

No. 869,257.

PATENTED OCT. 29, 1907.

T. PARKER.
WHEEL LOCKING ATTACHMENT FOR TRAM CARS.
APPLICATION FILED NOV. 13, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

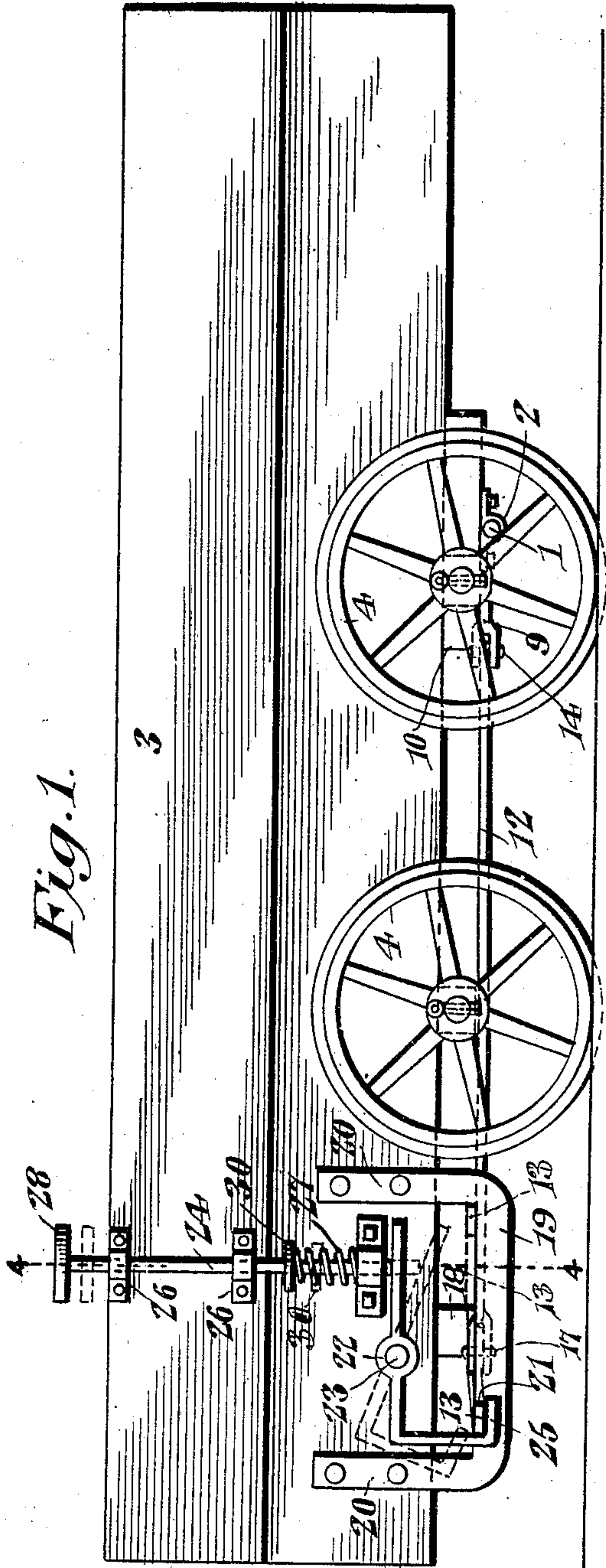


Fig. 3.

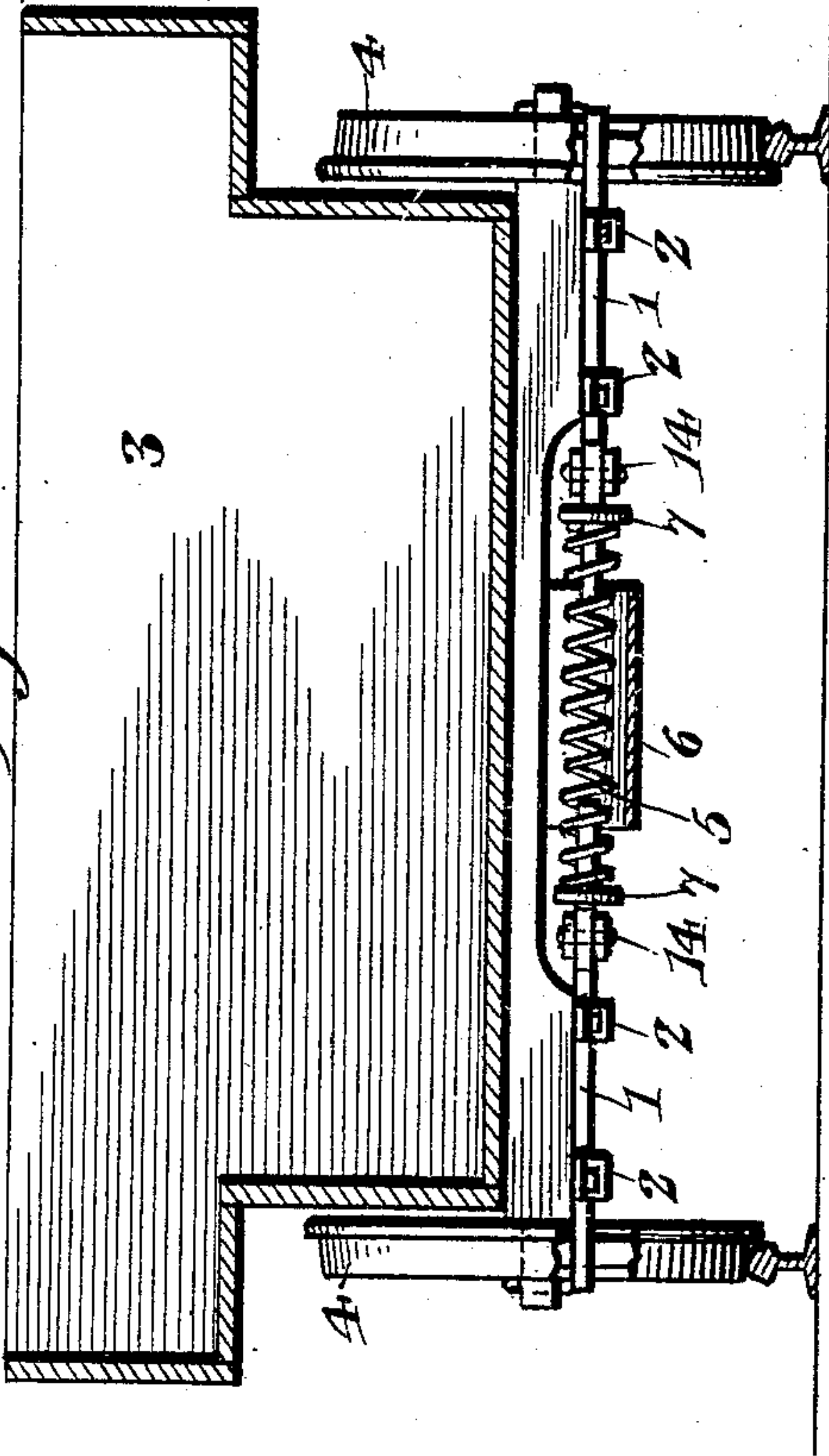
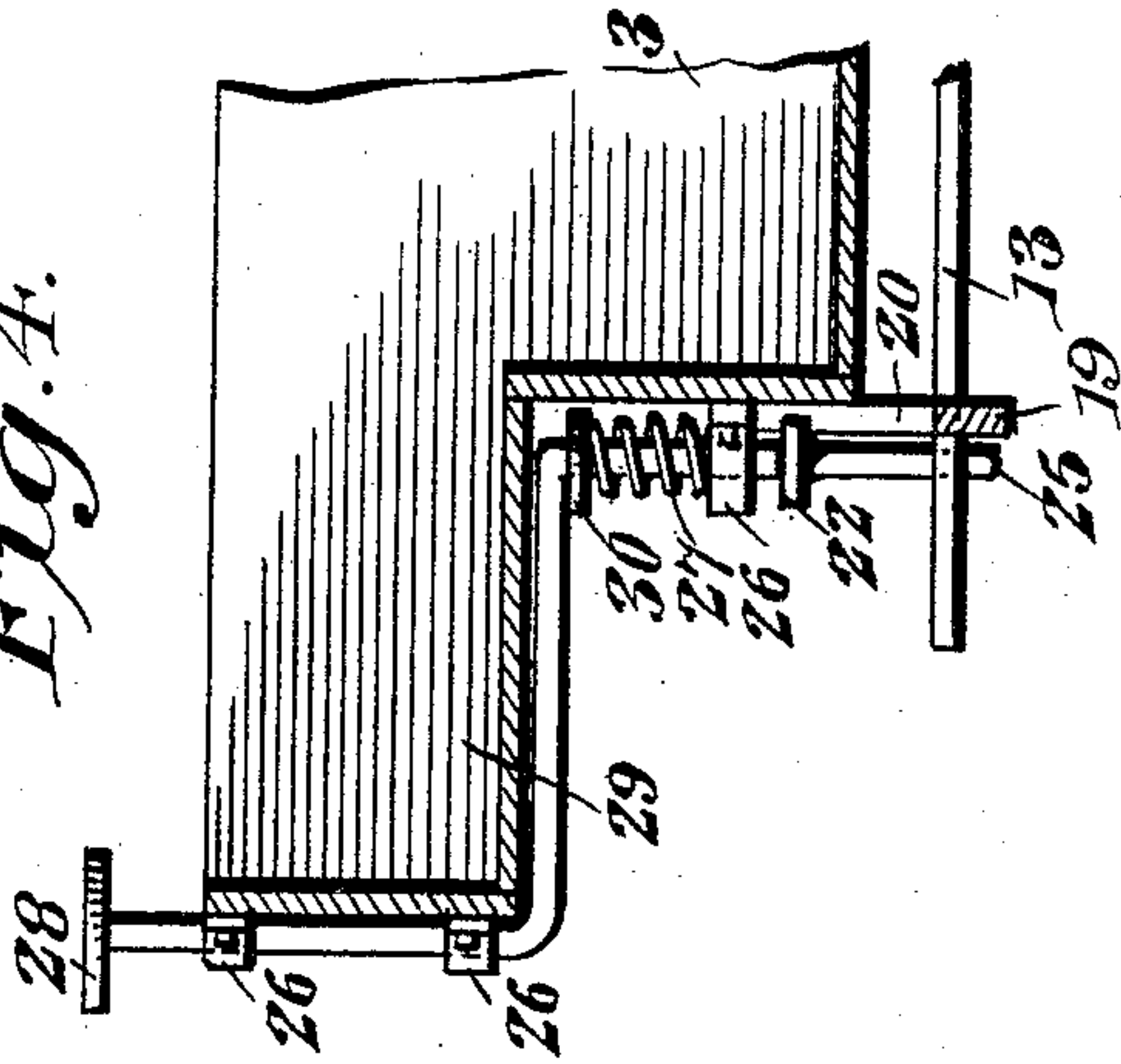


Fig. 4.



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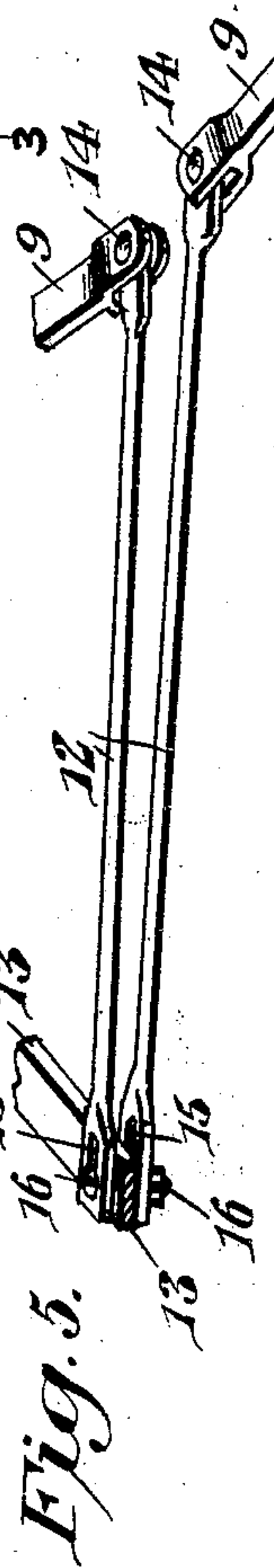
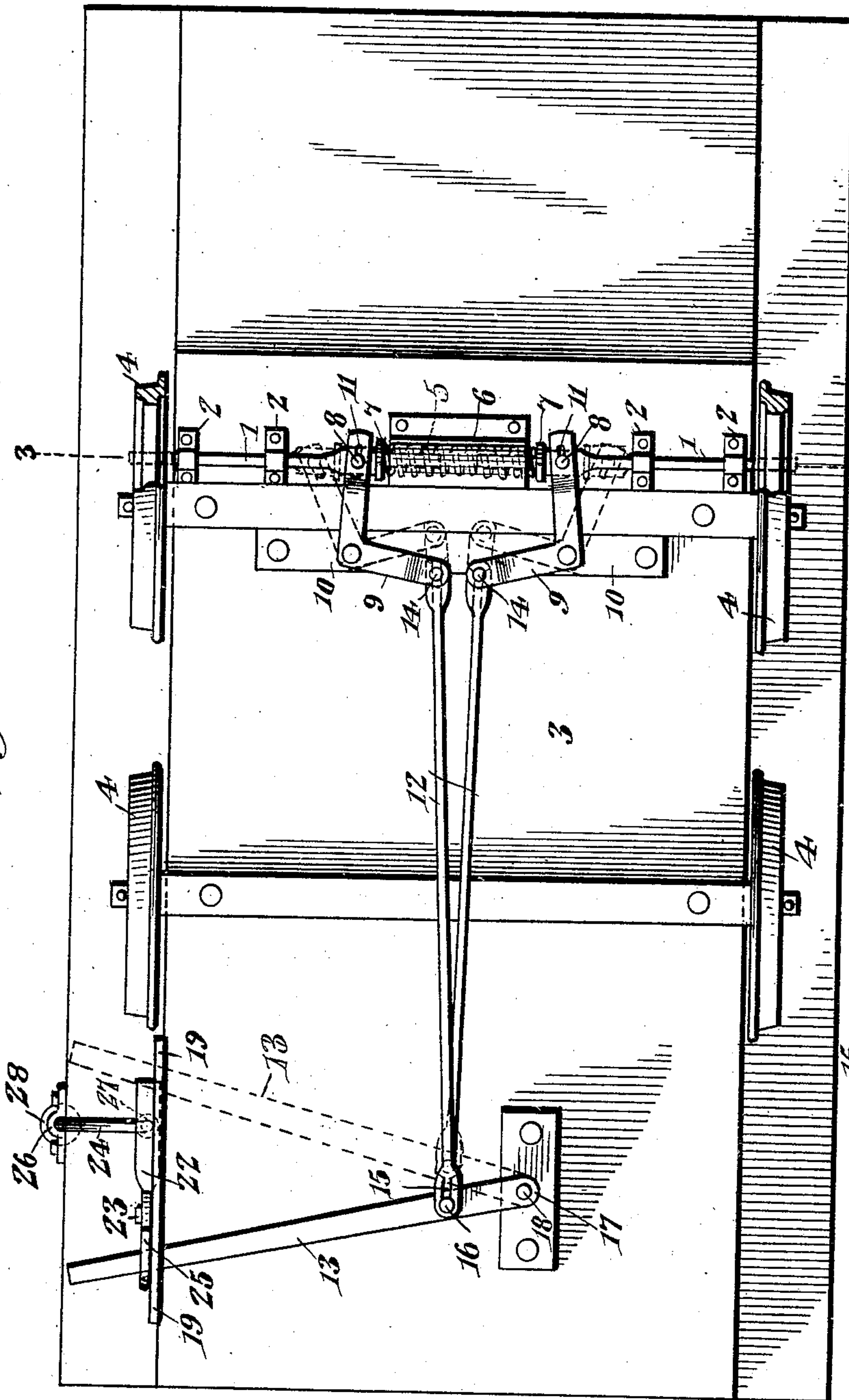
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2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

THOMAS PARKER, OF ALTOONA, ALABAMA, ASSIGNOR TO JASPER N. RICKLES, OF ALTOONA, ALABAMA.

WHEEL-LOCKING ATTACHMENT FOR TRAM-CARS.

No. 869,257.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed November 13, 1906. Serial No. 343,239.

To all whom it may concern:

Be it known that I, THOMAS PARKER, a citizen of the United States, residing at Altoona, in the county of Etowah and State of Alabama, have invented a new and useful Wheel-Locking Attachment for Tram-Cars, of which the following is a specification.

The invention relates to improvements in wheel locking attachments for tram cars.

The object of the present invention is to improve the construction of wheel locking attachments for tram cars, and to provide a simple, inexpensive and efficient device of great strength and durability adapted to be readily applied to a tram car, or similar vehicle and capable, when tripped, of automatically engaging the wheels and of locking the same against rotary movement for braking the car, when descending a grade or incline.

The invention also has for its object to provide a device of this character, which may be readily disengaged from the wheels of a car and reset.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a side elevation of a tram car provided with a wheel locking attachment, constructed in accordance with this invention. Fig. 2 is a reverse plan view of the same. Fig. 3 is a transverse sectional view, taken substantially on the line 3—3 of Fig. 2. Fig. 4 is a sectional view, taken substantially on the line 4—4 of Fig. 1. Fig. 5 is a detail view, illustrating the construction for connecting the rear wheel crank levers with the front side lever.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a pair of slidable locking pins or rods, mounted in suitable guides 2, which are secured to the bottom of the body 3 of a tram or mining car, and which may be of any preferred construction. The locking rods, when free to move outwardly, are automatically thrown into engagement with two of the wheels 4 of the car by means of a coiled spring 5, interposed between the inner portions of the rods, and arranged within a suitable casing or housing 6. The inner ends of the rods are preferably extended into the coiled spring, which bears against flanges 7, secured to the locking rods at the inner portions thereof, but any other form of abutment for the spring may be employed. The locking rods may be arranged to engage either the front or rear wheels of a car, and when ex-

tended, they project between the spokes of the wheels, or otherwise engage the same, whereby the wheels are locked against rotary movement. The wheels, when locked, will operate as a brake to retard the movement of the car down a steep grade or incline.

The inner portions of the rods are connected by pivots 8 with bell crank levers 9, which are fulcrumed at their angles preferably on a transverse bar 10, secured to the bottom of the body 3 of the car, but any other form of support may be provided for the levers, as will be understood. Two of the arms of the bell crank levers extend rearwardly, and are provided with slots or openings 11 for the reception of the pivots 8, and the other arms of the levers extend inwardly, being disposed transversely of the car, as clearly illustrated in Fig. 2 of the drawings. The inwardly extending arms of the bell crank levers are connected to the rear ends of a pair of longitudinal rods 12, which are connected at their front ends to a setting lever 13. The rear ends of the rods are enlarged and are secured in bifurcations of the transverse arms of the bell crank levers by suitable pivots 14, and the front ends of the connecting rods 12 are provided with longitudinal slots 15 for the reception of a pivot 16. These slots permit the locking rods to move independently of each other in engaging the wheels.

The setting lever 13, which is disposed transversely of the car, is pivoted at its inner end 17 to a block 18, or other suitable support, and its outer portion extends through a substantially U-shaped keeper 19, consisting of a horizontal bottom portion and upwardly extending sides 20, which are secured to the body of the car at one side thereof, as clearly shown in Fig. 1 of the drawings. The bottom portion of the keeper is provided near its outer end with a notch 21, located at the upper edge of the said bottom portion, and arranged to receive the setting lever, whereby the locking rods are held in a retracted position against the action of the spring, which is compressed, when the locking rods are withdrawn from engagement with the wheels of the car. The outer end of the setting lever projects beyond the keeper, and it is disengaged from the shoulder at the inner end of the notch 21 by means of a tripping lever 22.

The tripping lever 22 is fulcrumed between its ends on the body of the car at a point between the upwardly extending sides of the keeper by a suitable pivot 23. One arm of the lever is straight and extends inwardly beneath an operating rod 24, and the other arm is provided with a depending L-shaped portion 25, which extends beneath the outer end of the setting lever 13, when the latter is in engagement with the notch 21 of the keeper. The operating rod, which is mounted in suitable guides 26, is supported in an elevated position by a coiled spring 27, and it is provided at its upper end with a head or button 28, which is adapted to be struck

with the hand for operating the tripping lever to lift the setting lever out of engagement with the shoulder of the keeper. The guides 26, which may be of any suitable construction, are secured to the adjacent side of the body of the car, which has an outwardly projecting upper portion 29, and the operating rod is angularly bent to conform to the configuration of the body of the car, as clearly shown in Fig. 4 of the drawings. The operating rod is composed of vertical upper and lower portions, and an intermediate horizontal connecting portion. The lower vertical portion receives the coiled spring 27, which engages a flange or collar 30 for supporting the operating rod in an elevated position. The lower end of the spring bears against the guide, which receives the lower portion of the operating rod. A sudden blow on the head or button 28 will throw the setting lever out of engagement with the keeper, and the spring 5 will automatically move the locking rods into engagement with the wheels of the car. The locking rods may be readily withdrawn from engagement with the wheels by swinging the setting lever outwardly or forwardly from the position illustrated in dotted lines in Fig. 2 of the drawings to that shown in full lines in said figure.

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

1. In an attachment of the class described, the combination of spring actuated wheel engaging rods, levers connected to the rods, a setting lever connected with the said levers, and means for holding and for tripping the setting lever. 30
2. In an attachment of the class described, the combination of spring actuated wheel engaging rods, levers connected to the rods, a setting lever, means for connecting the said levers to permit the first mentioned levers to move independently of each other, and means for holding and for tripping the setting lever. 35
3. In an attachment of the class described, the combination of spring actuated wheel engaging rods, a setting lever, connecting rods having a slot and pin connection with the said lever to permit them to move independently of each other, and means for connecting the latter rods with the wheel engaging rods. 40
4. In an attachment of the class described, the combination of opposite spring actuated wheel engaging rods, bell crank levers connected with the rods, a setting lever, and connecting rods extending from the bell crank levers to the setting lever and having a limited independent movement to permit an independent movement of the wheel engaging rods. 45
5. In an attachment of the class described, the combination with a wheel engaging rod, of a setting lever connected with the rod, a keeper receiving the setting lever and provided with means for engaging the same, and tripping mechanism for disengaging the setting lever from the keeper. 50

6. In an attachment of the class described, the combination with a wheel engaging rod, of a setting lever connected with the rod, a keeper provided with means for engaging the setting lever, a tripping lever having an arm arranged to lift the setting lever out of engagement with the keeper, and operating mechanism for the tripping lever. 60

7. In an attachment of the class described, the combination with a wheel engaging rod, a setting lever connected with the rod, a keeper provided with means for engaging the setting lever, a tripping lever having an arm arranged to lift the setting lever out of engagement with the keeper, and a spring supported operating rod arranged to engage and actuate the tripping lever. 65

8. In an attachment of the class described, the combination of a wheel engaging rod, a setting lever connected with the rod, a keeper having a shoulder for engaging the setting lever, a tripping lever fulcrumed at an intermediate point and provided at one of its arms with a substantially L-shaped portion arranged to lift the setting lever out of engagement with the keeper, and an operating rod for actuating the tripping lever. 70

9. In an attachment of the class described, the combination of a wheel engaging rod, a setting lever connected with the rod, a substantially U-shaped keeper having a shoulder for engaging the setting lever, a tripping lever provided with an arm arranged to lift the setting lever out of engagement with the shoulder of the keeper, and a yieldably supported operating rod arranged to engage the tripping lever for actuating the same. 75

10. In an attachment of the class described, the combination of opposite spring actuated wheel engaging rods, bell crank levers connected with the rods, a setting lever connected with the bell crank levers, a keeper provided with means for engaging the setting lever for holding the rods out of engagement with the wheels of a car, a tripping lever having an arm arranged to lift the setting lever out of engagement with the keeper, and a yieldably supported operating rod arranged to engage and actuate the tripping lever. 80

11. In an attachment of the class described, the combination of opposite locking bars, a transverse setting lever fulcrumed at its inner end, means for connecting the rods with the setting lever, means for automatically actuating the rod to move the same in engagement with the wheels, a keeper for engaging the outer portion of the lever, and tripping mechanism located at the outer portion of the lever for releasing the same. 85

12. In an attachment of the class described, the combination with a car, of wheel engaging rods, a spring for moving the rods outwardly, a horizontally disposed setting lever, means for connecting the setting lever with the rods for moving the same inwardly against the action of the spring and for placing the lever under tension when the rods are retracted, a keeper for holding the setting lever, and tripping mechanism mounted on the car and arranged to disengage the setting lever from the keeper to permit the lever and the rods to be actuated by the spring. 90

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 95

THOMAS PARKER.

Witnesses:

BERTHA TRAYWICK,
C. A. JOHNSON.