

(No Model.)

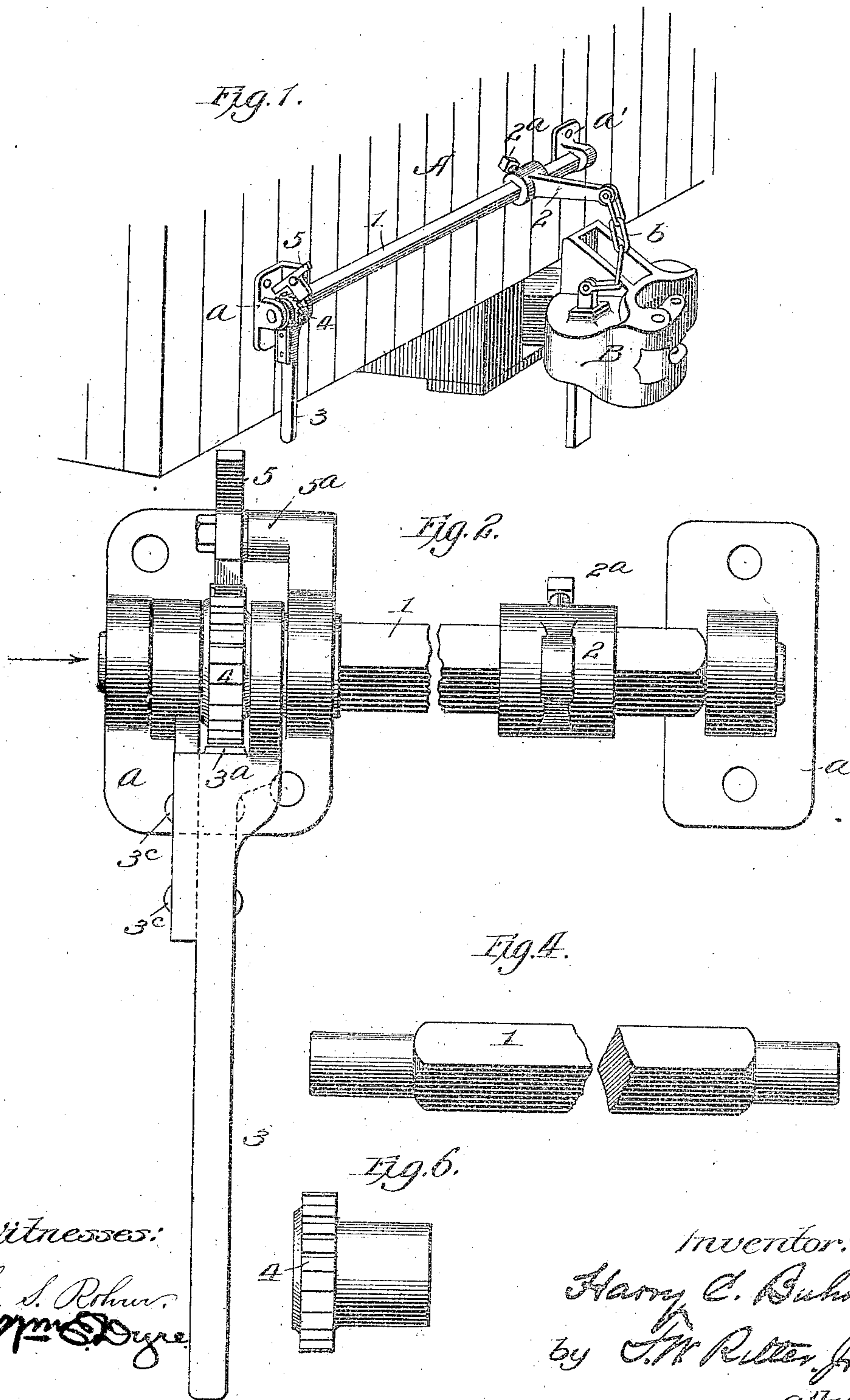
2 Sheets—Sheet 1.

H. C. BUHOUP.

RELEASE RIGGING FOR RAILWAY CARS.

No. 604,718.

Patented May 31, 1898.



(No Model.)

2 Sheets—Sheet 2.

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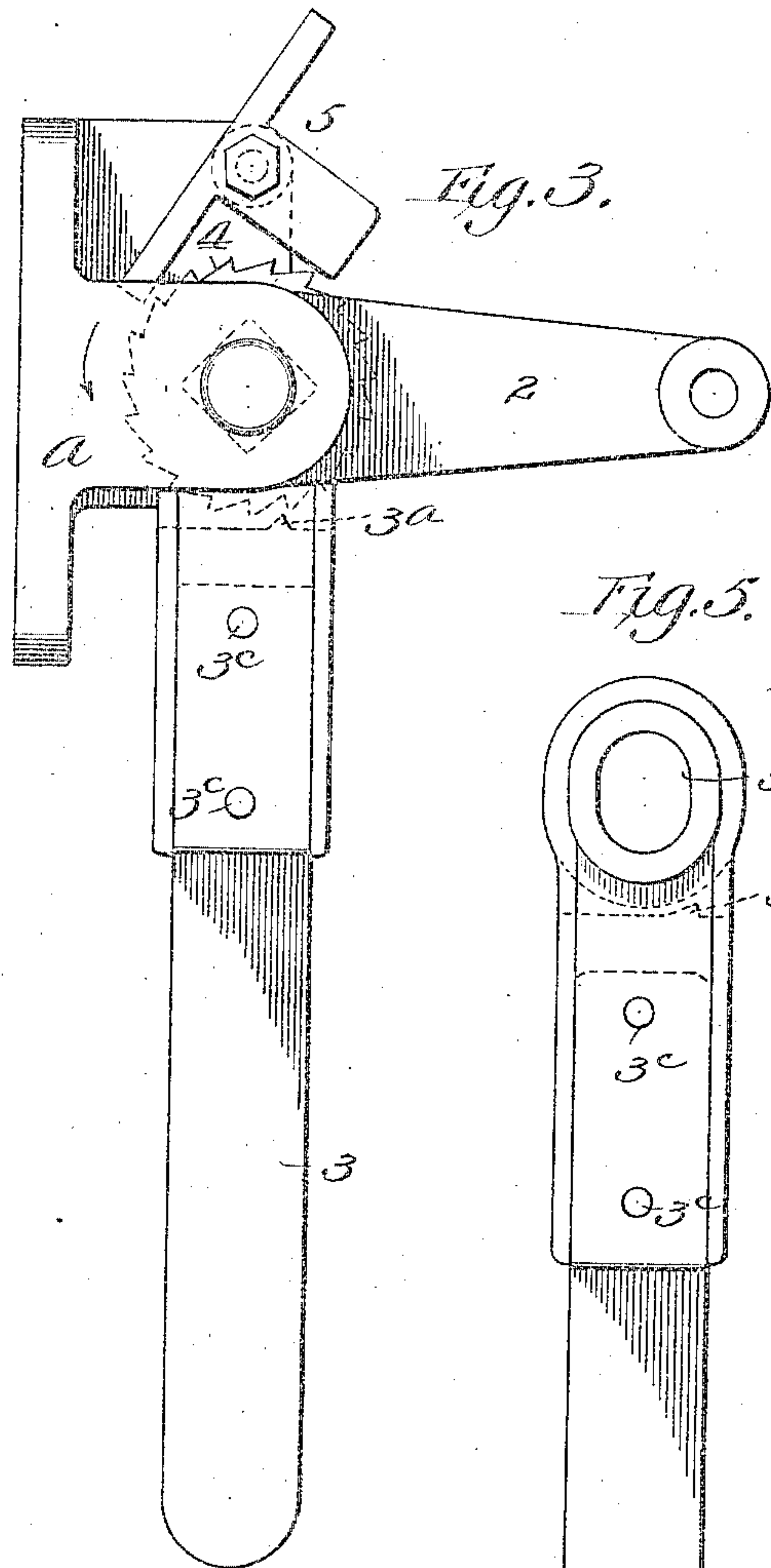


Fig. 3.

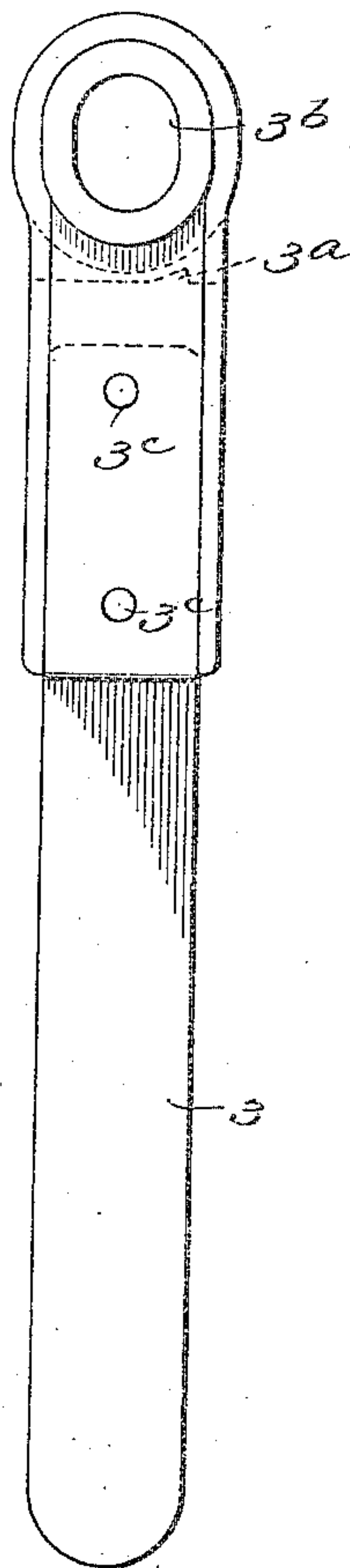
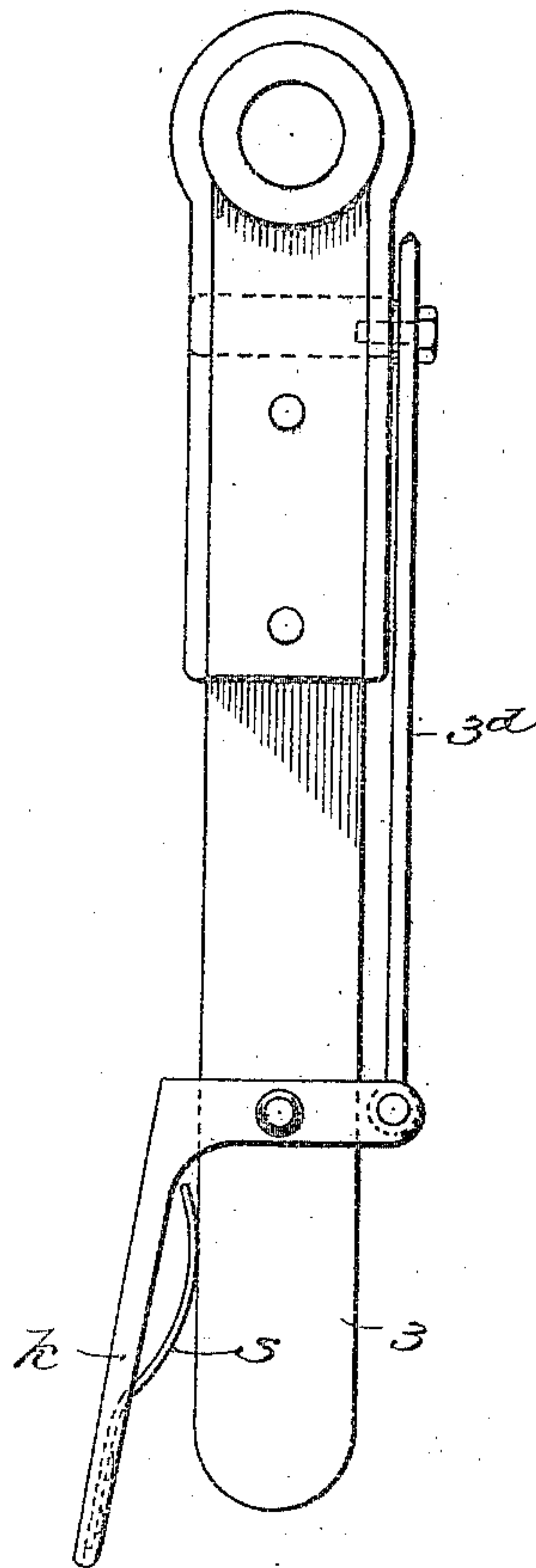


Fig. 5.

Fig. 7.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## RELEASE-RIGGING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 604,718, dated May 31, 1898.

Application filed December 29, 1897. Serial No. 664,321. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY C. BUHOUP, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Release-Rigging for Railway-Cars; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective end view of the end sill of a car and a vertical or Janney type of coupler with adjustable release-rigging embodying my invention applied thereto for operating the lock of the coupler, the parts being in the position they occupy when the locking-pin is down. Fig. 2 is an enlarged detached view of my release-rigging in side elevation, parts broken away. Fig. 3 is an end view of the devices, looking in the direction of the arrow, Fig. 2. Fig. 4 is a detached view of the uncoupling lever or shaft. Fig. 5 is a detached view of the drop-handle of the uncoupling-lever. Fig. 6 is a detached side elevation of the ratchet-wheel and its hub. Fig. 7 is a view of a modified form of drop-handle for the uncoupling-lever.

Like symbols refer to like parts wherever they occur.

My invention relates to that class of railway-car-equipment safety devices known as "uncoupling-levers" or "release-rigging," having for its object the manipulation of the locking device of the coupler from a point of safety outside of the car.

As commonly constructed and applied this class of devices has exhibited several objectionable features, viz: the horizontal position of the uncoupling-lever handle at the time of uncoupling or coupling up, whereby danger arises to the operator should he for any purpose enter between the cars, and also the circumscribed movement of the lever, whereby in case of either excessive slack in the connection between the coupler-lock and the uncoupling-lever or the lack of a proper length and adjustment of the connections the devices were rendered either wholly inoperative or else required the constant attention of the operator at the time of coupling and uncoupling.

To provide a simple and effective means of overcoming the above-noted objections is the object of the present invention; and to this end I combine with the coupling-lever a drop-handle loosely mounted thereon and provided with an automatically-retracted ratchet mechanism for engaging and rotating the shaft in one direction and means for locking the shaft in the position to which it is thus moved, whereby after the operation of the shaft or uncoupling-lever and upon the release of the lever-handle the same will drop or automatically assume a vertical position out of the way of a person entering between the cars, and such a construction or its equivalent embodies one feature of my invention. In carrying out said feature of my invention I prefer, for sake of simplicity and effectiveness, to combine with an uncoupling-lever which is provided with a ratchet-wheel or segment-rack a drop-handle having a dog for engaging the ratchet-wheel or segment-rack of the uncoupling-lever and provided with an elongated slot, whereby the said drop-handle is loosely journaled on the uncoupling-shaft and may be raised for causing the dog thereon to engage the ratchet-wheel or segment-rack on the uncoupling-lever, and such a construction or its equivalent embodies a second feature of my invention.

There are other minor features of invention residing in particular combinations and in special features of elemental construction, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the end sill or body of a car, upon which are supported the devices embodying my invention, and B indicates a vertical or Janney type of coupling whose locking-pin or locking device is connected with and operated from the release-rigging.

*a a'* indicate brackets secured to the car-body A and affording suitable bearings for a rock-shaft or uncoupling-lever 1, provided with a lifting-finger 2 and lever or drop-handle 3.

The shaft 1 is preferably square or polygonal except at the points where it is journaled



in its bearings and where it receives the drop-handle 3 in order to cause the ratchet-wheel 4 and lifting-finger 2 to rotate with the shaft 1 and permit of the adjustment of the lifting-finger longitudinally of shaft 1; but, if desired, the shaft or uncoupling-lever 1 may be cylindrical throughout, and a spline or feather may be employed in the usual manner to cause the ratchet-wheel and lifting-finger to rotate with the uncoupling-lever.

2 indicates a lifting-finger adjustable longitudinally of the shaft 1 and provided with a set-screw 2<sup>a</sup> or equivalent means of securing it in position on the shaft after adjustment.

With said lifting-finger 2 the locking-pin or lock of the coupler is connected by a chain b or other suitable flexible connection of such length as will provide for the travel of the coupler in pulling and buffing.

Secured on the uncoupling lever or shaft 1, near its outer end is a ratchet-wheel 4 (a segment-rack may be used, if preferred) and with said ratchet-wheel engages a pawl or locking-dog 5, preferably pivoted on a stud 5<sup>a</sup> upon the outer bearing or bracket a. This dog 5 is counterweighted, so that it is normally held out of engagement with the ratchet-wheel and must be manually applied to lock the uncoupling lever or shaft 1 in any given position, and being thus counterweighted it will automatically release itself or drop away from the ratchet-wheel 4 upon a slight movement of the shaft from right to left or in the direction of the arrow, Fig. 3.

Loosely journaled upon the outer end of uncoupling lever or shaft 1 is the lever-handle or drop-handle 3, provided with a dog 3<sup>a</sup> or equivalent means for engaging the ratchet-wheel 4, and said lever-handle 3 is preferably journaled on said shaft by means of an elongated slot 3<sup>b</sup>, which permits the dog 3<sup>a</sup> to drop out of engagement with the ratchet whenever the lever-handle 3 is released, and, furthermore, said lever-handle is by preference formed forked or with two jaws, so as to straddle and confine the ratchet-wheel 4, and, if desired, one of said jaws may be separable from the lever-handle 3 and connected thereto by bolts or rivets 3<sup>c</sup>.

If desired, in lieu of a fixed dog 3<sup>a</sup> on the lever-handle 3 and an elongated slot 3<sup>b</sup>, which permits the automatic disengagement of the dog, a spring-retracted and lever-projected dog 3<sup>d</sup> may be substituted, as indicated in Fig. 6 of the drawings, wherein k indicates the projecting lever, and s the retracting-spring, by means of which the dog is automatically withdrawn from engagement with the ratchet-wheel 4 and the lever-handle allowed to drop when released by the operator.

The construction and arrangement of the devices being substantially such as hereinbefore pointed out and said devices being in the position shown in Fig. 1 of the drawings—that is to say, the locking-pin or locking-block of the coupler in the lowered or locked position,

the lifting-finger 2 in a horizontal position, the lever-handle or drop-handle in a vertical position, and the locking-dog 5 out of engagement with the ratchet-wheel 4—if it is desired to raise the locking-pin of the coupler for the purposes of uncoupling the cars or to release the knuckle of the coupler B the dog 3<sup>a</sup> is brought into engagement with the ratchet-wheel 4 by lifting the lever-handle 3 longitudinally and vertically, (or by compressing the projecting lever k, as the case may be,) after which the lever-handle is turned to rotate the uncoupling lever or shaft 1 and carry the lifting-finger 2 from the horizontal toward the vertical position, and thus withdraw the locking-pin or latch of the coupler. If the movement of the uncoupling lever or shaft 1 and lifting-finger 2 has not been sufficient to take up all the slack in the connection b and fully withdraw the locking-pin, the locking-dog is made to engage the ratchet-wheel 4 and lock the shaft 1 until the lever-handle 3 can be lowered and the dog 3<sup>a</sup> again caused to engage the ratchet-wheel 4, when the shaft 1 is further rotated, the locking-dog 5 automatically disengaging or dropping away from the ratchet-wheel. When the locking-pin of the coupler has been fully withdrawn, the locking-dog 5 is again manipulated to cause it to engage the ratchet-wheel 4 and the shaft or uncoupling-lever 1, and elevated lifting-finger 2 will thereafter hold the locking-pin of the coupler withdrawn until the uncoupling-lever is released. As soon as the locking-dog 5 has been made to engage the ratchet-wheel 4 the lever-handle 3 may be released and will automatically drop and hang vertically, where it ceases to be an element of danger to a person entering between the cars.

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

1. In a release-rigging for car-couplers, the combination with an uncoupling lever or shaft provided with a ratchet device, of a lever-handle, an automatically-retracted dog for releasing the lever-handle from the uncoupling-lever, and means for locking the ratchet device of the uncoupling-lever, substantially as and for the purposes specified.

2. In a release-rigging for car-couplers, the combination with an uncoupling-lever having a ratchet device, of a lever-handle having an elongated slot whereby it is journaled on the uncoupling-lever, and provided with a dog which is adapted to engage the ratchet device of the uncoupling-lever, substantially as and for the purposes specified.

3. In a release-rigging for car-couplers, the combination with an uncoupling-lever provided with a ratchet device, of a drop-handle, provided with a dog to engage the ratchet device of the uncoupling-lever, and a pawl or locking-dog adapted to engage the ratchet device of the uncoupling-lever, said dog being counterweighted to be held normally out of



engagement with the ratchet device of the uncoupling-lever, substantially as and for the purposes specified.

4. In a release-rigging for car-couplers, the  
5 combination with an uncoupling lever or shaft provided with a ratchet device, of a forked-jaw drop-handle loosely journaled on the uncoupling-lever by means of an elongated slot and provided with a dog adapted to engage  
10 the ratchet device of the uncoupling-lever

when the drop-handle is raised, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 27th day of December, 1897.

HARRY C. BUHOUP.

Witnesses:

A. J. SCHEVER,  
D. B. MASON.