

R. W. LOMAX.
 APPARATUS FOR DELIVERING MAIL TO MOVING CARS.
 APPLICATION FILED OCT. 13, 1910.

978,911.

Patented Dec. 20, 1910.

3 SHEETS—SHEET 1.

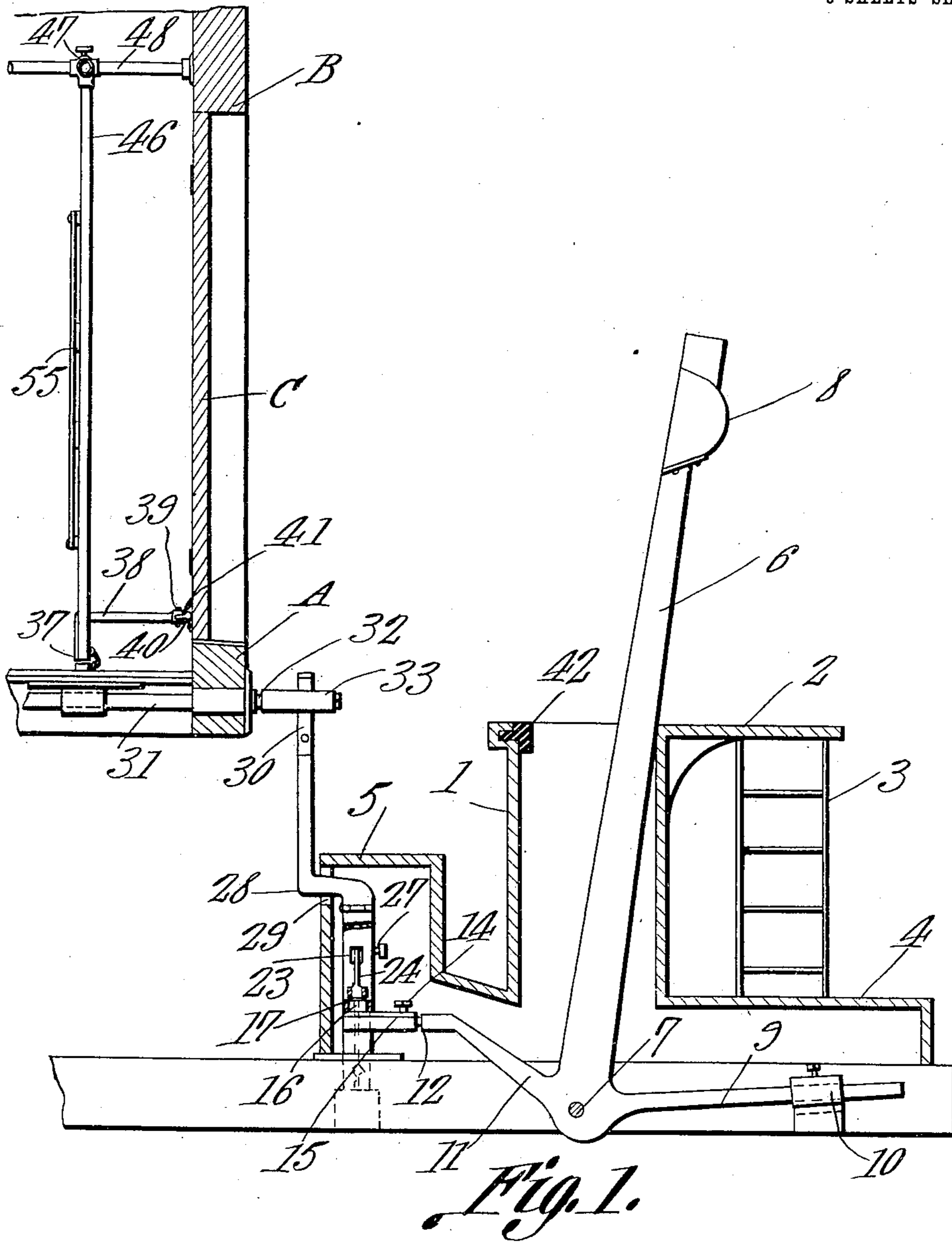


Fig. 1.

Witnesses

J. J. Downing
Arthur D. Lawson

Roger W. Lomax,
 Inventor

by *C. A. Snow & Co.*
 Attorneys

R. W. LOMAX.
 APPARATUS FOR DELIVERING MAIL TO MOVING CARS.
 APPLICATION FILED OCT. 13, 1910.

978,911.

Patented Dec. 20, 1910.

3 SHEETS—SHEET 2.

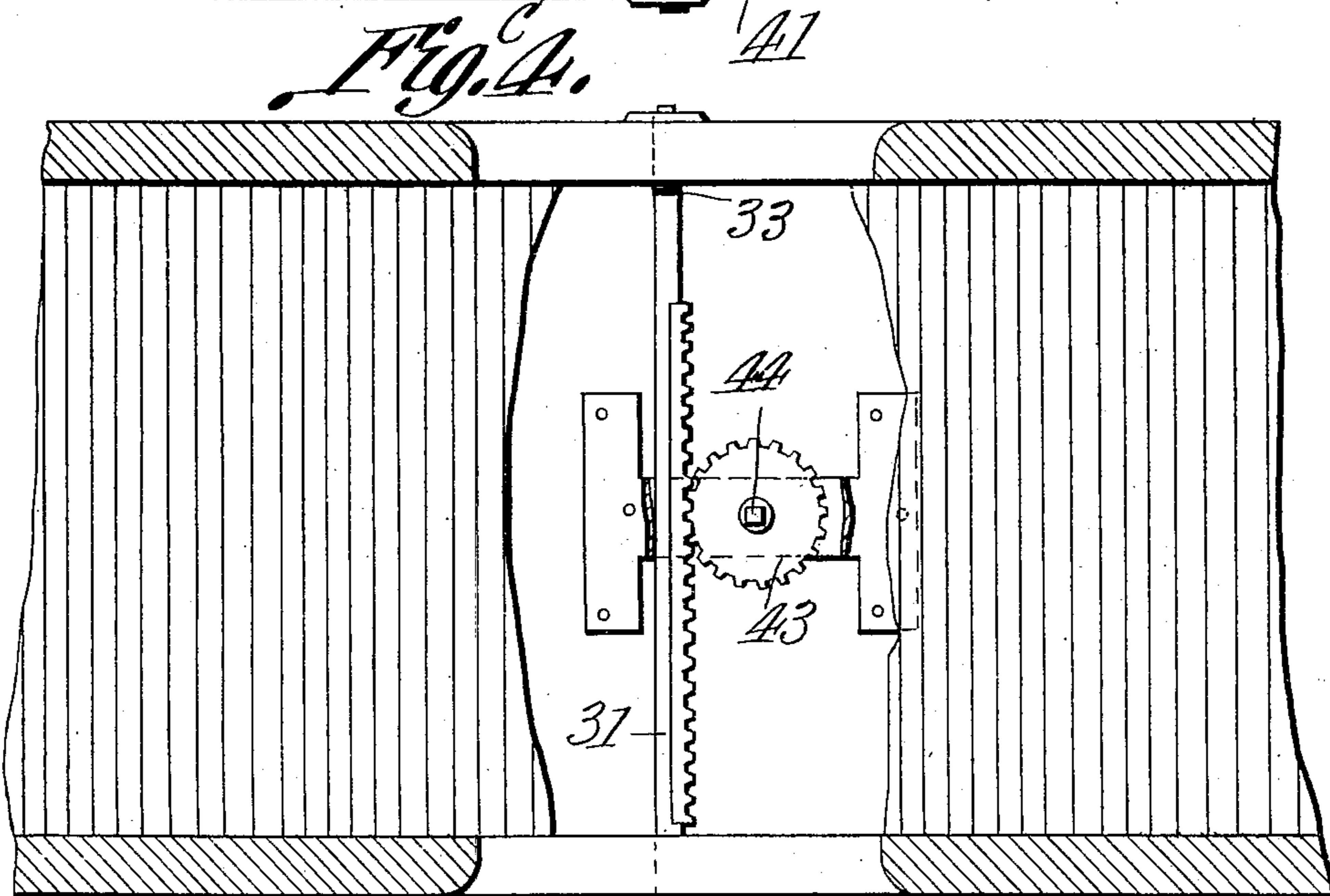
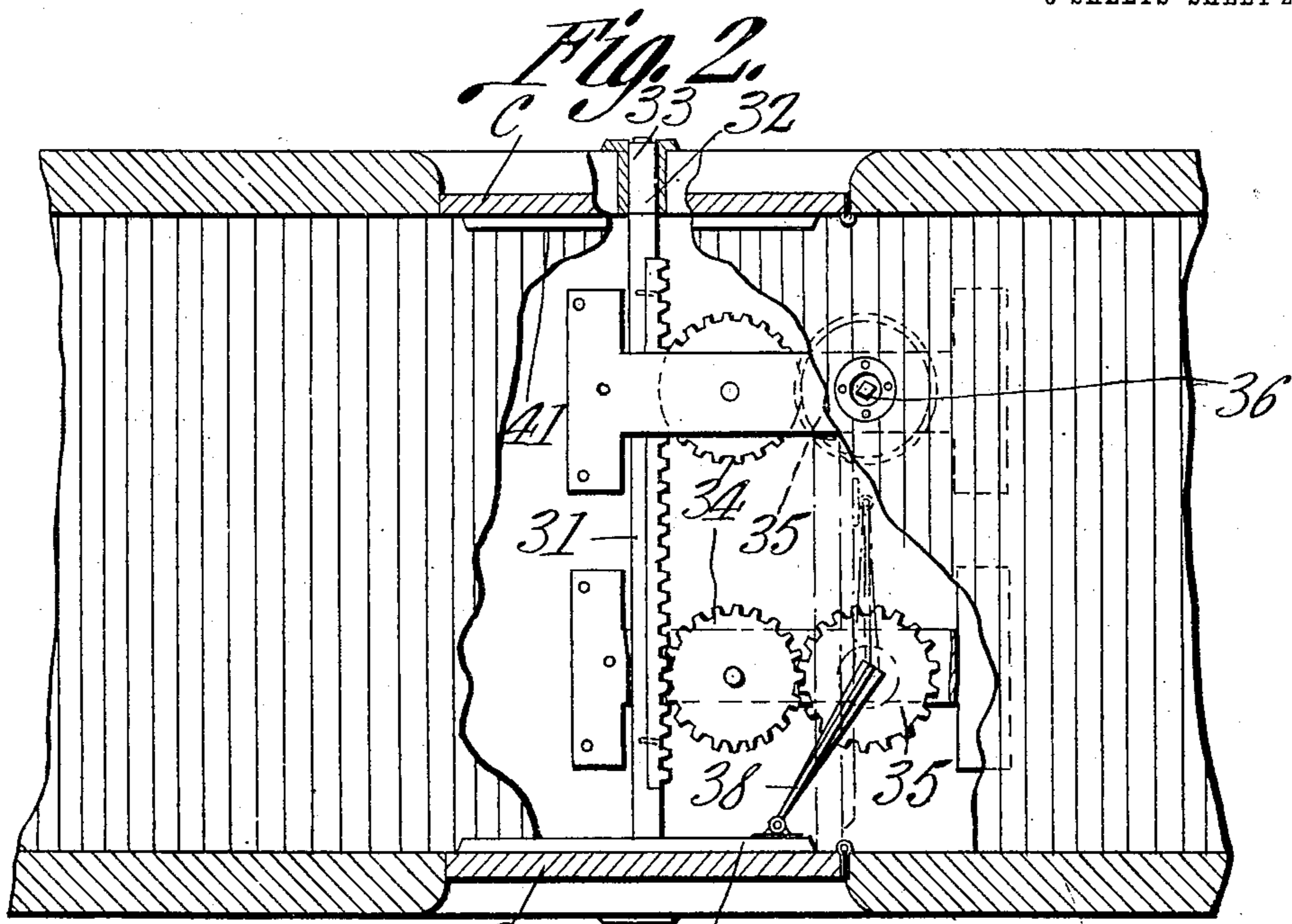


Fig. 5.

Witnesses
J. D. Dooling
Robert D. Lawson

Roger W. Lomax,
 Inventor
 by *C. A. Snow & Co.*
 Attorneys

R. W. LOMAX.
 APPARATUS FOR DELIVERING MAIL TO MOVING CARS.
 APPLICATION FILED OCT. 13, 1910.

978,911.

Patented Dec. 20, 1910.

3 SHEETS—SHEET 3.

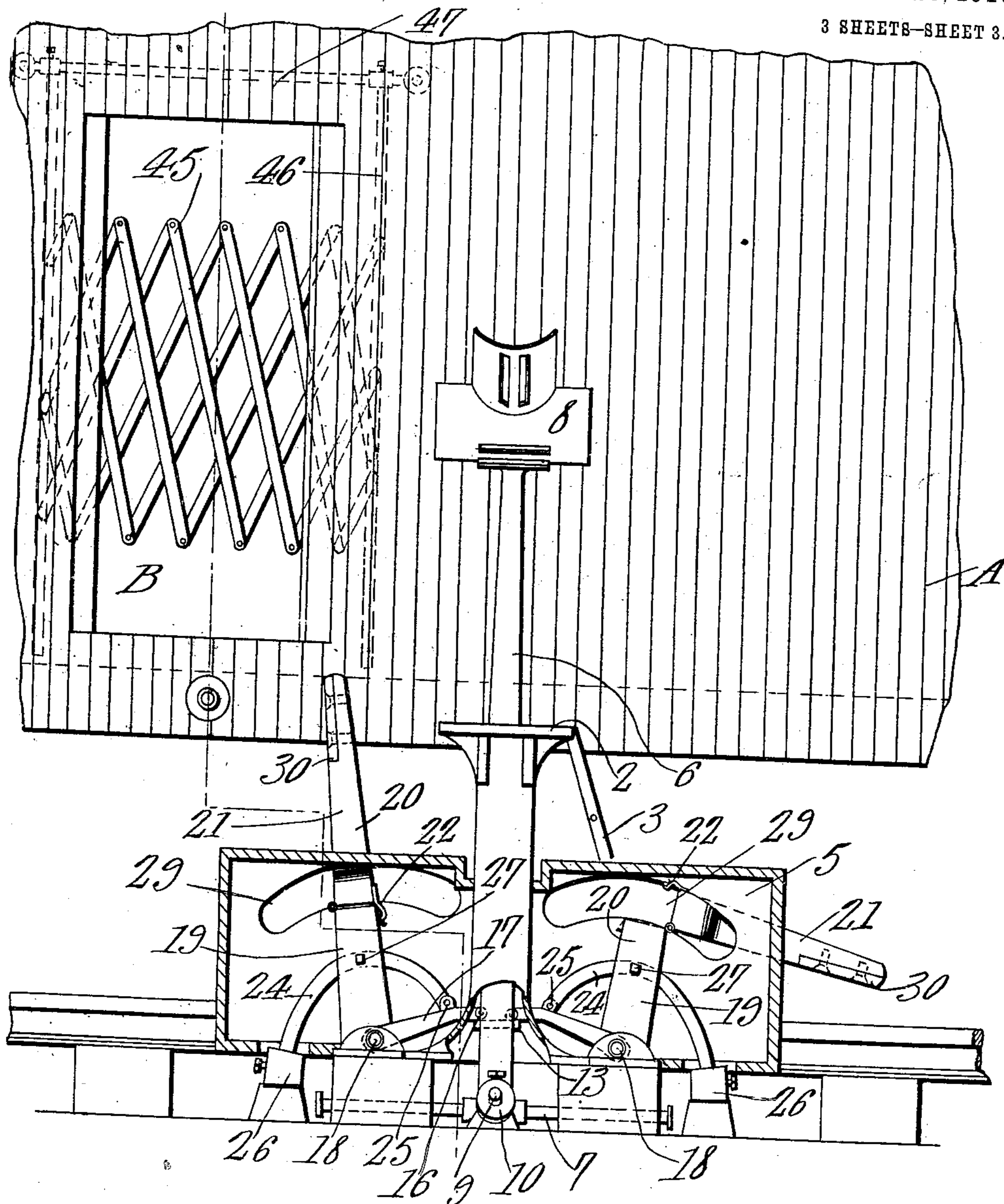


Fig. 3.

Witnesses

J. P. Loomis
Herbert D. Lawson

Roger W. Lomax,

Inventor

by

C. A. Snow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

ROGER W. LOMAX, OF LYNCHBURG, VIRGINIA.

APPARATUS FOR DELIVERING MAIL TO MOVING CARS.

978,911.

Specification of Letters Patent.

Patented Dec. 20, 1910.

Application filed October 13, 1910. Serial No. 586,952.

To all whom it may concern:

Be it known that I, ROGER W. LOMAX, a citizen of the United States, residing at Lynchburg, in the county of Campbell and State of Virginia, have invented a new and useful Apparatus for Delivering Mail to Moving Cars, (Case B,) of which the following is a specification.

This invention relates to apparatus for delivering mail to moving cars and has for its object the provision of a throwing arm mounted for swinging movement adjacent the track and which has actuating means located in the path of a trip carried by the car body so that, as the car passes the point of delivery, the throwing arm will be actuated thereby and will direct the bag or pouch into the proper opening in the car structure.

A further object is to provide a tripping element which is movably mounted on the car structure so as to be projected from either side thereof.

A further object is to provide means for actuating the throwing arm, said means being shiftable so as to be engaged and operated by a car moving in either direction.

A still further object is to provide a tripping device under the control of the car door so that, when the door is opened, the tripping device will be projected into position to actuate the throwing mechanism.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a view partly in section and partly in elevation showing the delivering mechanism and the tripping device for actuating the same. Fig. 2 is a view partly in plan and partly in section of a portion of a car and showing the door controlled means for projecting the tripping device. Fig. 3 is a view

partly in side elevation and partly in section of the parts shown in Fig. 1. Fig. 4 is a view similar to Fig. 2 and showing means whereby the tripping device may be projected by means of a crank or the like. Fig. 5 is a detail view of a crank or key which may be used in connection with the structure shown in Fig. 2.

Referring to the figures by characters of reference 1 designates a hollow standard having a platform 2 at the upper end thereof to which a ladder 3 or the like may lead. This standard is arranged upon a hollow box-like casing 4 and an extension 5 is located at one end of this casing and near the track. A throwing arm 6 is movably mounted within the standard 1 and is pivoted at its lower end as indicated at 7, the upper end of said arm being provided with a trough shaped bag or pouch holder 8. An arm 9 extends from the lower end portion of the arm 6 and carries an adjustable weight 10. Another arm 11 extends from the lower portion of arm 6 and has a reduced end portion 12 extended toward the track and projecting into a bearing plate 13 which is secured to extension 12 by means of a set screw 14 or the like. This bearing plate is located within the extension 5 and is constantly contacted by rollers 16 journaled in the ends of oppositely extended arms 17. Each of these arms is secured to a rock shaft 18 journaled within the casing 4. The lower section 19 of an actuating arm 20 is loosely mounted upon the shaft 18 and has the upper section 21 hingedly connected to it and normally held in alignment therewith by means of a spring catch 22 or the like. An opening 23 is formed within the inner or lower section 19 and an arcuate member 24 is loosely mounted within this opening and pivotally connected at one end to the adjacent arm 17, as shown at 25, while its other end has a weight 26 adjustably mounted upon it. A set screw 27 extends into the opening 23 and bears on the member 24 so as to hold the said member against movement within the section 19 and thus secure said section 19 to the arm 17 and compel them to move together. The outer or upper section 21 of the actuating device is off-set laterally as indicated at 28 and works within an arcuate slot 29 formed within the hollow extension 5. The upper end of the

section 21 has a wear plate 30 or the like fastened to it and this upper end normally projects into the path of a tripping device to be hereinafter described. It is to be understood of course that two of these actuating members 20 are provided, one of them being connected to each of the arms 17. The two members 20 however are oppositely disposed so that they can swing upon their hinges toward opposite ends respectively of the extension 5 in order to lower the upper section 21.

The tripping mechanism utilized for actuating the parts hereinbefore described, is located upon the car body A. This car body is formed with the usual door opening B and a door C may be hingedly connected to one of the jambs of the door and adapted to swing inwardly when it is desired to open it.

A rack bar 31 is extended transversely under the floor of the car structure A and is adapted to move longitudinally, this bar being provided, at each end, with a trunnion 32 on which is arranged a roller 33. A gear 34 is journaled under the floor of the car and meshes with the rack bar and also with another gear 35. An angular stem 36 extends upwardly from the center of gear 35 and through the car floor and is adapted to be engaged by a socket 37 formed in one end of a crank 38. This crank is connected, as by means of an ear 39, to a slide 40 mounted within a guideway 41 formed on the inner face of the door C. This arrangement of gears 34 and 35 is duplicated at each side of the car but only one crank member is utilized, the crank being detachable from one gear and adapted to be placed in engagement with the other gear 35 and also being detachable from the guideway 41 and insertible into engagement with the other door C. It will be apparent therefore that the parts can be adjusted so as to be operated by the opening of the door at either side.

When it is desired to throw a pouch or bag into the car, it is placed within the holder 8 and the section 21 nearest the approaching car is swung upwardly as shown at the left of Fig. 3 while the other section 21 is swung downwardly as shown in said figure. Weight 10, of course, holds the parts in the position shown in Fig. 1. The person upon the mail car approaching the station opens the door C at that side of the car to which the bag or pouch is to be delivered. This inward swinging of the door will cause the slide to move longitudinally of the guideway 41 and the crank 38 will therefore be rotated to the position shown in dotted lines in Fig. 2. Gear 35 will therefore be correspondingly rotated and motion will be transmitted therefrom through the gear 34 to the rack bar 31. One of the trunnions 32 will be projected beyond the side of the car and into position where it will move against the

upwardly extending arm section 21. As this tripping device moves against section 21, it will cause the said section to swing with the shaft 18 as its fulcrum. Arm 17 connected to arm section 19 will be correspondingly swung downwardly and thus depress the bearing plate 15. This depression will be with such force as to swing the arm 6 violently toward the car when it will be brought to a sudden stop by coming in contact with a cushioning device 42 located in the upper portion of the standard 1. The bag or other object within the holder 8 will thus be projected into the door opening B which, at this time, is directly opposite the holder 8.

It is to be understood, that, if preferred, the rack bar may be projected independently of the doors by utilizing a single gear 43 meshing with the rack bar as shown in Fig. 4. This gear has an angular neck 44 projecting through the floor of the car and which is adapted to be engaged by the crank.

If preferred, and as shown in Figs. 1 and 3, a supplemental door may be arranged within the car and back of the door B. This supplemental door consists of crossed pivotally connected metal strips 45 forming a lazy-tongs, the side portions of the supplemental gate being connected to hangers 46 which are pivotally suspended from a cross rod 47 adjustably mounted on arms 48 extending from one side to the other of the car. It will be apparent that this supplemental door can be readily collapsed or can be moved inwardly toward the center of the car or swung upwardly close to the roof.

What is claimed is —

1.—The combination with a throwing arm mounted for swinging movement, of a car-supported tripping device, means for projecting said device beyond either side of the car, and means operated by the projected device for shifting said arm toward the car.

2. The combination with a throwing element movably mounted, and means for holding it normally in a predetermined position, of a car-supported tripping element, an actuating device projecting into the path of said tripping element, and means mounted for angular adjustment relative thereto and movable therewith for shifting the throwing element toward the car.

3. The combination with a throwing element, of a car-supported tripping device, operating means projecting into the path of said device, and means movable with and adjustably connected to said operating means and normally engaging the throwing element for shifting the throwing element in the direction of the car when the operating means is actuated.

4. A throwing element, a bearing member movable therewith, an actuating device mounted for swinging movement, means movable therewith and mounted for angu-

lar adjustment relative thereto for depressing the bearing member, means for holding the actuating device normally in a predetermined position, and a car-supported tripping device movable against the actuating device.

5. Apparatus of the class described including a throwing element, a bearing device movable therewith, an upwardly extending actuating member including movably connected sections, an arm adjustably connected to said member, and a car-supported tripping device movable against the member to shift the arm and depress the bearing device.

6. Apparatus of the class described including a throwing element, a bearing device movable therewith, an actuating member consisting of hingedly connected sections, means for securing said sections against relative movement, an arm movably connected to one of the sections and overhanging the bearing device, means for adjustably connecting the arm to the actuating member, and a car-supported tripping device movable against the upper section of said actuating member to operate the arm and depress the bearing device.

7. Apparatus of the class described including a throwing element, means for shifting the same, a car-supported tripping device, and means upon the car for shifting said device beyond either side of the car

and into position to engage the actuating member.

8. Apparatus of the class described including a throwing element, an actuating member, a car structure, a rack movably mounted on said structure, a tripping device carried by the rack, and means upon the structure for shifting the rack to bring the tripping device into position to engage and shift the actuating member.

9. Apparatus of the class described including a throwing arm, an actuating member operatively connected thereto, a car structure, a door upon said structure, a tripping device, and means operated by the movement of the door in one direction for projecting the tripping device beyond the car structure.

10. Apparatus of the class described including throwing mechanism, a car structure, a tripping device upon said structure for actuating the throwing mechanism, a door upon the structure, and means operated by the door for shifting the tripping device into operative position.

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

ROGER W. LOMAX.

Witnesses:

HUBERT D. LAWSON,
EDWARD S. LOMAX.