

No. 627,294.

Patented June 20, 1899.

H. J. BROWN.

APPARATUS FOR RECEIVING AND DELIVERING MAIL BAGS.

(Application filed Jan. 30, 1899.)

(No Model.)

4 Sheets—Sheet 1.

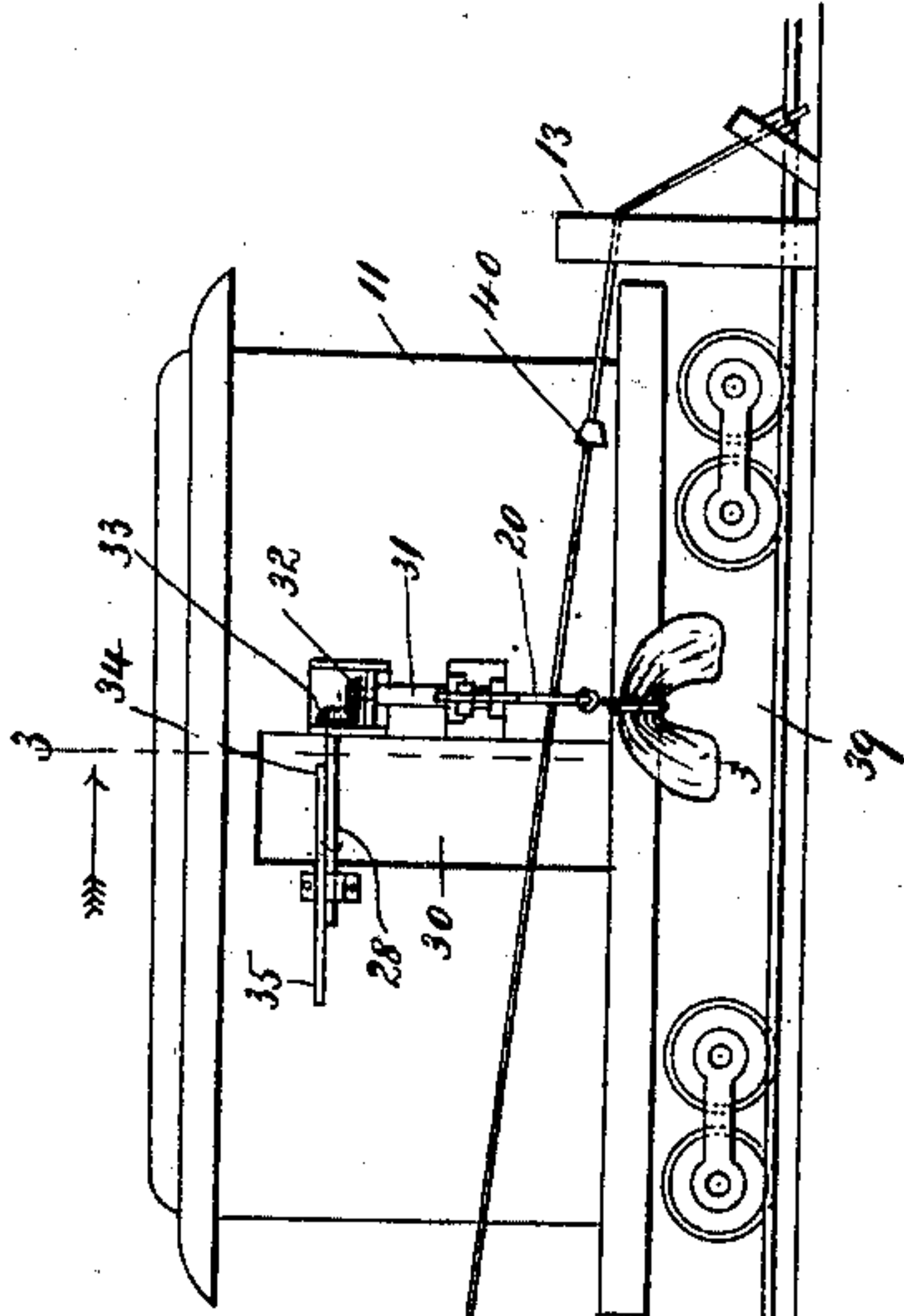


Fig. 1.

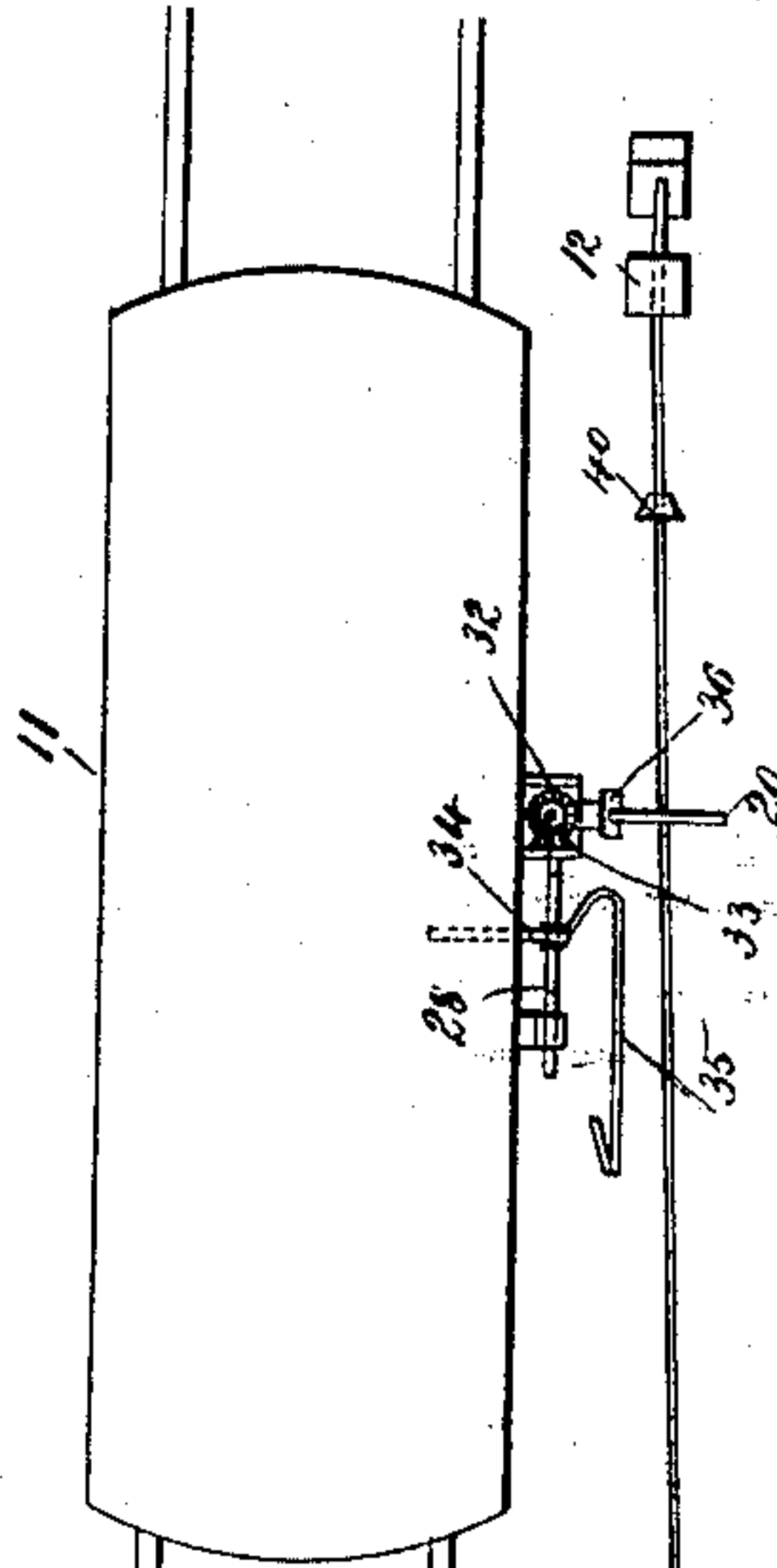
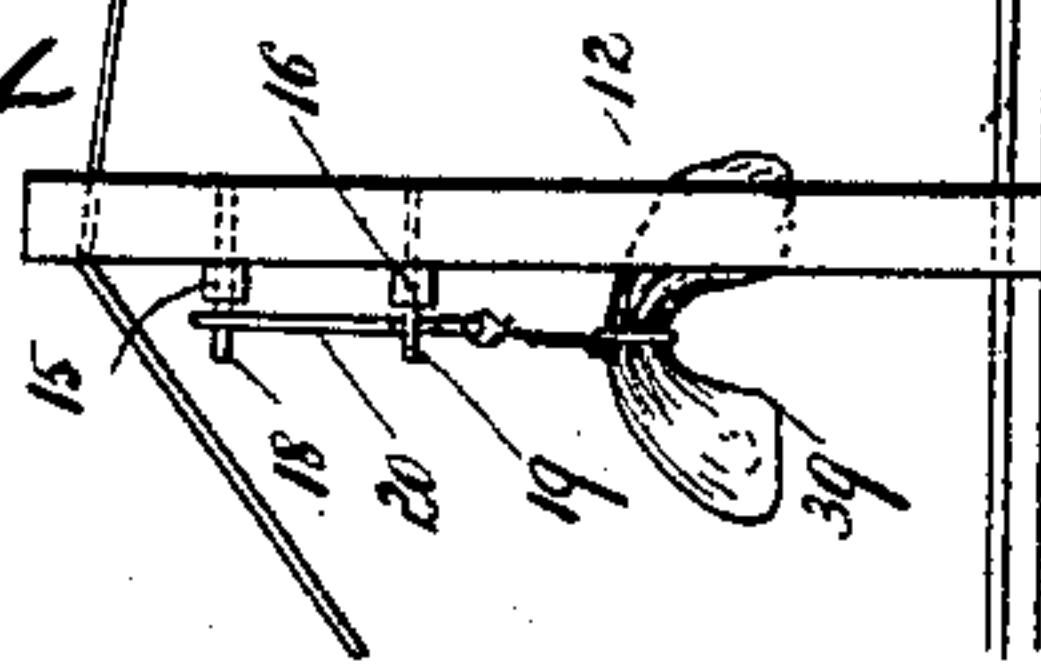


Fig. 2.

WITNESSES
John Ruckler,
J. A. Stewart



INVENTOR

Hiram J. Brown,
BY Edgar Sater

ATTORNEYS.

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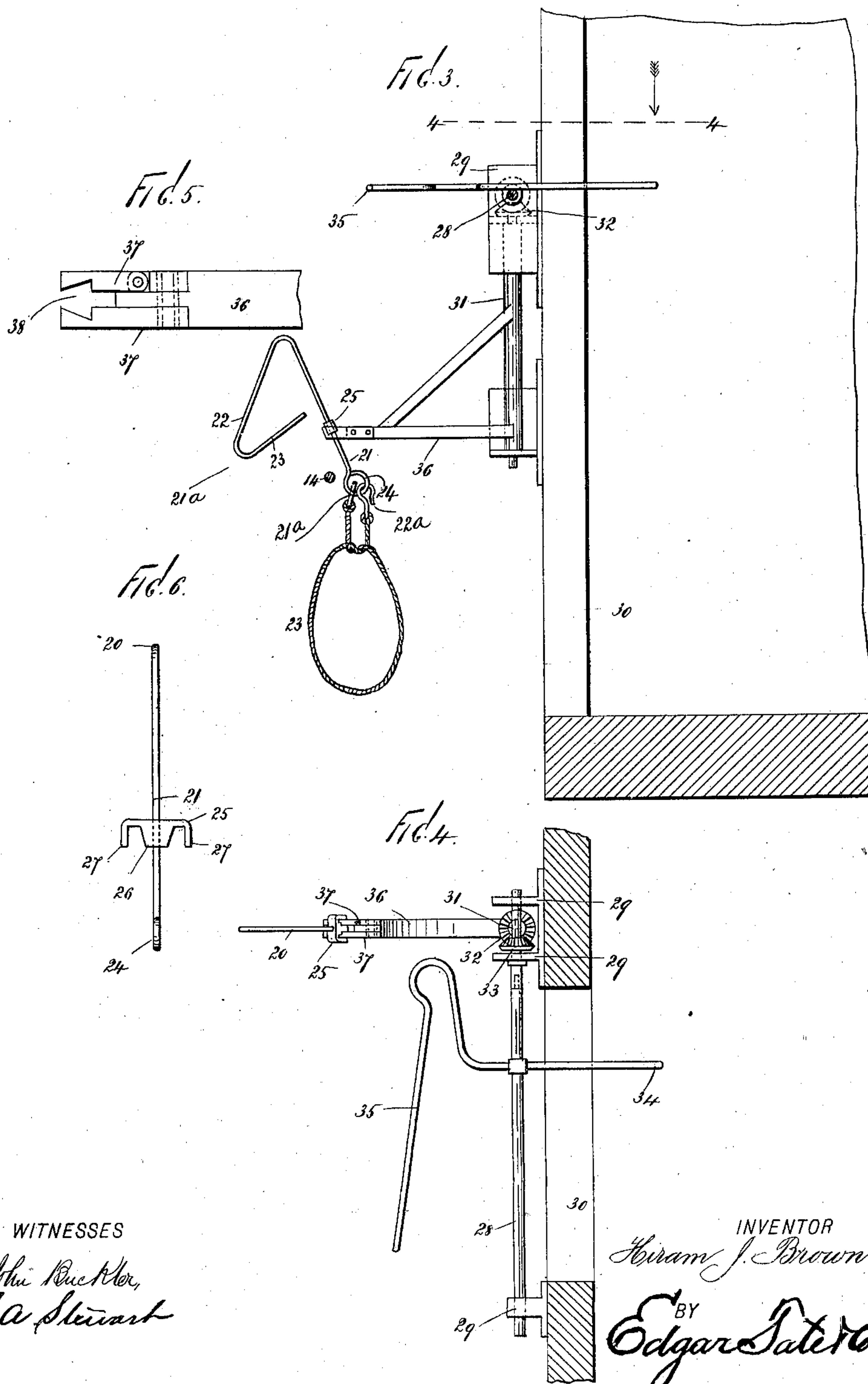
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4 Sheets—Sheet 2.



WITNESSES

John Buckler,
T. A. Stewart

INVENTOR

Hiram J. Brown

BY

Edgar Sater

ATTORNEYS

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Patented June 20, 1899.

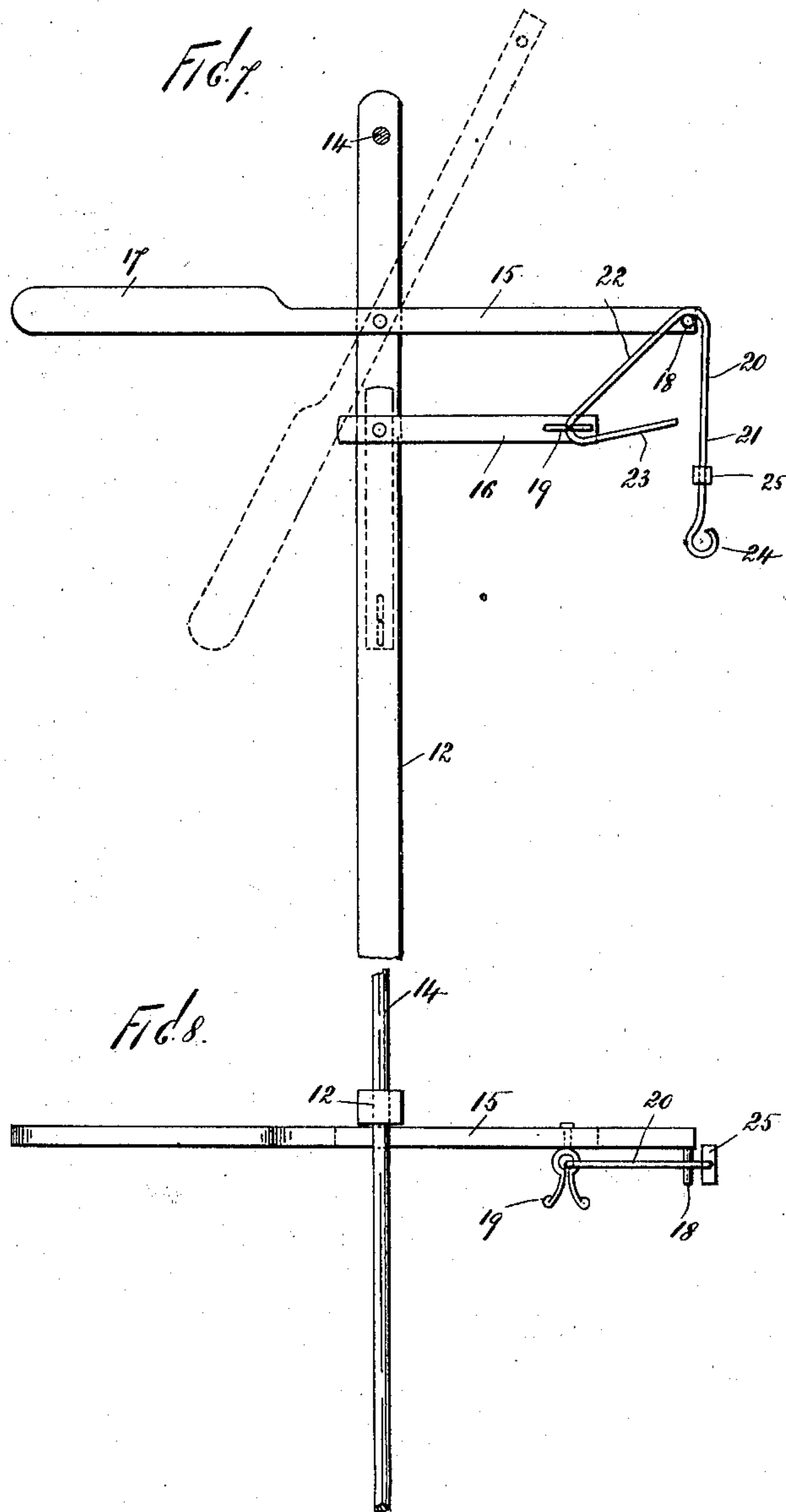
H. J. BROWN.

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(Application filed Jan. 30, 1899.)

(No Model.)

4 Sheets—Sheet 3.



WITNESSES

John B. Miller,
L. A. Stewart

INVENTOR

Hiram J. Brown

BY

Edgar Tate & Co.
ATTORNEYS

No. 627,294.

Patented June 20, 1899.

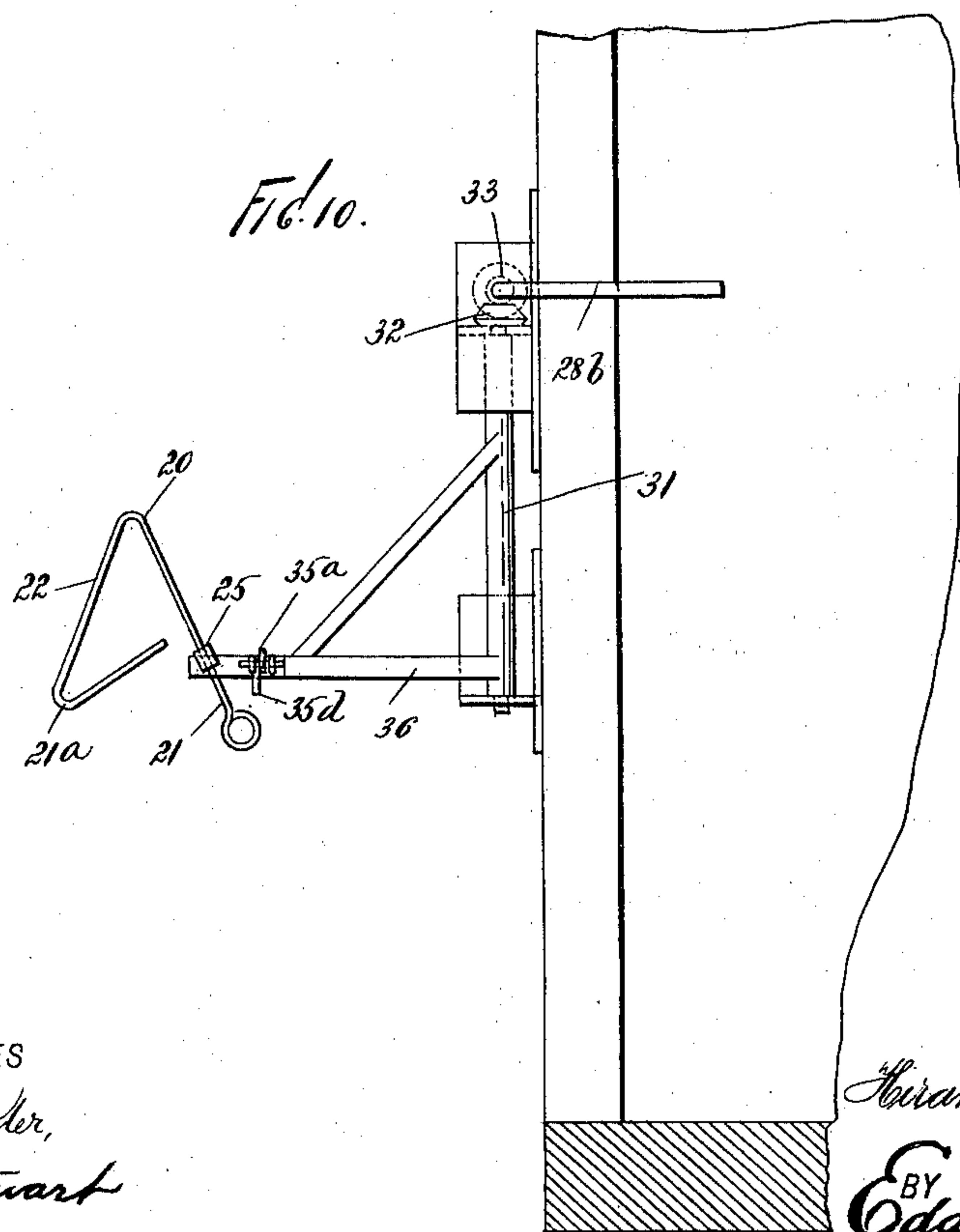
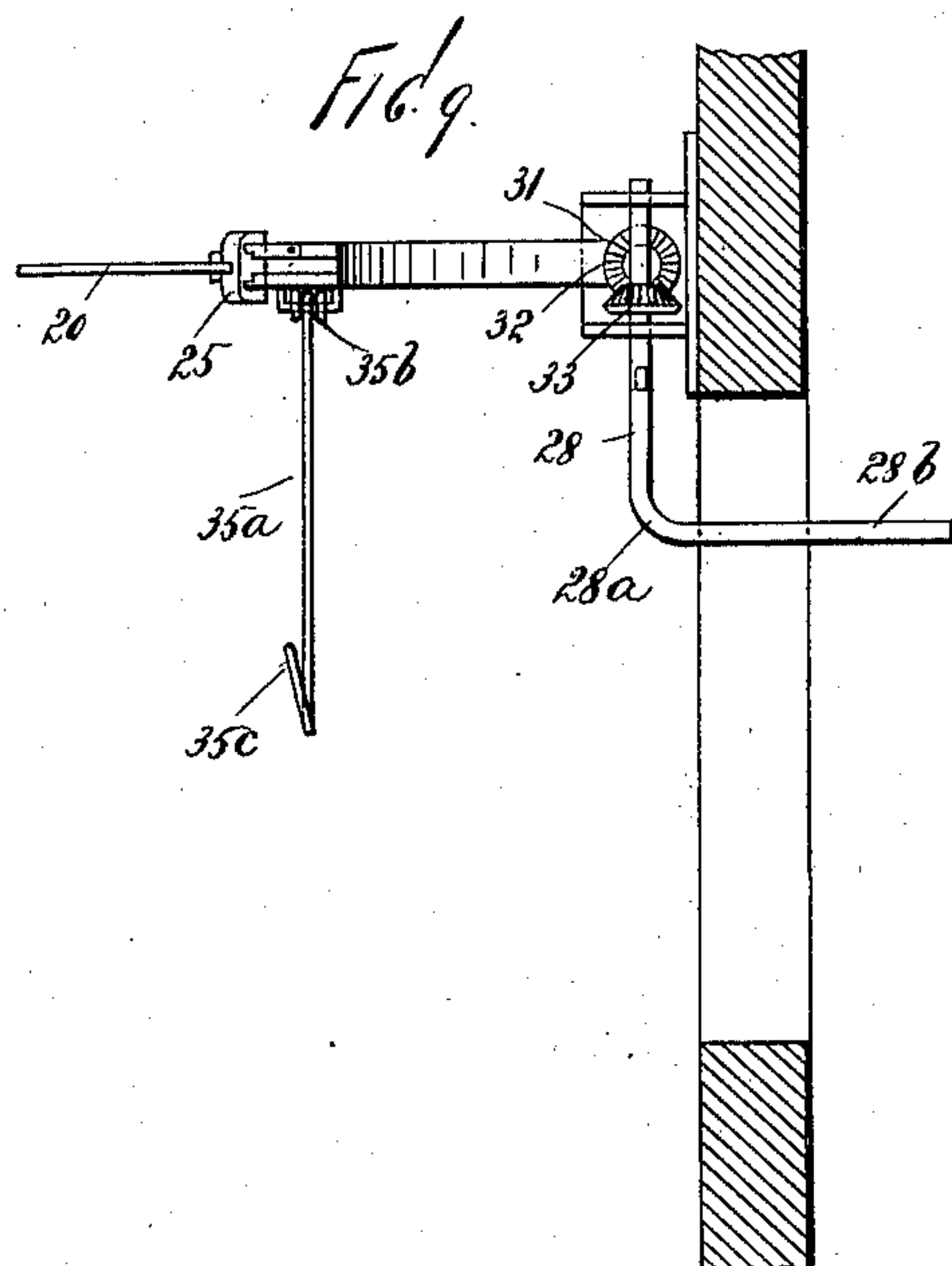
H. J. BROWN.

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(Application filed Jan. 30, 1899.)

(No Model.)

4 Sheets—Sheet 4.



WITNESSES
John Buckler,
J. A. Stewart

INVENTOR
Hiram J. Brown,
BY *Edgar Sater*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

HIRAM J. BROWN, OF NEW YORK, N. Y.

APPARATUS FOR RECEIVING AND DELIVERING MAIL-BAGS.

SPECIFICATION forming part of Letters Patent No. 627,294, dated June 20, 1899.

Application filed January 30, 1899. Serial No. 703,769. (No model.)

To all whom it may concern:

Be it known that I, HIRAM J. BROWN, a citizen of the United States, residing at New York, borough of Queens, in the county of Queens and State of New York, have invented certain new and useful Improvements in Apparatus for Receiving and Delivering Mail-Bags, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to apparatus for delivering mail-bags from a moving train to a station and also for delivering said bags from the station to the train; and the object thereof is to provide an improved apparatus for this purpose whereby mail-bags may be more safely and conveniently transferred, as described, than has heretofore been possible.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side elevation showing the apparatus which I employ; Fig. 2, a plan view thereof; Fig. 3, a vertical section on the line 3 3 of Fig. 1; Fig. 4, a horizontal section on the line 4 4 of Figs. 1 and 3; Fig. 5, a plan view of a detail of that portion of the apparatus for delivering the mail-bags from the train to the station; Fig. 6, a view in elevation of another detail of said portion of the apparatus; Fig. 7, a view in elevation of a standard or support which forms a part of that portion of the apparatus for delivering the mail-bags from the station to the train; Fig. 8, a plan view thereof; Fig. 9, a view similar to Fig. 4, showing a modified form of construction; and Fig. 10, a side view thereof similar to Fig. 3.

In the drawings forming part of this specification the separate parts of my improvement are designated by the same numerals of reference in each of the views, and in said drawings, reference being made to Figs. 1 and 2, I have shown at 10 the rails of a railway-track and at 11 a mail-car, and in the practice of my invention I provide adjacent to the station and track two standards or supports 12 and 13, which are arranged longitudinally of the track and at one side thereof.

The standard 13 is a little closer to the track than the standard 12, and the standard 12 is

much higher than the standard 13, and secured to the tops of said standards is a cord or cable 14, preferably of wire, and by reason of the fact that one of said standards or supports is higher than the other the said cord or cable is maintained at an inclination, the end thereof which passes over or is connected with the standard or support 12 being higher than the other end.

The standard or support 12 is provided with a main pivoted arm 15 and a supplemental pivoted arm 16, the arm 15 being placed above and being longer than the arm 16, and said arm 15 is weighted at one end, as shown at 17, and is provided at its opposite end with a pin 18, and the arm 16 is provided with an open spring-clamp 19.

I also employ bag-suspending devices 20, one of which is used in connection with the arms 15 and 16 of the standard or support 12 and another in connection with the car, and these bag-suspending devices are preferably composed of a strong spring wire or rod bent to form a straight portion 21, a central portion 22, and a hook-shaped portion 23, and the straight portion 21 is provided with a ring or eye 24, as clearly shown in Figs. 3 and 7. In connecting this device with the arms 15 and 16 it is suspended from the pin 18 of the arm 15, and the loop of the hook-shaped portion 23 is passed into the open spring-clamp 19 of the arm 16, and the straight portion 21 of the bag-suspending device is also provided at the end thereof opposite the ring or eye 24 with a catch 25, comprising a central depending portion 26 and two depending side arms 27, as clearly shown in Fig. 6.

That portion of the apparatus which is connected with the car comprises a horizontal top shaft 28, mounted in supports 29 at the opposite sides of the door 30, and a vertical shaft 31, supported at one side of the door and provided at its upper end with a beveled gear-wheel 32, which operates in connection with a corresponding beveled gear-wheel 33 on the horizontal shaft 28.

The upper horizontal rod 28 is provided with an arm 34, rigidly secured thereto and which is adapted to project into the car through the open door, and the outer end of said arm is provided with a hook-shaped supplemental arm 35.

The vertical shaft 31 is provided at its lower end with a horizontal arm 36, rigidly secured thereto, a plan view of which is given in Fig. 5, and said arm is provided at its outer end with two projecting side pieces 37, between

the outer ends of which is a triangular notch or recess 38, adapted to receive the central depending portion 26 of the catch 25, which is secured to the bag-suspending device 20.

When the bag-suspending device 20 is used in connection with the arms 15 and 16 of the standard or support 12, the catch 25 has no function; but when said device is used in connection with the arm 36 of the shaft 31 the central portion 26 of said catch is passed downwardly through the triangular notch or recess 38 at the outer end of the arm 36, and the depending side arms 37 of said catch pass over the outer sides of the side pieces 37 of said arm, as clearly shown in Figs. 3 and 4.

By moving the inner end of the arm 34 in a vertical plane the horizontal shaft 28 is turned, as will be readily understood, and the arm 36 is swung inwardly, while at the same time the supplemental hook-shaped arm 35 of the arm 34 is also swung inwardly.

I have also shown in Fig. 1 a mail-bag 39, suspended from the bag-suspending device 20, connected with the car, and a similar bag 39, suspended from the bag-suspending device 20, connected with the standard or support 12, and in this operation I employ a sling shown in detail in Fig. 3 and consisting of a cord or strap provided at one end with an eye 21^a and at the other with a hook 23^a, by which it is connected with the bag-suspending device 20, and in practice the bag or bags are suspended by means of a half-hitch 23^a, which is passed around the middle of said bag or bags, and the operation of the apparatus will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof. When the train approaches the station, one of the bag-suspending devices 20 is connected with the arm 36, as shown and described, and the bag is suspended from the ring or eye 24 of said bag-suspending device, the position of said bag-suspending device being shown in Fig. 3, and as the train passes the standard or support 13 the said bag-suspending device passes over said standard and over the lower end of the cable 14, and as the train proceeds the said cable rises because of its inclined position into the bag-suspending device, as shown in Fig. 3, and lifts said bag-suspending device from the arm 36 and leaves said device, together with the bag or bags, suspended thereon, and if a bag is to be delivered from the station to the train said bag is suspended from the bag-suspending device 20 of said standard or support 12, as shown in Fig. 1, and the supplemental arm 35 of the arm 34, which is connected with the shaft 28 of that part of apparatus which is connected with the mail-car, passes through the bag-suspending de-

vice connected with the standard or support 12 and detaches the same, together with the bag, from the arms 15 and 16 of said standard or support.

It will be observed that the cable 14 is provided adjacent to each of the standards 12 and 13 with a stop 40, and these stops are designed to prevent the bag from coming in contact with either of said standards or supports, it being understood that when the bag is delivered from the mail-car to the cable 14, as described, it is under considerable momentum and might be thrown against the standard or support 12 or the pivoted arms thereof, if the adjacent stop 40 were not provided, and the stop 40, adjacent to the standard or support 13, prevents the bag from sliding back against said standard or support.

By my improved apparatus I provide means whereby the bag is easily and conveniently delivered from the moving train to the station and prevented from being thrown to the ground or deposited against any fixed substance or support, so as not to shake, break, or otherwise injure the contents thereof, said bag being deposited on the cable 14 in such manner as to slide thereon, and the corresponding devices for delivering the bag to a car or train are also simple in construction and effective in operation.

Instead of extending the shaft 28 across the door, as shown in Fig. 4, the said shaft may terminate at 28, as shown in Fig. 9, and be provided with an inwardly-directed arm 28^b, by which it may be turned or operated, and instead of employing the supplemental arm 35, connected with said shaft, as shown in Fig. 4, which is intended to detach the bag or bags from the standard or support 12, I may employ an arm 35^a, pivotally connected at 35^b with the outer end of the arm 36 and provided at its free end with a backwardly-directed hook 35^c. The arm 35^a is adapted to swing in a vertical plane, but is provided at its hinged end with a downwardly-directed pin or projection 35^d, which prevents it from dropping below a horizontal plane, and the operation of this arm 35^a in detaching the bag or bags from said support will be the same as that of the arms 35 hereinbefore described, and the object of hinging or connecting the arm 35^a with the arm 36, so that it will swing in a vertical plane, is to provide means for folding said arm 35^a when the arm 36 is turned parallel with the sides of the car, so as to prevent the arm 35^a from projecting into the car. I prefer the construction shown in Figs. 9 and 10 to that shown in Figs. 3 and 4, however, for the reason that by connecting the arm 35^a with the outer end of the arm 36 the support of the bag or bags may be placed at a greater distance from the side of the car or from the track, and by reason of this arrangement I avoid serious accidents, which frequently result from the location of the bag-supports too close to the railway-track.

It will be apparent that other changes in

and modifications of the construction described may be made without departing from the spirit of my invention or sacrificing its advantages, and I reserve the right to make all such alterations therein as fairly come within the scope of my invention.

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

1. In an apparatus for delivering mail-bags from a moving train to a station, a receiver consisting of a cable mounted longitudinally of the track and adjacent to one side thereof and adapted to slidably receive the holder of a mail-bag thereon, and a holder for the bag detachably connected with a car for delivering the bag onto said cable, said holder being adapted to be detached from its support by said cable as the car passes, substantially as shown and described.

2. In an apparatus for delivering mail-bags from a moving train to a station, a receiver consisting of a cable mounted longitudinally of the track and adjacent to one side thereof and adapted to slidably receive the holder of a mail-bag thereon, and a holder for the bag detachably connected with a car for delivering the bag onto said cable, said holder being adapted to be detached from its support by said cable as the car passes, one end of said cable being higher than the other, substantially as shown and described.

3. In an apparatus for delivering mail-bags from a moving train to a station, and from the station to the train, a cable mounted adjacent to the side of the track and longitudinally thereof, standards by which said cable is supported, one of said standards being provided with means for detachably suspending a bag-holder therefrom, a bag-holder adapted to be detachably connected therewith, devices connected with a car for detachably suspending a bag-holder, a bag-holder adapted to be detachably connected therewith, said last-named holder being adapted to be detached from its support by said cable as the car passes, and devices connected with the car for detaching the first-named holder from its support as the car passes, substantially as shown and described.

4. In an apparatus for delivering mail-bags from a moving train to a station, and from the station to the train, a cable supported adjacent to the side of the track and longitudinally thereof, one end of said cable being higher than the other, standards by which the opposite ends of said cable are supported, a bag-holder adapted to be detachably connected with one of said standards, another bag-holder adapted to be detachably connected with a car and adapted to deliver a mail-bag to said cable, the last-named bag-holder being adapted to be detached by the cable as the car passes, and devices connected with the car for detaching the first-named bag-holder as the car passes, substantially as shown and described.

5. In an apparatus of the class described, a cable supported longitudinally of a railway-track and adjacent to one side thereof, and devices connected with a car for delivering a mail-bag to said cable, said devices consisting of a vertical shaft connected with the side of the car adjacent to the door thereof, a horizontal arm rigidly connected with said shaft, and a bag-suspending device detachably connected with the outer end of said arm and which is adapted to be detached from said arm by said cable, substantially as shown and described.

6. In an apparatus of the class described, a cable supported longitudinally of a railway-track and adjacent to one side thereof, and devices connected with a car for delivering a mail-bag to said cable, said devices consisting of a vertical shaft connected with the side of the car adjacent to the door thereof, a horizontal arm rigidly connected with said shaft, and a bag-suspending device detachably connected with the outer end of said arm and which is adapted to be detached from said arm by said cable, said cable being higher at one end than at the other, substantially as shown and described.

7. In an apparatus for the purpose described, a cable supported by standards arranged longitudinally of a railway-track, and one end of which is higher than the other, and a device detachably connected with a car for suspending a bag and delivering the same to said cable, and a device connected with one of said standards for detachably supporting a bag, said car being also provided with a movable arm for detaching the bag from the standard, substantially as shown and described.

8. In an apparatus for delivering mail-bags from a moving train to a station and from a station to the train, a cable supported longitudinally of the track at one side thereof by standards, one of which is higher than the other, pivoted arms connected with the higher standard, a bag-suspending device adapted to be detachably connected with said arms, a pivotally-supported arm connected with a car, a bag-suspending device adapted to be detachably connected with said arm for delivering a bag to said cable, and an arm connected with the car for detaching the bag from the pivoted arms of said standard, substantially as shown and described.

9. In an apparatus of the class described, a cable supported adjacent to one side of a railway-track by standards, one of which is higher than the other, arms pivotally connected with said standards, one of which is above and longer than the other, a bag-suspending device adapted to be detachably connected with said arms, and devices connected with a car for delivering a bag to said cable and for detaching the bag from said pivoted arms, substantially as shown and described.

10. In an apparatus for delivering mail-bags from a moving train to a station, a cable or slideway supported longitudinally of the track

and adjacent to one side thereof, said cable or slideway being higher at one end than the other, and a bag-suspending device detachably connected with a car and adapted to deliver a mail-bag to said cable, the support of said cable at one end thereof being also provided with pivoted arms, and a bag-suspending device adapted to be detachably connected with said arms, and devices connected with the car for detaching said bag-suspending devices from said arms, substantially as shown and described.

11. An apparatus of the class described, comprising a cable supported longitudinally of a railway-track, and at one side thereof by standards, one of which is higher than the other, arms pivotally connected with the higher standard, a bag-suspending device adapted to be detachably connected with said arms, a vertical shaft connected with a car and provided with an arm which is adapted to swing in a horizontal plane, a bag-suspending device detachably connected with said arm and adapted to deliver a bag to said cable, a horizontal shaft geared in connection

with said vertical shaft and provided with an arm which is adapted to detach the bag-suspending device from the pivoted arms of said standard, substantially as shown and described.

12. In an apparatus for the purpose described, the combination with a car, of a vertical shaft 31 provided with an arm 36, and a detachable bag-suspending device, a horizontal shaft 28 geared in connection with said vertical shaft and provided with an arm by which it may be operated, and a supplemental arm pivotally connected with the outer end of the first-named arm and adapted to swing in a vertical plane, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 23d day of January, 1899.

HIRAM J. BROWN.

Witnesses:

E. A. FOSTER,
J. MAYNARD KISSAM.