

W. H. LEFEVRE.  
MAIL CAR FORK.  
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917,775.

Patented Apr. 13, 1909.

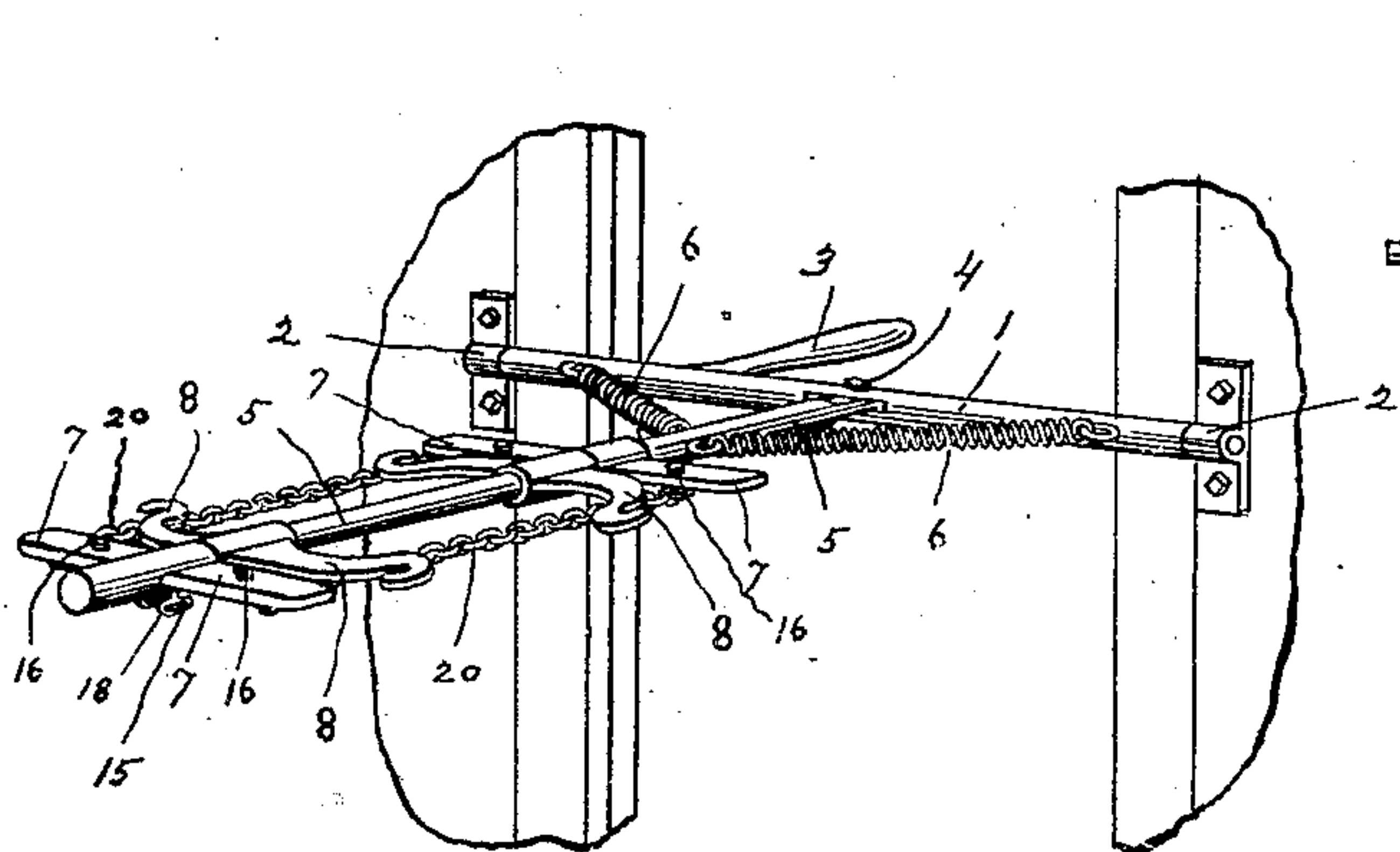


Fig. 1.

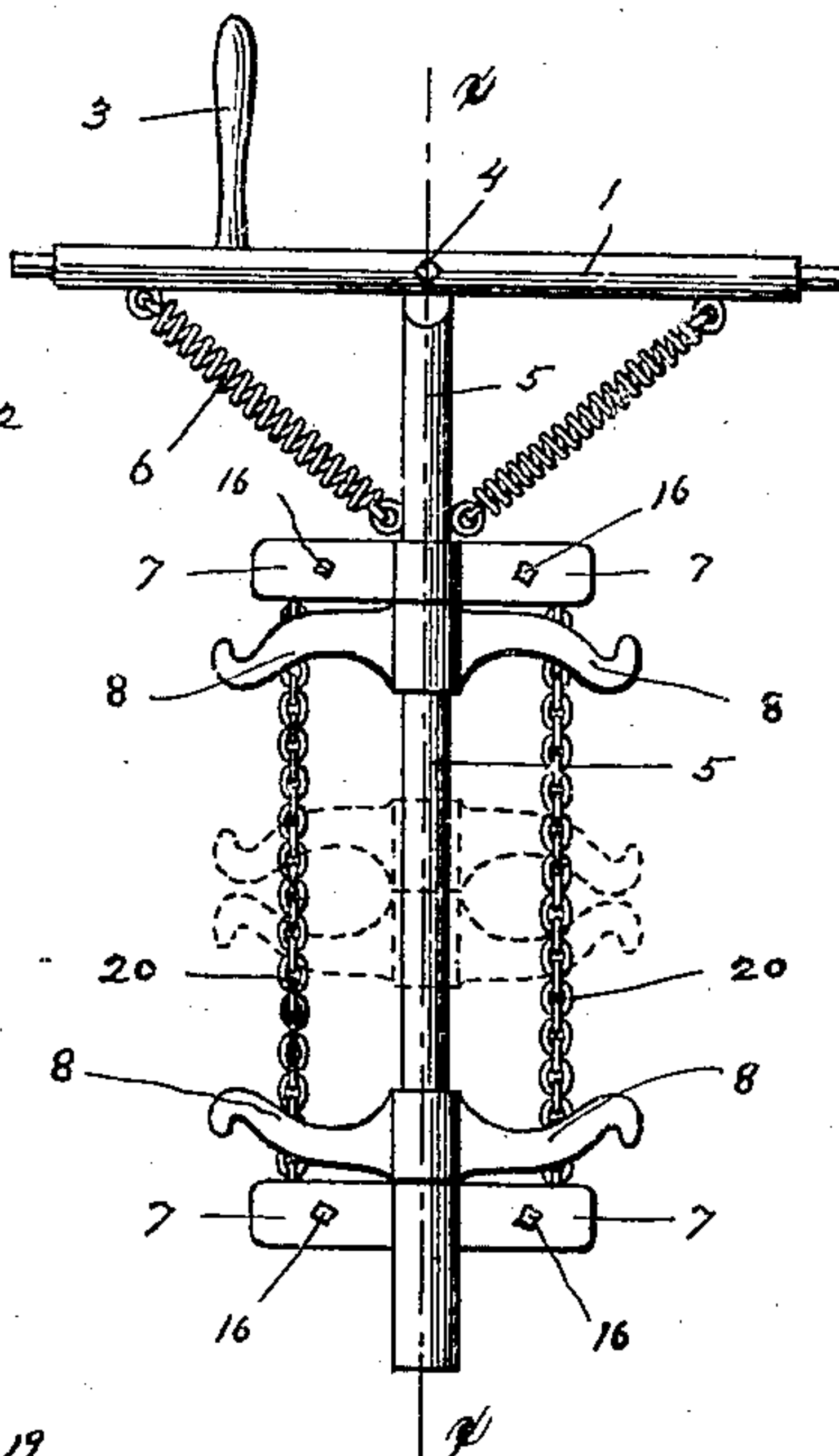


Fig. 2.

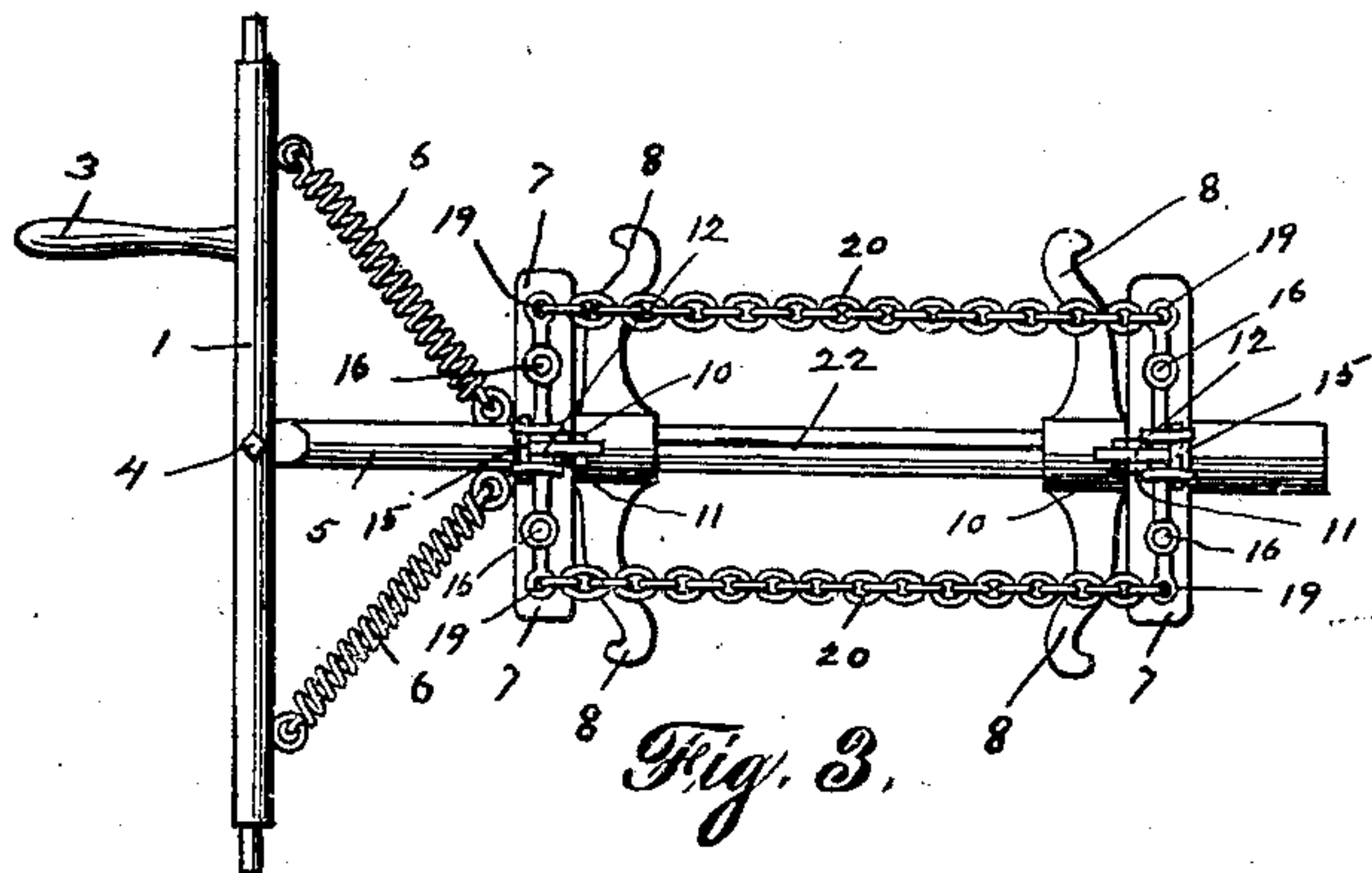


Fig. 3.

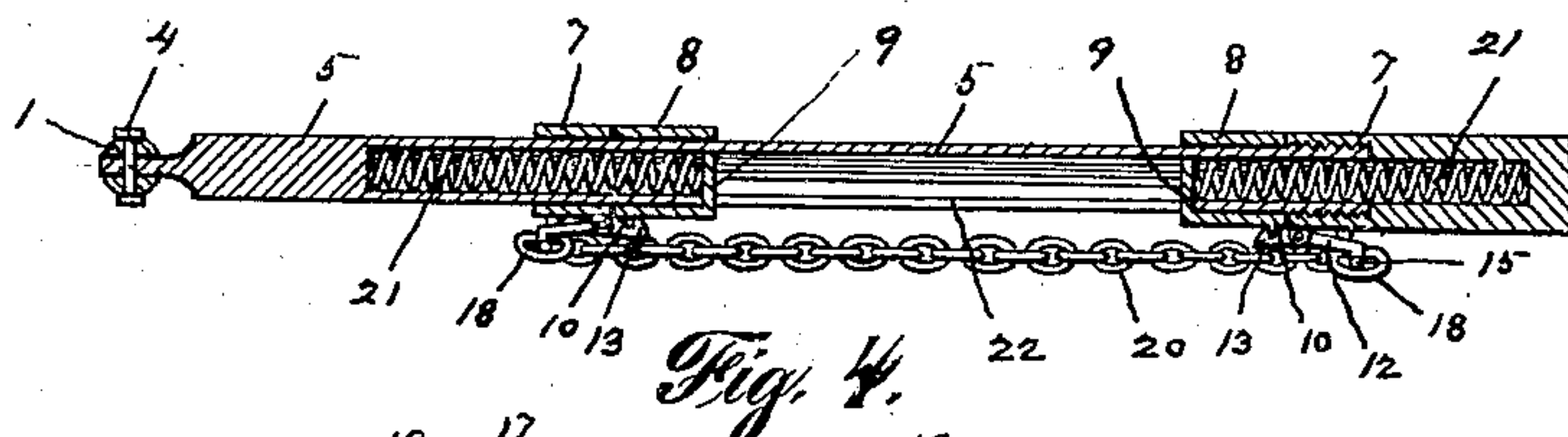


Fig. 4.

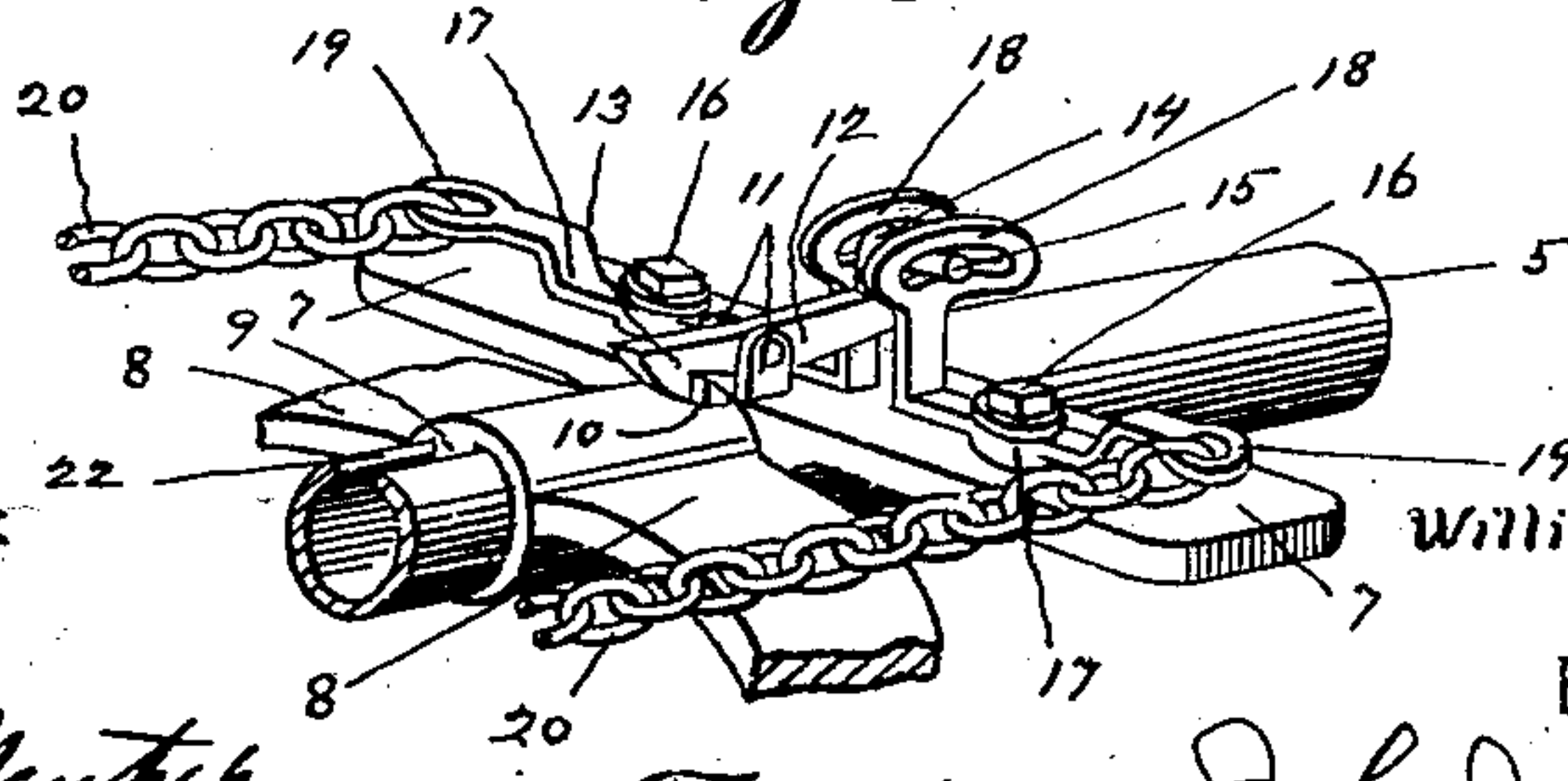


Fig. 5.

WITNESSES:  
Mabel L. Lefevre.

Frank P. Moutz.

INVENTOR

Willis H. Lefevre.

BY

John J. Thompson  
ATTORNEY



# UNITED STATES PATENT OFFICE.

WILLIS H. LEFEVRE, OF LANCASTER, PENNSYLVANIA.

## MAIL-CAR FORK.

No. 917,775.

Specification of Letters Patent.

Patented April 13, 1909.

Application filed November 6, 1908. Serial No. 461,269.

*To all whom it may concern:*

Be it known that I, WILLIS H. LEFEVRE, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Mail-Car Forks, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to car forks of that class that are detachably mounted within the doorway of mail cars and designed for catching the mail pouches from the crane situated alongside the track.

The objects of my invention are to produce a simple, cheap, durable and effective device of this class and one in which is provided a gripping means whereby as the mail pouch comes into contact with the fork, it automatically releases the gripping mechanism, and the pouch is firmly held until released by the messenger, and the danger of the pouch rebounding from the fork and falling to the ground, as is often the case with the present style of car fork, is avoided, while another object of my invention is to produce an automatic gripping or retaining fork of this class that may be operated in either direction that the train is traveling, or from either side of the car without special adjustment, and also a device of this class containing few parts and having its operating mechanism so placed as to be fully protected from the elements.

With these and other objects in view my invention consists in certain construction and combination of parts as will be fully described and claimed in the annexed specification, reference being had to the accompanying drawing forming part of this application, and in which like figures of reference refer to corresponding parts in all the views, but it is fully understood that I do not confine myself to the exact construction as shown, as slight changes may be made without departing from the spirit of the invention.

In the drawing:—Figure 1, is a perspective view of my improved fork extended from the car door in a position for catching a pouch. Fig. 2, is a top plan view, showing the jaws open and also in dotted lines in a closed position. Fig. 3, is a bottom plan view, showing the operating mechanism. Fig. 4, is a sectional view, taken on the line X—X of Fig. 2, and shows the operating

springs, etc. Fig. 5, is an enlarged partial view of one of the jaw-retaining catches and releasing mechanism.

Referring to the drawing, 1, indicates the supporting bar, which is pivotally mounted in the bearings 2, which are attached to the sides of the car door-way; while attached to said bar 1, and forming a part thereof, is the operating handle 3, which extends at right angles to said bar within the car. At a suitable point upon said bar 1, is pivoted by the pin 4, the rear end of the arm 5, and also to which are secured the stay-springs 6, in such a manner as to provide a certain amount of elasticity to the arm 5, in relation to the bar 1, as the pouch strikes it, thus tending to prevent its being bent or broken. The arm 5, as herewith shown, is hollow throughout the greater part of its length and provided with the slot 22, upon its under side; while upon said arm 5, near the ends thereof, are rigidly secured the cross-arms 7, and slidably mounted upon said arm 5, between said cross-arms 7, are the gripping jaws 8, which are formed with the tongue 9, which extends through the slot 22, serving as a guide and to restrain the jaws 8, from rotating upon the arm 5. The body portions of said jaws 8, are provided with the lugs 10, near the rear end thereof, and mounted within the brackets 11, secured to the cross-arms 7, are the catches 12, which are formed with the hooked nose 13, adapted to engage said lugs 10, and the angular rear end 14, which is provided with the transverse pin 15; while pivoted by the studs 16, upon the cross-arms 7, are the release arms 17, which are formed with circular slotted arms 18, adapted to embrace said transverse pin 15, while the outer ends 19, are connected by the trip chains or cables 20. Contained within the arm 5, with their ends in contact with the ends of said arm and the tongue 9, of the cross-arms 7, are the compression springs 21, which serve to force jaws 8, toward each other to grasp and retain the pouch when said springs are released.

The operation of the device is as follows:—The jaws 8, being forced apart by the operator or messenger against the action of the springs 21, are held in place by the catches 12, which engage the lugs 10. The arm 5, now being extended at right angles to the car by the messenger and in position to catch the mail pouch from the crane, the pouch as it hits the arm will at about the same instant



come into contact with the trip chain 20, which being forced toward the arm 5, by the pouch will exert a pull upon the lever ends of the release-arms 17, which will move the  
 5 slotted arms 18, in such a manner that the pins 15, will follow the direction of said slot and be depressed and thus disengage the hooked noses 13, of the catches 12, from the lugs 10, and allow the springs 21, to  
 10 force the jaws 8, together to grip and retain the pouch.

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

15 1. In a device of the class described, comprising a supporting bar, a catching arm adjustably secured thereto, means for cushioning the lateral movement of said arm, means for gripping and retaining the pouch when  
 20 caught, means for automatically operating said gripping mechanism, and means for retaining said mechanism in a set position.

2. In a device of the class described, comprising a removable supporting bar, a catching  
 25 arm formed with a recess in the body thereof, and a longitudinal slot communicating with said recess and having one end of said arm pivoted to said bar, lateral compensating springs having their ends secured  
 30 to said bar and to said arm, gripping jaws slidably mounted upon said arm, means for retaining said jaws in a set position, means for bringing said jaws together, and means for automatically releasing the retaining  
 35 mechanism of said jaws.

3. In a device of the class described, comprising a supporting bar, detachably secured to the car, an extending catching arm formed with a recess in the body thereof and a communicating slot in the under surface thereof,  
 40 and having one of its ends pivoted to said supporting bar, tension springs having their ends secured to said supporting bar and to said catching arm, gripping jaws formed  
 45 with opposed arms and a cylindrical body adapted to embrace and slide upon said supporting arm, a tongue formed upon said cylindrical body portion and adapted to extend through the slot in said supporting arm  
 50 and guide the action of said jaw upon said arm, means for retaining said jaws in a set

position and means for automatically releasing said jaws.

4. In a device of the class described, in combination with a supporting bar hingeably  
 55 and detachably mounted within the doorway of the car, of a catch arm pivoted thereto and formed with a recessed body and a longitudinal slot communicating therewith and upon the under side thereof, gripping  
 60 jaws slidably mounted upon said arm, a tongue formed within the body of said jaws and extending through the slot in said arm, a lug formed upon the outer surface of the body of said jaws, cross bars secured upon  
 65 said arm at right angles thereto and without said jaws, catches formed upon said cross bars and formed with a hooked nose to engage said lug upon said jaws, said catches formed with an angular rear portion extend-  
 70 ing upward from the body of said catch and provided with a transverse pin, and means for automatically operating said catches.

5. In a device of the class described, comprising a pouch catching arm pivotally and  
 75 detachably mounted upon the car and provided with shock absorbing means and a recess in the body thereof, gripping jaws slidably mounted upon said arm and provided with a guide tongue sliding in said re-  
 80 cess, compression springs contained within said recess with their ends in contact with the tongue of said jaws for the purpose of forcing said jaws toward each other; cross-arms secured upon said catching arm near  
 85 the ends thereof, catches mounted upon said cross-arms and formed with a hooked nose to engage said jaws and a body portion provided with a transverse pin, releasing levers pivoted upon said cross-arms and provided  
 90 with angular ends formed with circular orifices adapted to engage and operate said pins in a vertical manner, trip chains having their ends secured to said releasing levers and parallel to said catching arms, all for the pur-  
 95 pose set forth.

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

WILLIS H. LEFEVRE.

Witnesses:

ANNIE E. ROSS,  
 LIZZIE M. ROSS.