

No. 614,304.

Patented Nov. 15, 1898.

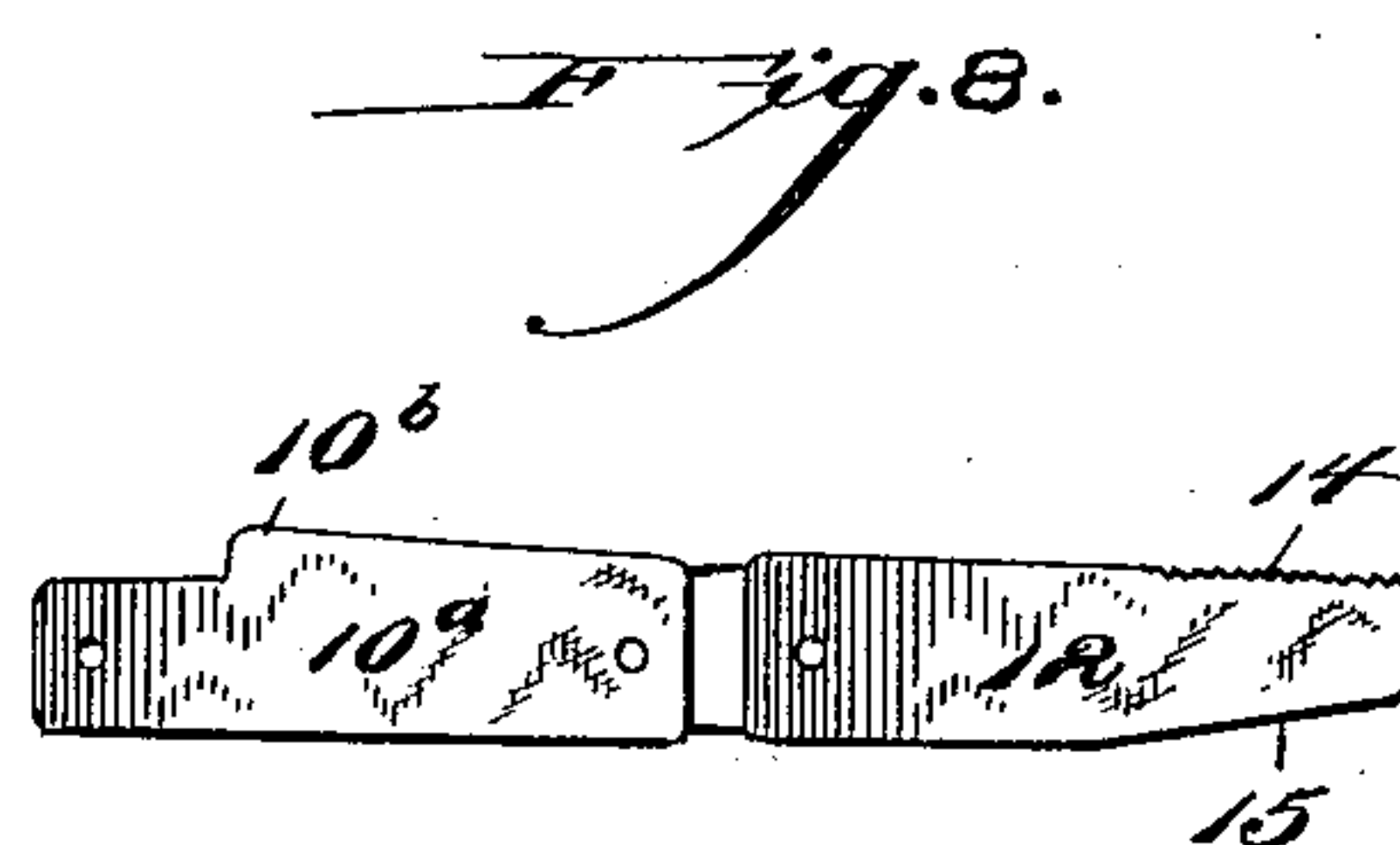
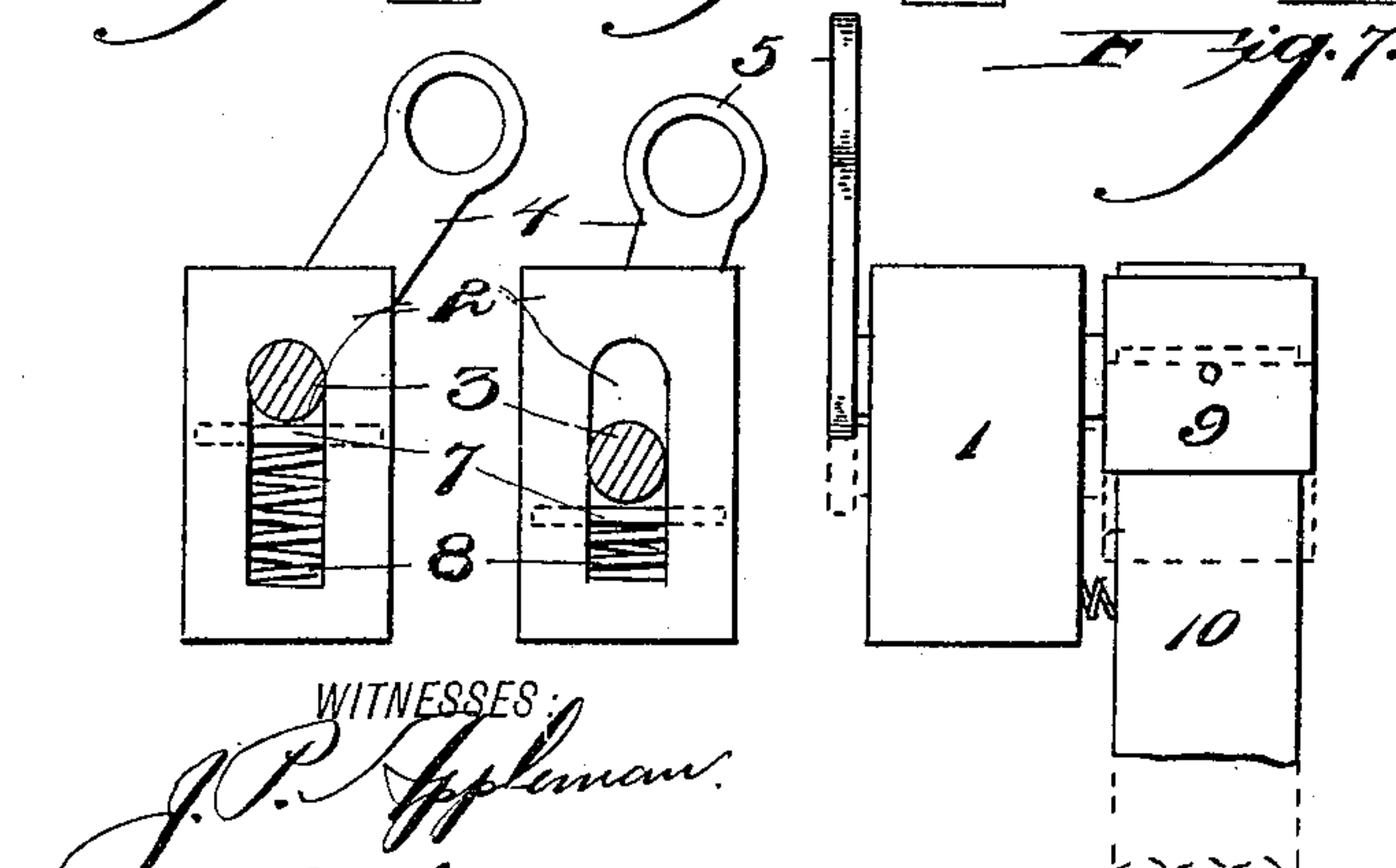
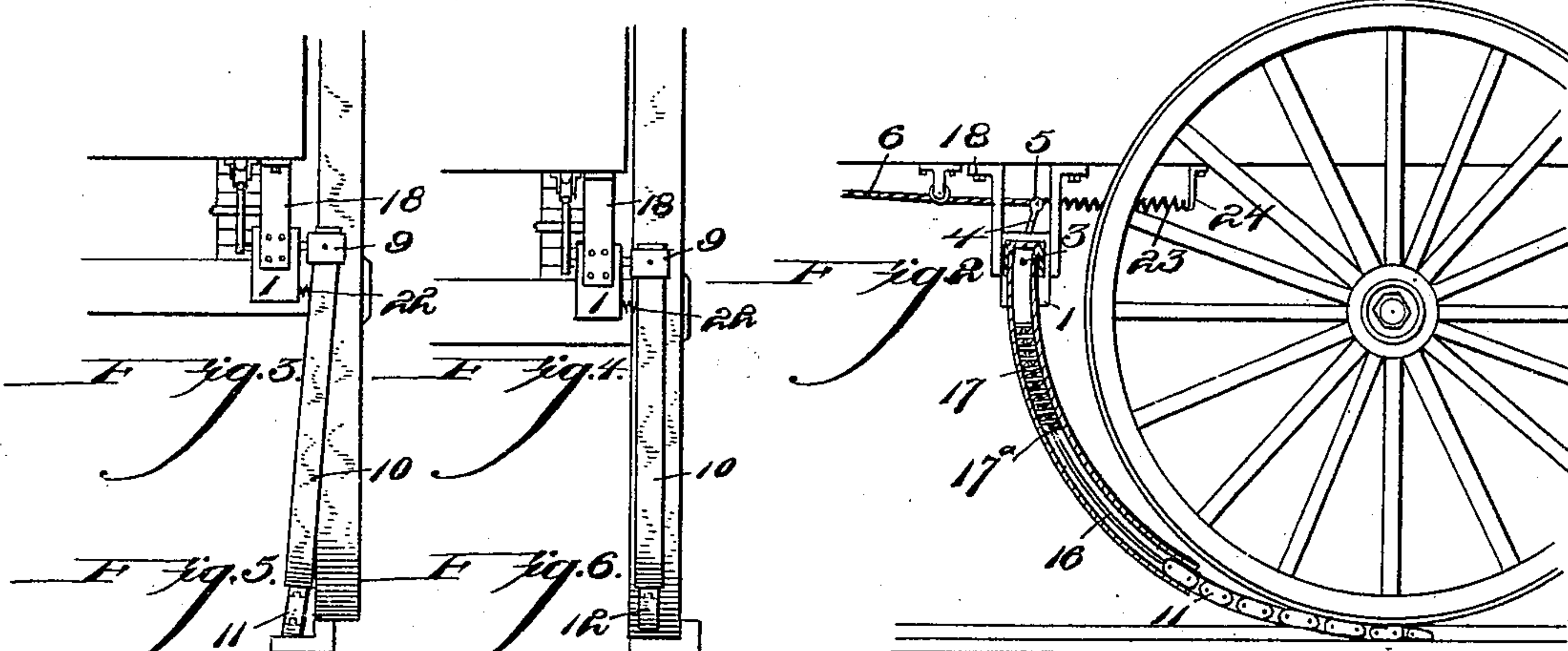
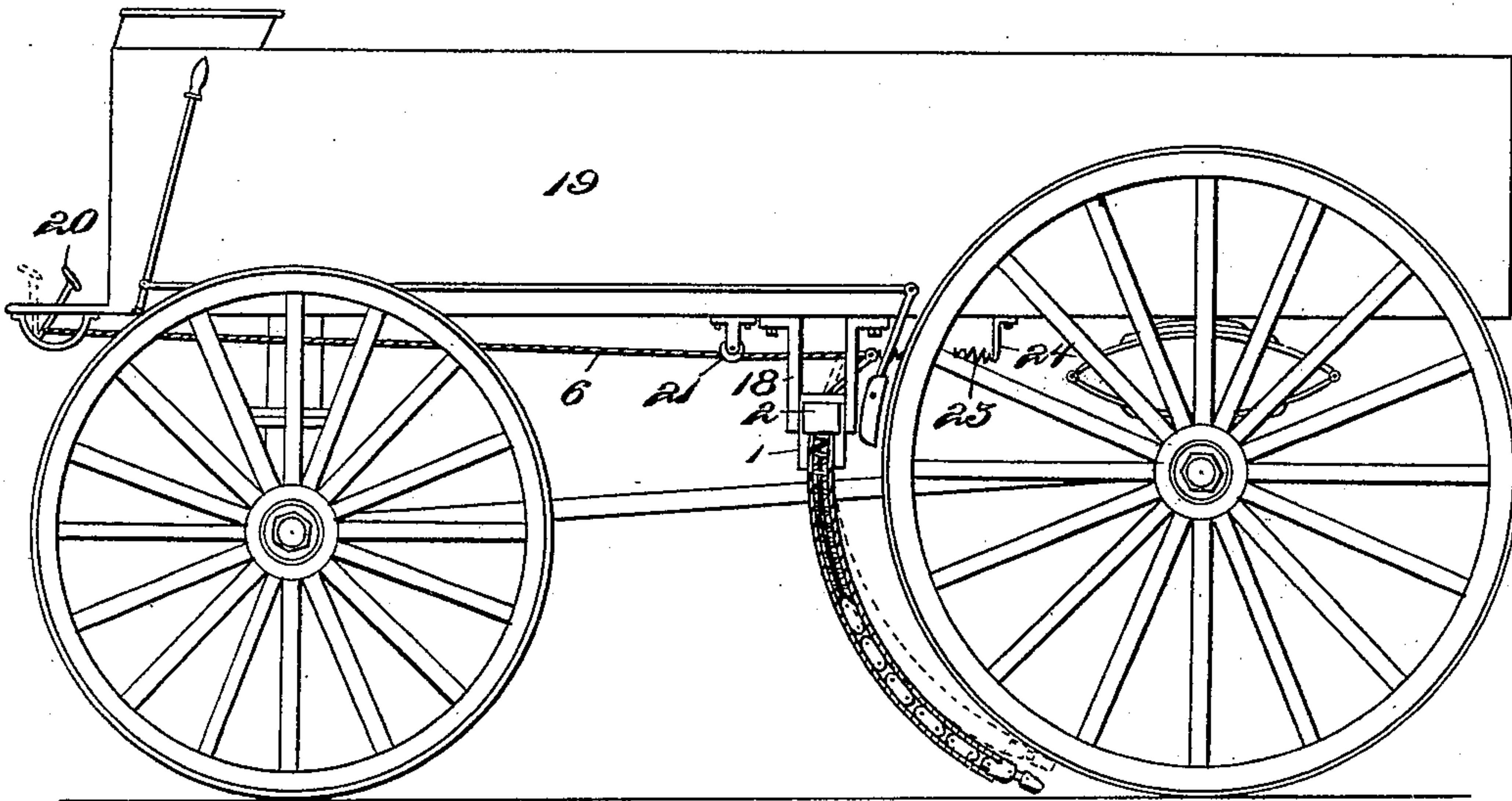
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DEVICE FOR THROWING WAGON WHEELS OFF CAR TRACKS.

(Application filed Apr. 30, 1898.)

(No Model.)

Fig. 1.



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DEVICE FOR THROWING WAGON-WHEELS OFF CAR-TRACKS.

SPECIFICATION forming part of Letters Patent No. 614,304, dated November 15, 1898.

Application filed April 30, 1898. Serial No. 679,309. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER F. HUMPHREY, a citizen of the United States of America, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Devices to Throw Hind Wheels of Wagons Off Car-Tracks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements for assisting the rear wheel of a wagon or other vehicle in passing readily off street-car tracks and the like.

The invention consists principally in a segment-shaped hollow tube which is supported from the wagon-bed or from any suitable point of the running-gear of the wagon and in which is arranged a chain adapted to be withdrawn from the tube by contact between the wagon-wheel and the rail and which is afterward drawn into the tube by a spring to which the said chain is attached.

Novel means are provided for operating the segment-shaped tube so as to bring the same into position that the end of the chain may be engaged by the wheel.

In the accompanying drawings, Figure 1 shows a side elevation of a wagon with my improved device in position, the segment-shaped tube being in section. Fig. 2 is a side view of a portion of the wagon, showing position of the chain when engaged by the wagon-wheel. Fig. 3 is a front view of the device, showing a portion of the wagon with the wheel elevated onto the head of the rail. Fig. 4 is a like view showing the position of the device before being engaged by the wheel. Fig. 5 is a side view of the journal-block for the operating-shaft, with the latter in section. Fig. 6 is a similar view showing the position of the shaft when the chain is engaged by the wheel. Fig. 7 is a front view of a portion of the device, showing operation of the operating-shaft and segment-shaped tube in dotted lines. Fig. 8 is a side view of the two outer links of the chain.

To put my invention into practice, I provide a journal-box 1, which is provided with a vertically-extending slot or journal-way 2 for the reception of the operating-shaft 3, having attached thereto a lever 4, which may be

formed upon its free end with an eyelet 5 to receive the operating cord or chain 6, or other suitable means may be employed for this purpose. This operating-shaft 3 is returned to its position after the pressure has been relieved by means of the plate 7, upon which the underneath face of the shaft rests, said plate being operated by a stiff tension-spring 8, arranged underneath the same. The shaft 3 extends through the journal-block 1 and connects rigidly with the head 9 of the segment-shaped tube 10. Within this latter is arranged a chain 11, the outer link 12 of which is preferably provided on its upper face with corrugations 14, and is or may be provided on its underneath face with a slight bevel 15, said corrugations serving to permit the wheel to readily engage the link, the bevel 15 causing the link to be slightly tilted as it is engaged by the wheel, so as to be bound firmly thereby. The inner end of this chain is connected by a cord or chain 16 to the upper end of the stiff coil-spring 17, which is arranged within the segment-shaped tube 10, so that as the wagon-wheel engages the chain and withdraws the same from its tube or casing until such time as it has passed onto the head of the rail the spring 17 will serve to retract the chain and draw the same into its tube or casing immediately upon its release from engagement with the wheel.

In the drawings I have shown the device as supported by two brackets 18, which are attached to the underneath side of the wagon-bed 19 and to the sides of the journal-box 1. The operating-cord may be attached to the foot-lever 20 at the front of the bed, as shown, or other means may be employed for performing this operation. As the operating cord or chain 6 is pulled forward it is depressed at the same time, so as to force the shaft 3 downwardly and cause the segment-shaped tube 10 to move inwardly toward the wheel, as shown in dotted lines in Fig. 1 by means of the pulley 21, which may be supported from the underneath side of the wagon-bed and is adapted to be engaged by the said operating cord or chain 6. Thus as the shaft 3 is forced downwardly the segment-shaped tube or casing is thrown toward the wheel, so that the outer links of the chain will come in engagement with the wheel between the same and

the rail and be withdrawn from the casing, as is shown in Fig. 2. This serves to elevate the wheel, so that the same will readily pass off the tread portion of the rail and onto the head portion thereof, and by reason of the links in the chain being of less thickness than the depth of the rail from its head to the tread portion the spring 17 will serve to instantly retract the chain into its segment tube or casing immediately upon the wheel of the wagon passing onto the head of the rail.

In order to hold the segment-shaped tube normally in its position, I may attach a coil-spring 22 to the same and to the journal-block 1, as shown, and I may also attach a retracting-spring 23 to the bracket 24, carried by the wagon-bed, and to the lever 4. In order to prevent the retracting-spring 17 from retracting the chain entirely within the segment-shaped casing, I provide the link 10^a of said chain (which is the one next to the outer link) with a shoulder 10^b, which comes in engagement with the end of the tube or casing and prevents the said chain passing farther therein. I also provide either an annular shoulder or projection 17^a on the inner face of the tube, against which the bottom of the spring 17 will rest, so as to cause the same to be compressed as the chain is being withdrawn by the wheel.

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

1. In a device of the character described, the combination of a journal-block, an operating-shaft passing through said journal-block, a lever connected to one end of said shaft and a segment-shaped tube rigidly connected to the other end, an operating cord or chain attached to said lever, a chain arranged within the tube and connected to the

retracting-spring, and supporting means for said tube, substantially as shown and described.

2. In a device of the character described, the combination with a tube or casing, of a chain arranged therein and connected to a retracting-spring, means for supporting said tube from the wagon-bed, and means for operating said tube so as to bring the chain into engagement with the outer periphery of the wagon-wheel, substantially as shown and described.

3. In a device of the character described, the combination of the tube or casing, means for supporting the same, a chain arranged therein and connected to a retracting-spring, means for limiting the retracting movement of said chain, an operating-shaft connected to the tube or casing, and means for operating said shaft so as to move the tube or casing and bring the outer end of the chain into engagement with the periphery of the wagon-wheel, substantially as shown and described.

4. In a device of the character described, the combination with a tube or casing, of a spring-retracted chain arranged therein, means for operating said tube or casing so as to bring the outer links of the chain into engagement with the periphery of the wagon-wheel, an operating-shaft, connections with said shaft whereby the same is operated to move the tube or casing, and a retracting-spring for the shaft to operate the same when the chain is withdrawn from engagement with the wagon-wheel, substantially as shown and described.

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

ALEXANDER F. HUMPHREY.

Witnesses:

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WILLIAM E. MINOR.