

No. 644,468.

Patented Feb. 27, 1900.

R. RUTTER.
HOIST.

(Application filed Oct. 31, 1899.)

(No Model.)

Fig. 1.

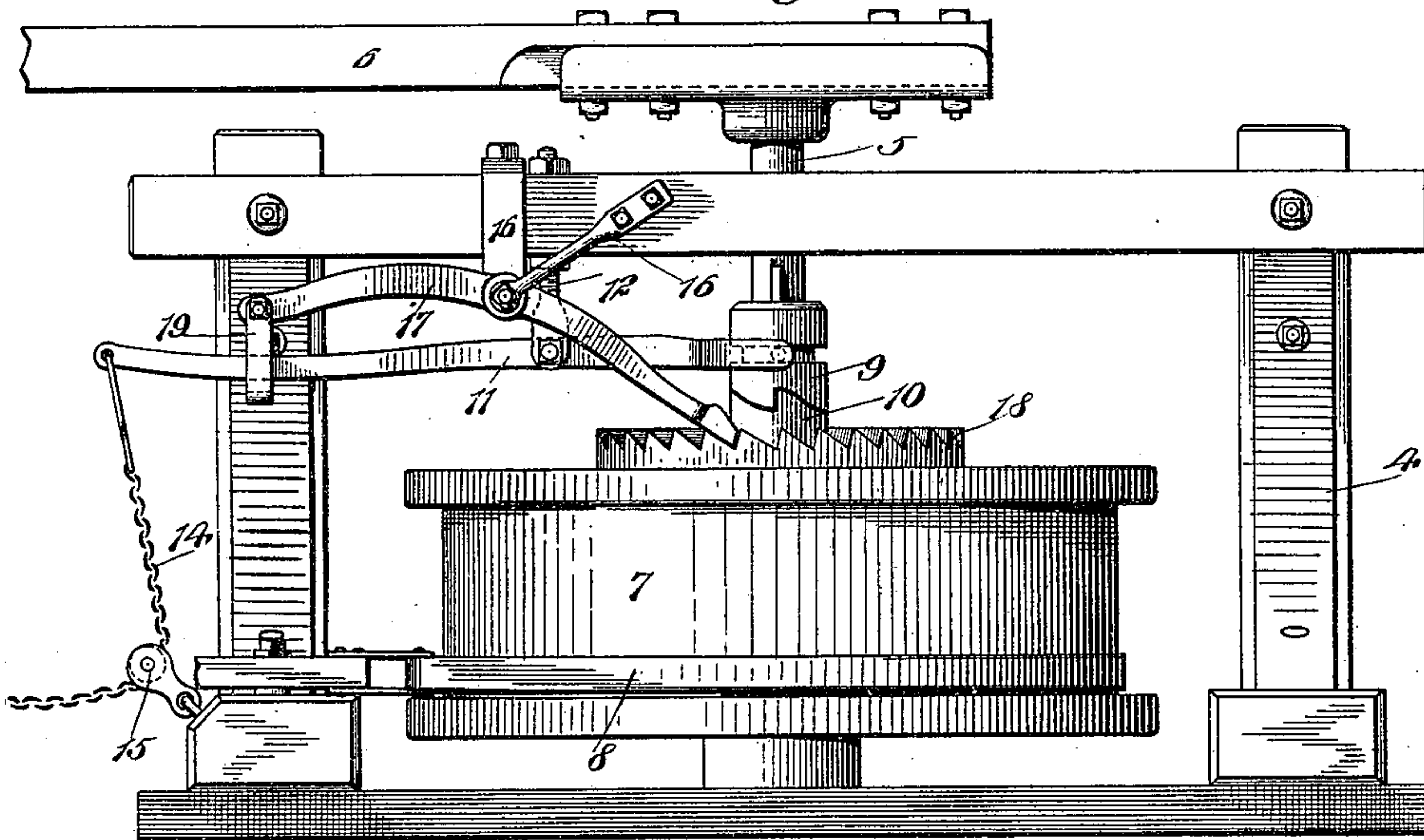


Fig. 2.

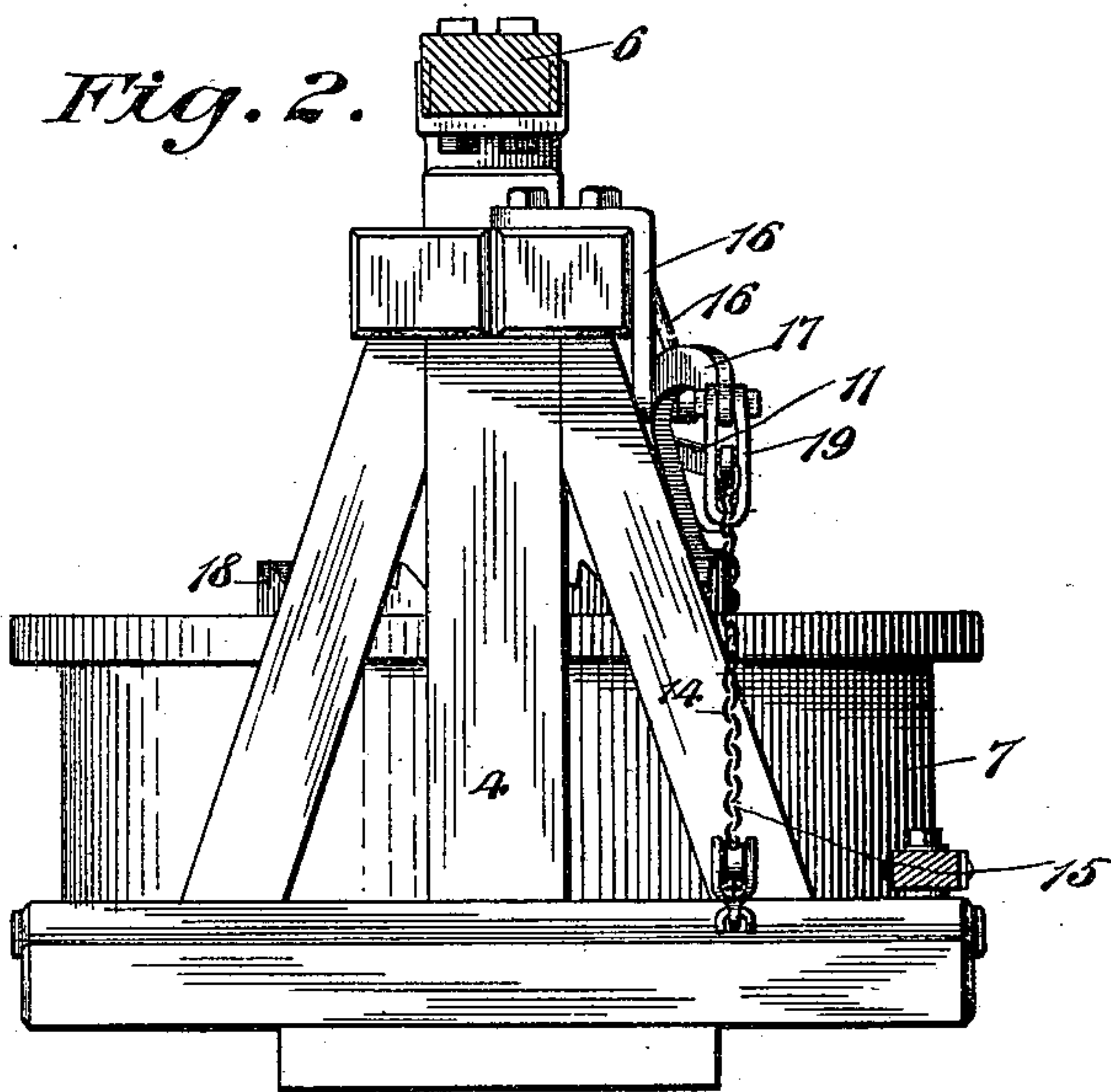
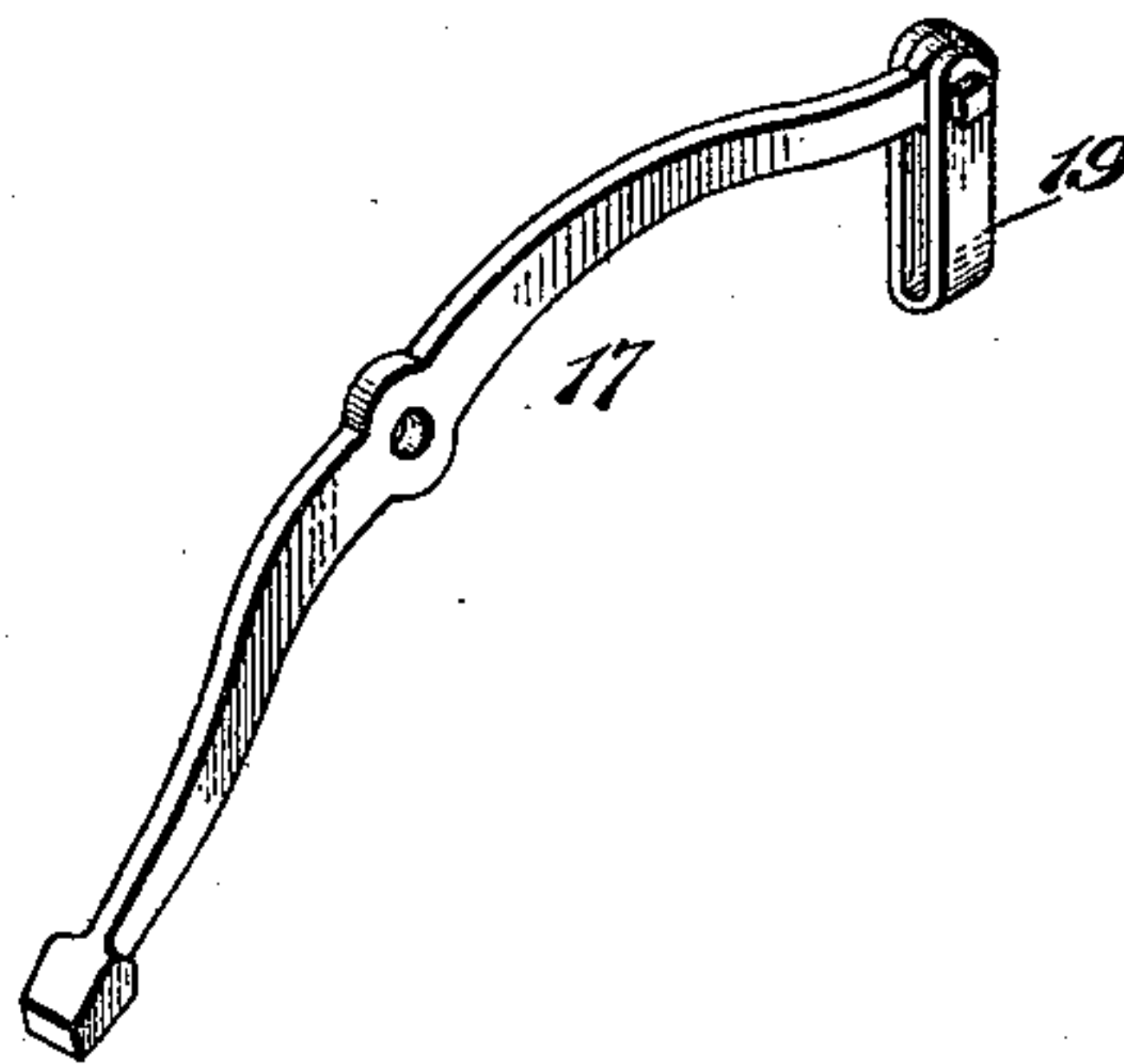


Fig. 3.



WITNESSES:

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ROBERT RUTTER, OF SOUTH BUTTE, MONTANA.

HOIST.

SPECIFICATION forming part of Letters Patent No. 644,468, dated February 27, 1900.

Application filed October 31, 1899. Serial No. 735,374. (No model.)

To all whom it may concern:

Be it known that I, ROBERT RUTTER, a citizen of the United States, and a resident of South Butte, in the county of Silver Bow and State of Montana, have invented a new and Improved Hoist, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide a hoist adapted especially for mining purposes and to be driven by horse-power, although, of course, the apparatus may be driven by other power, if so desired, the novelty of the invention lying in certain peculiar clutch and pawl devices.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the invention. Fig. 2 is an end elevation thereof, and Fig. 3 is a detail perspective view of the pawl.

The hoist to which my invention is applied comprises a suitable framing 4, in which is mounted a vertical drive-shaft 5, provided with a sweep 6, to which the team of horses or other power may be applied. On the shaft 5, within the frame 4, is mounted a drum 7, the drum being loose on the shaft and provided with a strap-brake 8 of any desired form. The movement of the shaft 5 is transmitted to the drum 7 through the medium of a clutch member 9, which is splined on the shaft 5 and meshes with a corresponding member 10, attached to the drum 7. A forked lever 11 engages with the clutch member 9 and is fulcrumed on a bracket 12, depending from the upper portion of the frame 4. To the lever 11 is connected a chain 14, which passes beneath a pulley 15 and is extended from the hoist, so that by drawing on the chain the lever 11 may be thrown down at its outer end, thus lifting the clutch member 9 and stopping the driving of the drum. Two brackets 16 are attached to the frame 4 and carry a

pawl-lever 17, which is extended downwardly and inwardly and arranged to work with a crown-ratchet 18, attached to the drum 7. This pawl-lever has a clevis 19 attached to its outer end, which clevis is passed around the outer portion of the lever 11. Now it will be seen that when the lever 11 is thrown down its movement is transmitted to the lever 17 through the clevis 19, and such lever is disengaged from the ratchet 18. Therefore whenever the clutch members 9 and 10 are engaged to drive the drum 7 forward the lever 17 engages with the ratchet 18 to prevent backward movement of the drum. When it is desired to permit the drum to unwind, the chain 14 is drawn on, thus simultaneously lifting the parts 11 and 17 and releasing the drum 7.

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

1. The combination with a frame, of a revolvably-mounted member, a clutch serving to impart movement thereto, a ratchet fixed to the said member, a lever forming a pawl fulcrumed on the frame and engaging the rod, a second lever in connection with the clutch, to throw the same, the two levers extending approximately in the same direction, and a link forming a connection between the two, to cause them to be simultaneously operated.

2. In a hoisting apparatus, the combination with a frame or support, of a drum mounted to turn thereon, a clutch serving to transmit movement to the drum, a lever mounted on the frame or support and having connection with the clutch to actuate the same, a ratchet attached to the drum, and a pawl working with the ratchet to prevent the back movement of the drum when the clutch is in gear, such pawl having connection with the clutch-lever so as to disengage the pawl from the ratchet simultaneously with the disengagement of the clutch.

ROBERT RUTTER.

Witnesses:

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I. H. HUNTER.