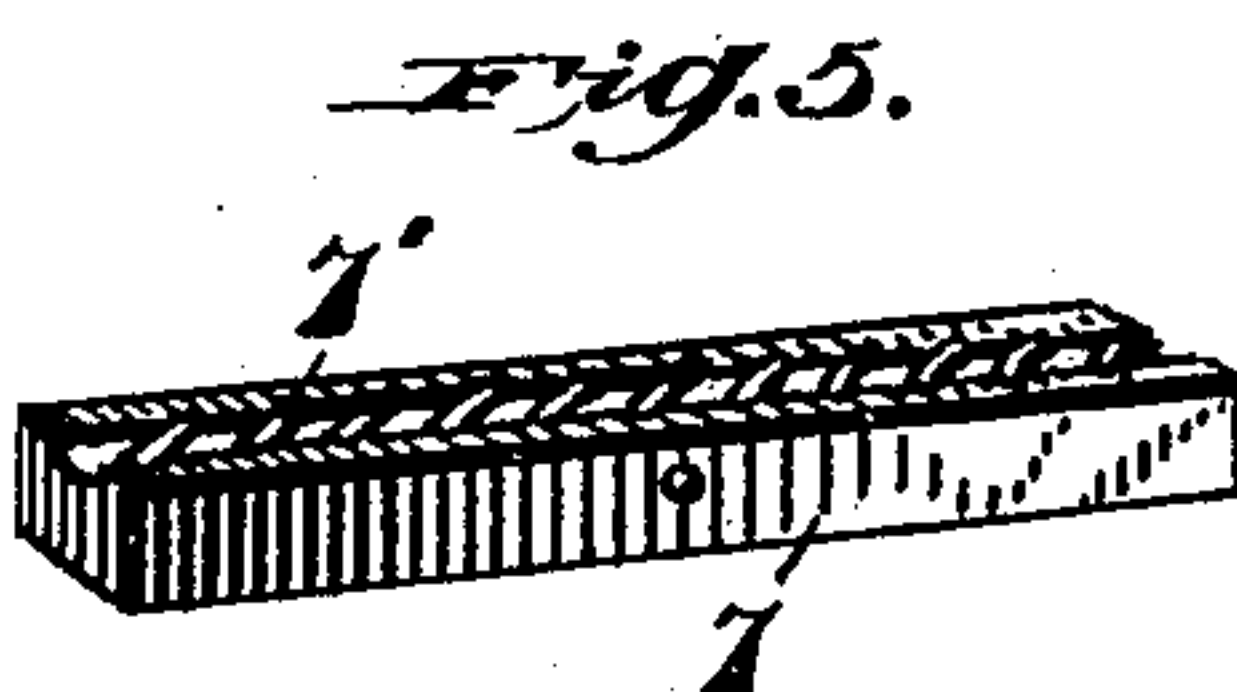
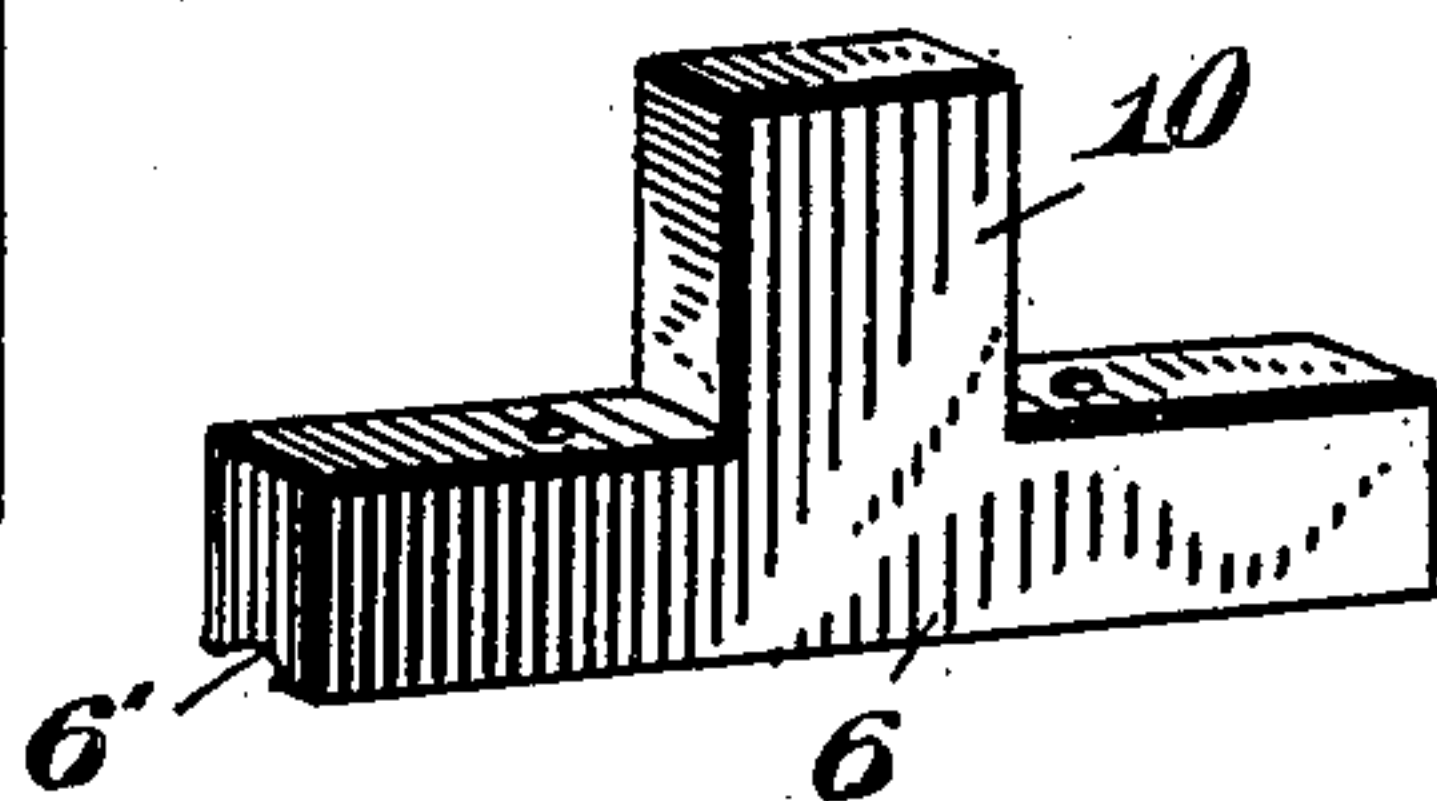
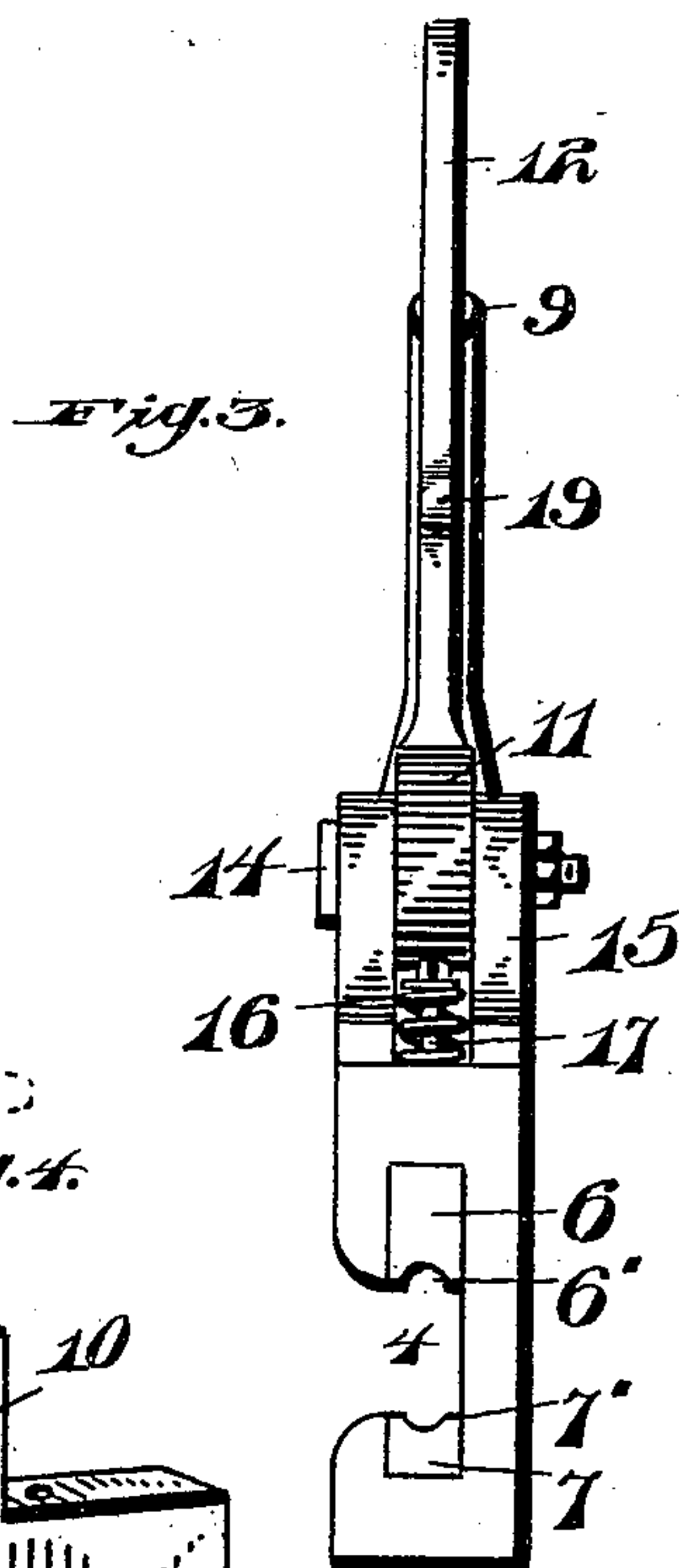
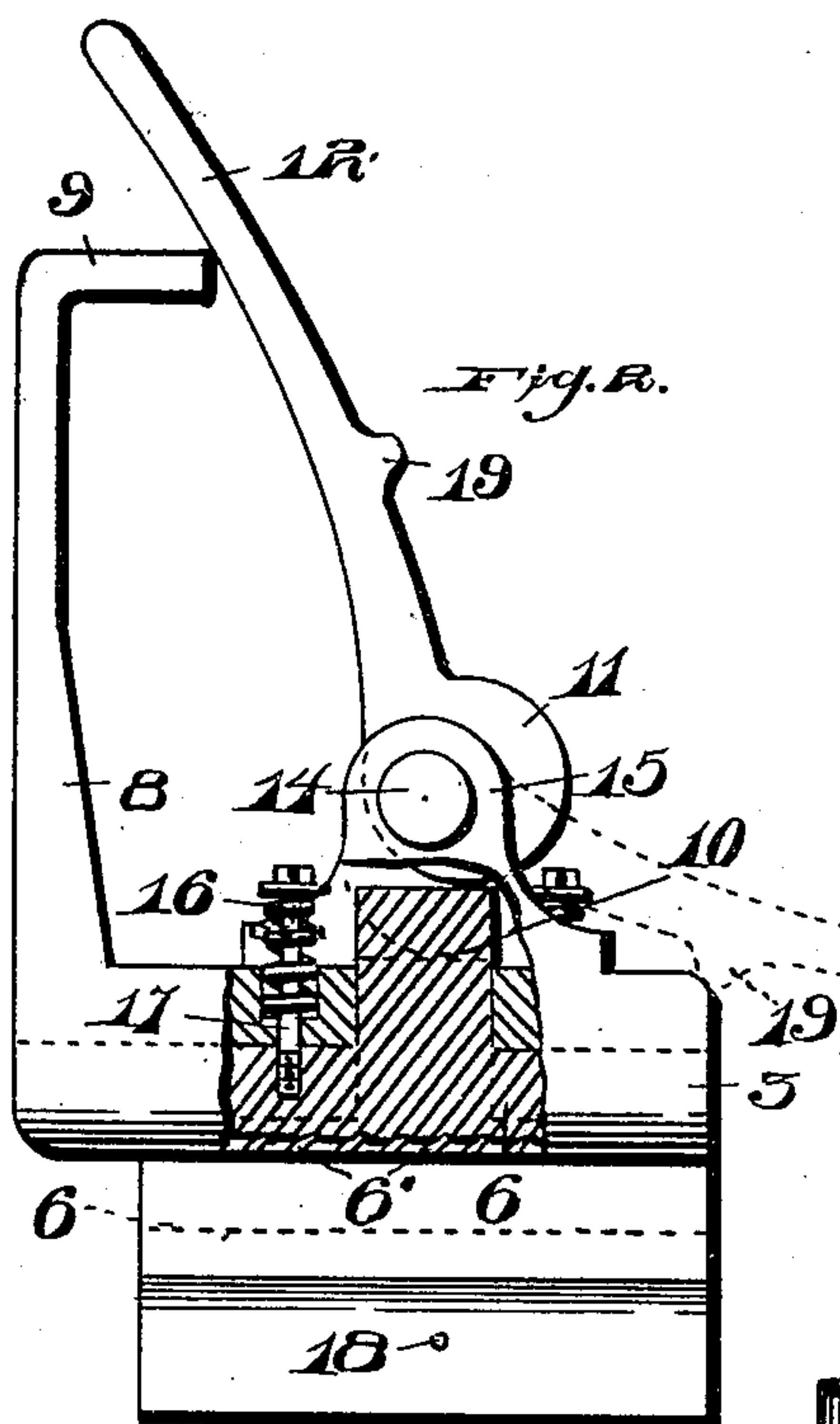
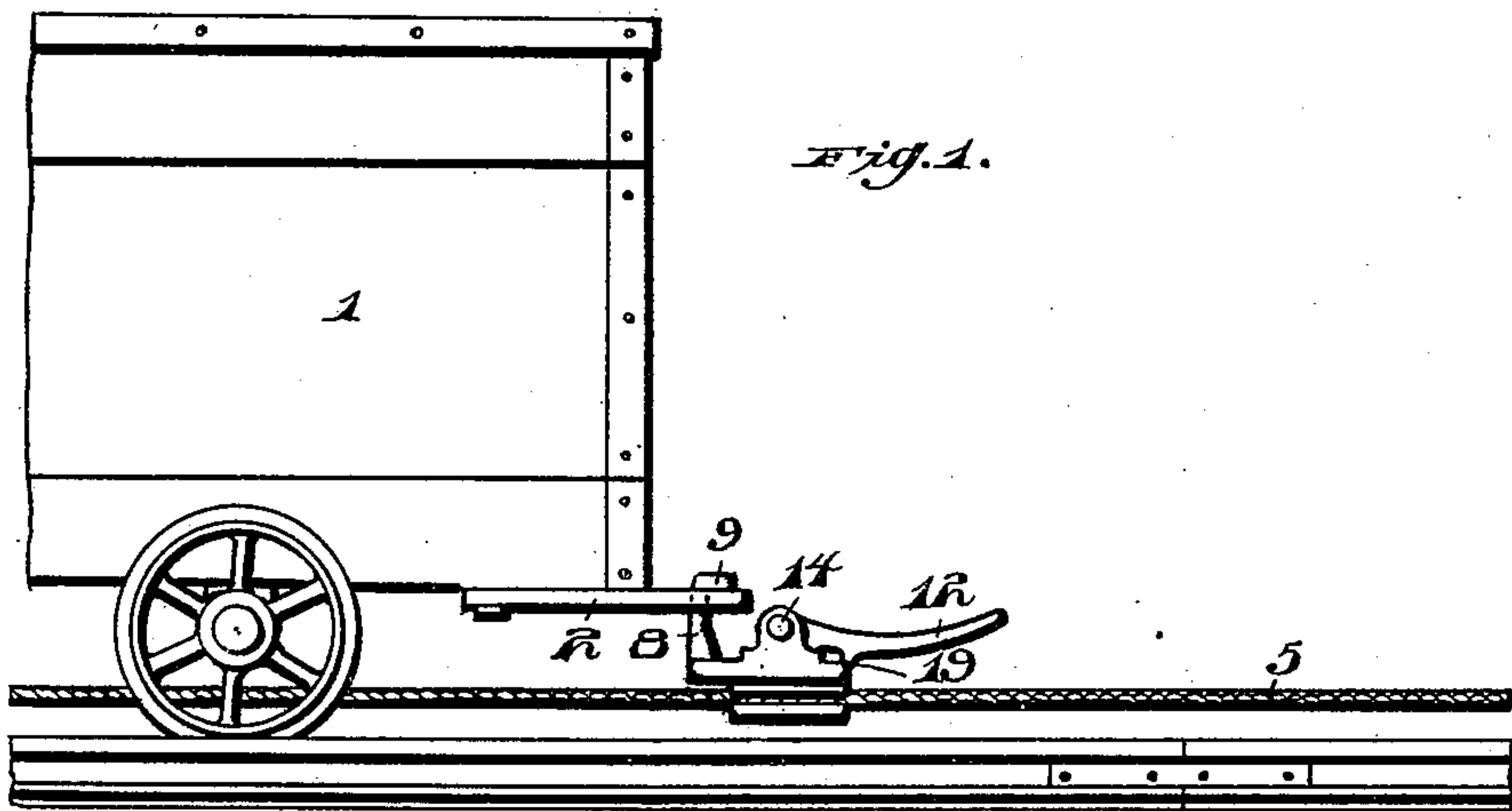


No. 669,314.

Patented Mar. 5, 1901.

J. H. VANDEGRIFT.
GRIP FOR CABLE CARS.
(Application filed July 24, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN H. VANDEGRIFT, OF ALLENPORT, PENNSYLVANIA.

GRIP FOR CABLE-CARS.

SPECIFICATION forming part of Letters Patent No. 669,314, dated March 5, 1901.

Application filed July 24, 1900. Serial No. 24,704. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. VANDEGRIFT, a citizen of the United States of America, residing at Allenport, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Grips for Cable-Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in cable-grips, and it is particularly adapted and designed to be used as a grip for coal-cars and the like.

The invention has for its object to construct a grip of this class, which may be conveniently and quickly attached and detached from a coal or mining car and which may also be quickly secured to or detached from a rope or cable.

Briefly described, the invention consists of a block which is integral, carrying a coupling-arm adapted to be connected to the coupling of a coal or mining car, a spring-held grip which is actuated by a lever or cam carried by the block, and a stationary grip arranged within the block, the lever acting also as a weight to hold the spring-pressed grip in engagement with the rope or cable.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification and wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

Figure 1 is a side view of a portion of a coal or mining car, showing my improved grip in position and in engagement with the rope or cable. Fig. 2 is a side view of the grip, partially in section, showing the lever in full lines in the position it occupies when the grip is open and in dotted lines the position it occupies when the grip is closed. Fig. 3 is an end view of the grip in an open position. Fig. 4 is a detail perspective view of the upper grip. Fig. 5 is a like view of the lower grip.

In the drawings, 1 indicates the mining-car, which is provided with a draw-bar 2 for attaching thereto the grip, which will now be described in detail.

The grip consists of a substantially rectangular block 3, provided on its inner face with a groove 4 to permit the entering and disen-

gagement of the cable 5 with the grips 6 and 7, respectively. The block 3 carries at its rear end an upwardly-extending arm 8, having an angular or hook end 9, which is adapted for insertion into and engagement with the draw-bar 2 to hold the grip in position, as shown in Fig. 1 of the drawings. The upper grip 6 is provided with a post 10, arranged centrally of its upper face and extends upwardly through the opening in the block 5 and is adapted to be engaged by the cam 11 of the operating-lever 12. This lever is pivotally suspended on the shaft or bolt 14, which is mounted in a pair of lugs 15, formed integral with the block 3. This upper grip 6 is held normally in an elevated position by means of springs 16, which are arranged upon the bolts 17, engaging the grip 6 and extending upwardly through apertures provided therefor in the block 3. The lower grip 7 is held rigidly in its seat in the block 3 by means of a pin 18, passing transversely through the block and grip.

The lever 12 is or may be provided with a shoulder or projection 19, which will engage the upper forward corner of the block 3 and limit the downward movement of the lever 12 to prevent the striking of this lever with the upper end of the front bolt 16. The upper grip 6 and the lower grip 7 are each provided with a concave roughened gripping-surface 6' and 7', respectively, so that the same will retain their firm grip upon the cable when in engagement therewith.

The operation of the device it is believed can be readily understood from the foregoing description, taken in connection with the accompanying drawings, as it will be observed that when the lever is in position, as shown in full lines in Fig. 2 of the drawings, the cam 11 will be out of engagement with the post 10 and the springs 16 will hold the upper grip 6 elevated in the position in which it is shown in Figs. 2 and 3. The cable 5 may then be readily inserted in the groove or slot 4 in the side of the block into position between the two grips, and when in this position the lever 12 is thrown downwardly to the position shown in full lines in Fig. 1 of the drawings and the position shown in dotted lines in Fig. 2, causing the cam 11 to engage with the top of the post 10 and depress the

upper grip 6 into engagement with the cable. The lever 12 when in this position being of greater weight than the tension of the springs 16 holds the grip 6 in engagement with the cable. The grip may be readily detached by elevating the lever 12, which will permit the springs 16 to lift the upper grip 6, when the cable may be readily disengaged through the slot 4.

10 The grip may be removed from the draw-bar 2 when disengaged from the cable by lifting upwardly on the block, so as to permit of the disengagement of the hooked end 9 of the arm 8. This construction permits of
15 the ready removal of the grip from one mining-car and the placing of the same upon another when desired.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

25 A grip for cable-propelled cars, comprising a rectangular block provided in one side with a recess, a supporting-arm formed integral with the block at one end and extending upwardly at right angles to the block; said arm
30 having its free end bent at right angles to the

arm, a vertically - movable upper grip arranged in the block above the recess and provided with a serrated engaging face, a post formed integral with the upper face of said block centrally thereof and extending upwardly through the block, a pair of lugs formed integral with the upper face of said block, an operating-lever pivotally mounted in said lugs, a cam carried on the lower end of said lever for engagement with the post of the upper grip to depress said grip, a lug or stop formed integral with the lever between the cam and the free end of the lever for the engagement with the block to limit the downward movement of said lever, a pair of bolts connected to the upper grip, one on either side of the post, springs arranged on said bolts with the upper end engaging the heads of the bolts and their lower ends seated in recesses provided therefor in the block, and a stationary lower jaw seated in the block and provided with a serrated upper face substantially as shown and described.

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

JOHN H. VANDEGRIFT.

Witnesses:

CHAS. HARRIS,

L. P. FLICKINGER.