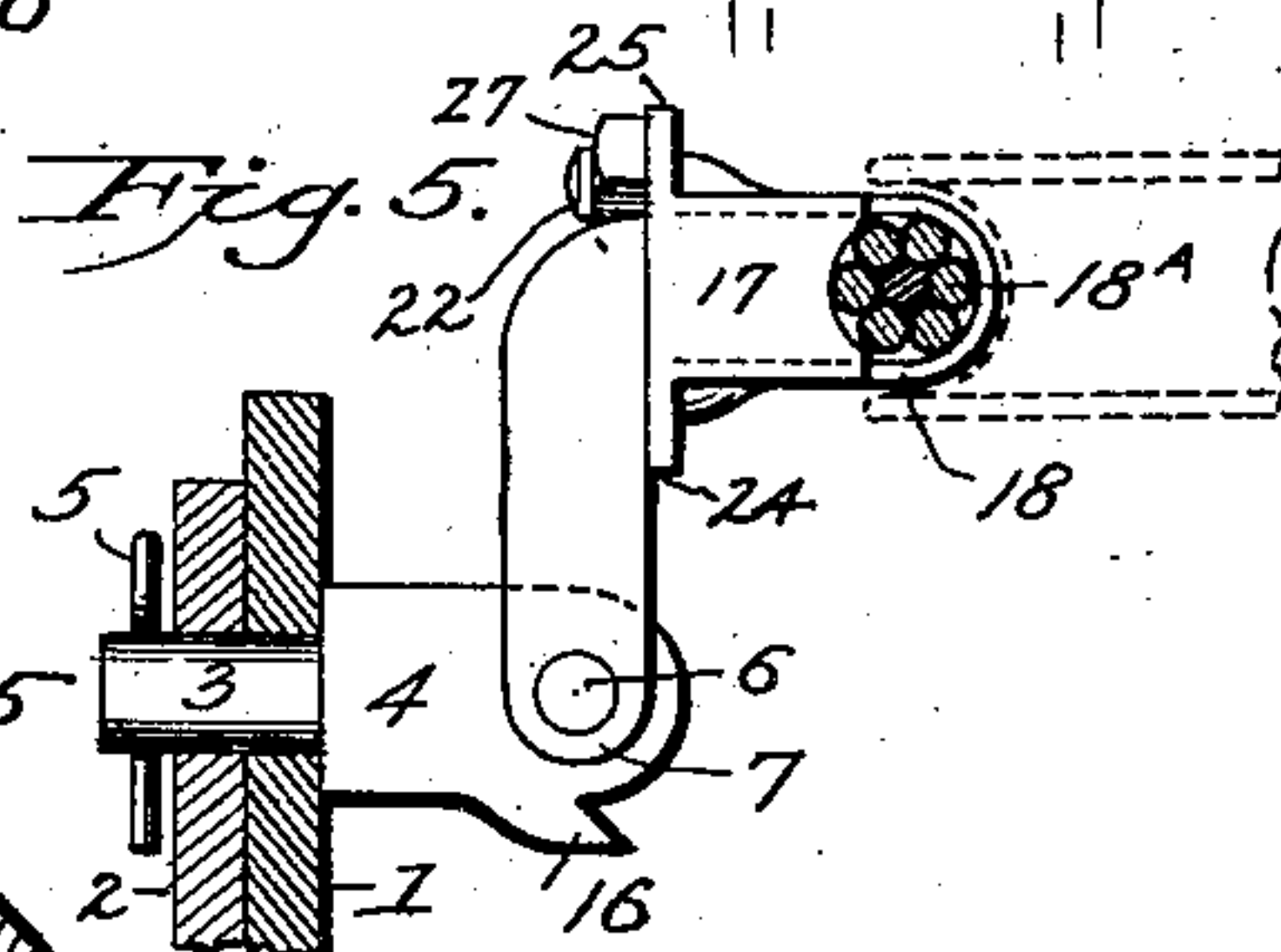
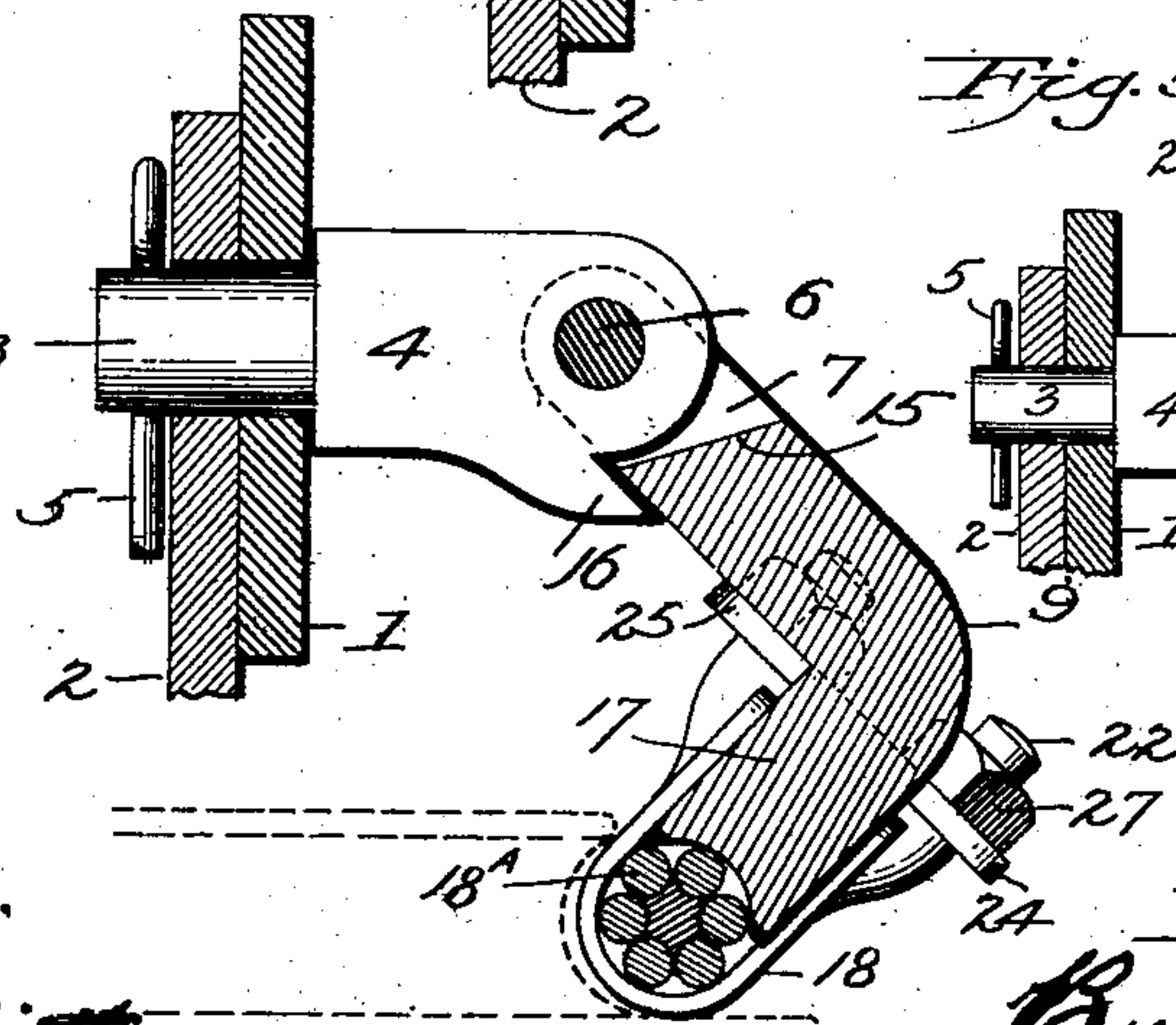


Fig. 4.



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Inventor:

Byron C. Riblet.

Attorney.

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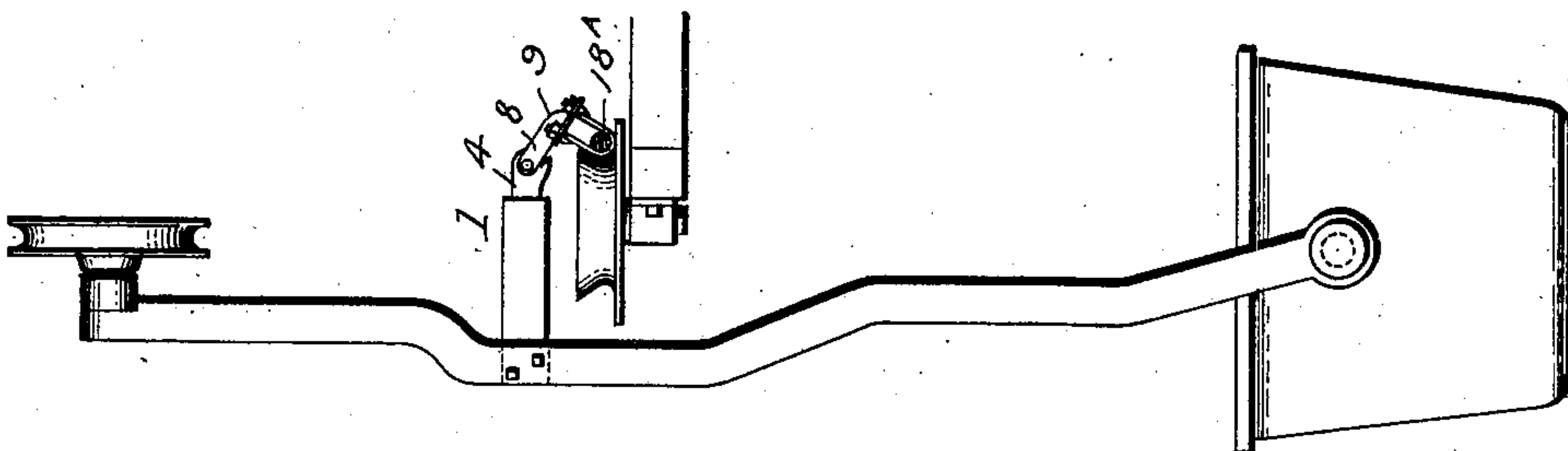
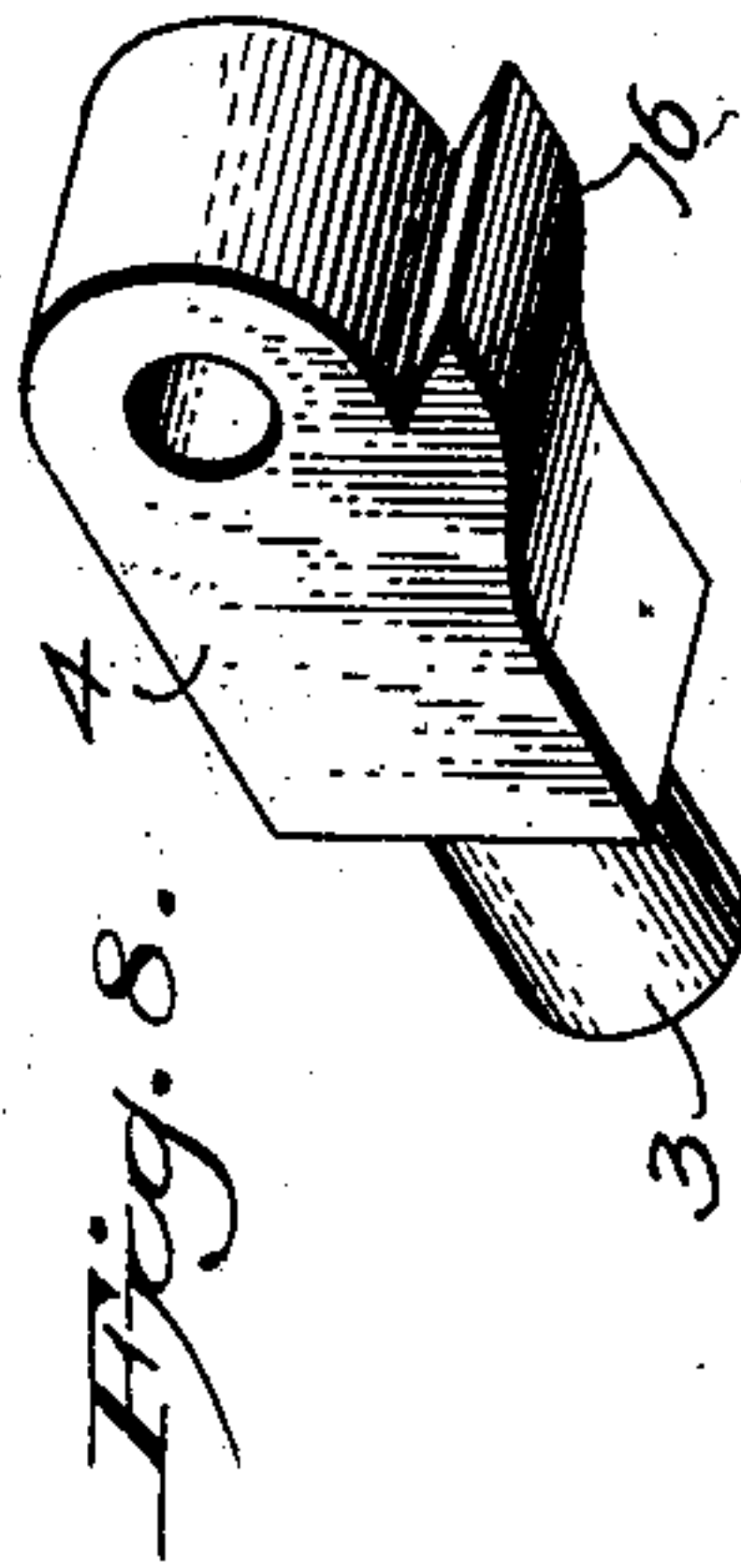
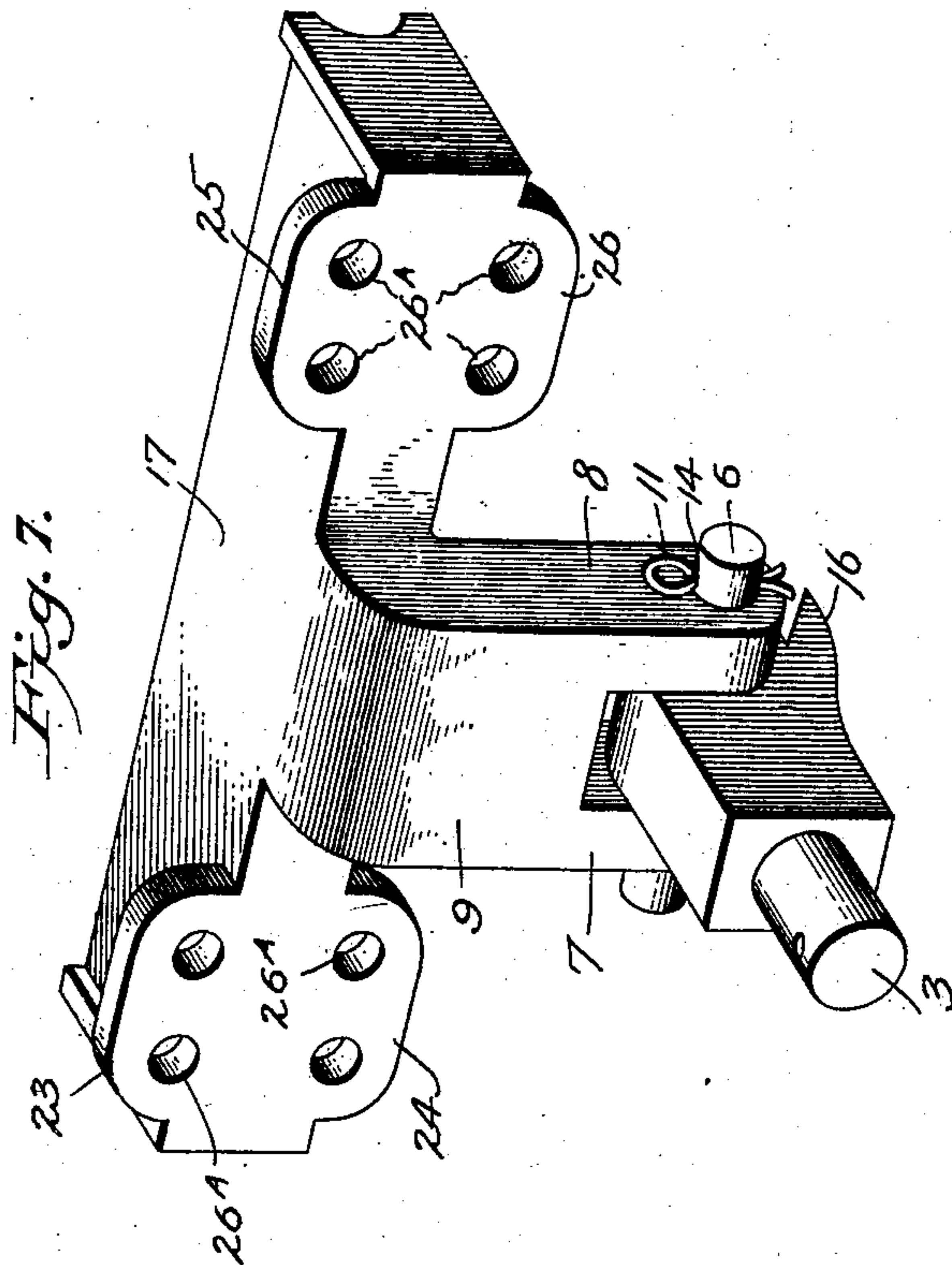
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NO MODEL.

2 SHEETS—SHEET 2.



Witnesses:
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Fig. 6.

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UNITED STATES PATENT OFFICE.

BYRON C. RIBLET, OF SPOKANE, WASHINGTON.

ROPE-CLIP.

SPECIFICATION forming part of Letters Patent No. 744,406, dated November 17, 1903.

Application filed December 8, 1902. Renewed October 12, 1903. Serial No. 176,795. (No model.)

To all whom it may concern:

Be it known that I, BYRON C. RIBLET, a citizen of the United States of America, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Rope-Clips; and I do 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 the characters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in rope-clips for attaching buckets to the running ropes of aerial wire-rope tramways, and the object of my invention is to provide a clip that will permit a running rope to run on vertical, horizontal, and obliquely positioned sheaves adapted to be positioned to allow the rope and clip to move in a semicircular path relative to the position of the bucket and of the stationary rope. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved clip. Fig. 2 is a sectional elevation of my improved clip at the height of its upward movement or in the position it is arranged to assume when bearing on the under side or to run under a vertical sheave. Fig. 3 is a side elevation of the clip in horizontal or central alinement with the bucket-connecting pivoting-lug. Fig. 4 is a side elevation of the clip at the end of its downward movement relative to its pivotal lug. Fig. 5 is a side elevation of the clip in the position it assumes in passing around a horizontally-positioned sheave on the opposite side of the rope from the bucket-hanger. Fig. 6 is a side elevation of the clip in its downward position and in the position necessary for it to assume to allow the running rope to run around a horizontally-arranged sheave positioned between the rope and the bucket. Fig. 7 is a perspective view of the clip-bar and the bucket-pin. Fig. 8 is a perspective view of the bucket-pin.

Similar characters of reference refer to similar parts throughout the several views.

Referring to the drawings, the numeral 1 designates a cross-bar of any common trolley-

bucket, such as is used for carrying ore, coal, lime, or other material on a wire-rope tramway.

2 designates a brace that is riveted by rivets to the cross-bar 1.

The cross-bar 1 and brace 2 are secured to a stud 3, that forms a part of the hinge-bolt 4, by a split pin 5, which passes through the end of the stud. This hinge-bolt 4 is pivotally attached by a pin 6 to two ears 7 and 8, which form an integral part of an angled bar 9, preferably a right-angled clip, which forms the body of the clip.

The pivotal pin 6 is preferably secured to the ears 7 and 8 by split pins 10 and 11, which are placed in holes 13 and 14, formed in the opposite ends of the pin.

The hinge-bolt is preferably formed concentric with the axis of the pin 6 at the part adjacent to the adjacent edge of the clip-bar, so that the angled clip-bar can swing through substantially a semicircular arc.

The swinging movement of the clip is limited by the angled edge 15 of the clip-bar to swing upward to nearly but not quite to the vertical center over the pivotal pin, as shown by the dotted line A in Fig. 2. A projecting stop-lug 16 is also formed on the under side of the hinge-bolt in order to stop the downward swing of the clip-rope just before it reaches a vertical center line through the pivot-pin and to prevent its moving to or crossing the vertical plane as denoted by the dotted line. These stops are provided to prevent the rope from passing the center vertical of the vertical plane, as it would lock in alinement with the center of the pin and would not move either upward or downward.

The clip-bar 9 is mainly a rectangular bar, but is provided with an angular extension or arm 17, a right-angled bar as shown. The limbs of the angle may be either of equal or of unequal length, as desired.

The edge of the clip-bar to which the running rope 18 is secured is concaved to fit against the periphery of the rope. The opposite ends of the clip-bar are provided with a narrow projecting strip, which forms shoulder-straps for the yoke-shaped clips 17^A, 18, 19, and 20. These yoke-shaped clips comprise a flat band 21, with round terminal threaded ends 22. The band portion is bent

to lie around the rope and against the opposite sides of the bar. Near the ends of the clip-bar on the opposite side from the rope projecting ears 23, 24, 25, and 26 are formed. 5 These ears are formed integral with the edge of the side opposite each other and are provided with holes 26. The threaded ends extend over the bar and extend through the holes 26. Threaded nuts 21 and 22 are then 10 applied to the ends of the clip, and the clip bar and rope are clamped together by turning them against the strap between the clip and strap. The outside clips lie against the shouldered straps, which prevent them from 15 slipping off in case they work loose.

My angular clip makes a strong and simple fixed connection between a bucket and a rope and can be quickly and easily applied to them. The running and stationary ropes of tram- 20 ways usually run in a straight line over the tops of sheaves; but my angular clip enables me to place sheaves in position to make horizontal deflections in the tramway and to pass over or under vertically or obliquely posi- 25 tioned sheaves. The position assumed by the clip in passing around a sheave is determined by the relative positions of the traction-rope and track-rope.

Having described my invention, what I 30 claim as new, and desire to secure by Letters Patent, is—

1. In a rope and bucket clip, the combination with the rope, of a clip-bar fitted against a rope arranged to clamp said rope, suitable 35 yoke-bolts arranged to clamp said rope and bar together, an angular arm formed on said bar, a hinge-bolt pivotally secured to the free end of said angular arm and arranged to be pivotally secured to a rope-carried bucket, 40 substantially as described.

2. In a rope and bucket clip, the combination with the rope of a right-angle bar, con-

caved in one edge to fit against the rope and provided with a pair of ears at its opposite end, a projecting shoulder portion at each 45 end of said bar, opposite said rope-bearing portion, containing bolt-holes, clips folded around said rope at each end of said bar, and arranged to lie against the opposite sides of said bar, threaded ends on said clips, nuts on 50 said threaded ends, a bolt pivotally secured between the ears at the ends of said clip-bar, a projecting stop on the lower side of said hinge-bolt, adapted to define the downward movement of said clip-bar on said hinge-bolt, 55 a stud and nut on the face of said hinge-bolt, and an inclined surface between said ears, adapted to define the upward movement of said clip-bar on said hinge-bolt, substantially as described. 60

3. In a rope and bucket clip, the combination with the rope and the bucket-bar of the right-angle clip-bar having projecting lugs at its side and end edges, the clips arranged to clamp the rope to one edge of said clip-bar, a 65 hinge-bolt pivotally secured to one end of said angle clip-bar, stops arranged to define the movement of said clip-bar around said hinge-bolt, and a stud and nut on the end of said hinge-bolt, substantially as described. 70

4. In a rope and bucket clip for aerial wire-rope tramways, the combination with the rope and the cross-bar of a bucket, of a clip-bar having an arm extending at right angles to the body of said clip-bar, a hinge-bolt pivotally secured to the end of said arm, and 75 means for securing said hinge-bolt to said bar, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

BYRON C. RIBLET.

Witnesses:

G. SARGENT ELLIOTT,
E. E. SOMMERS.