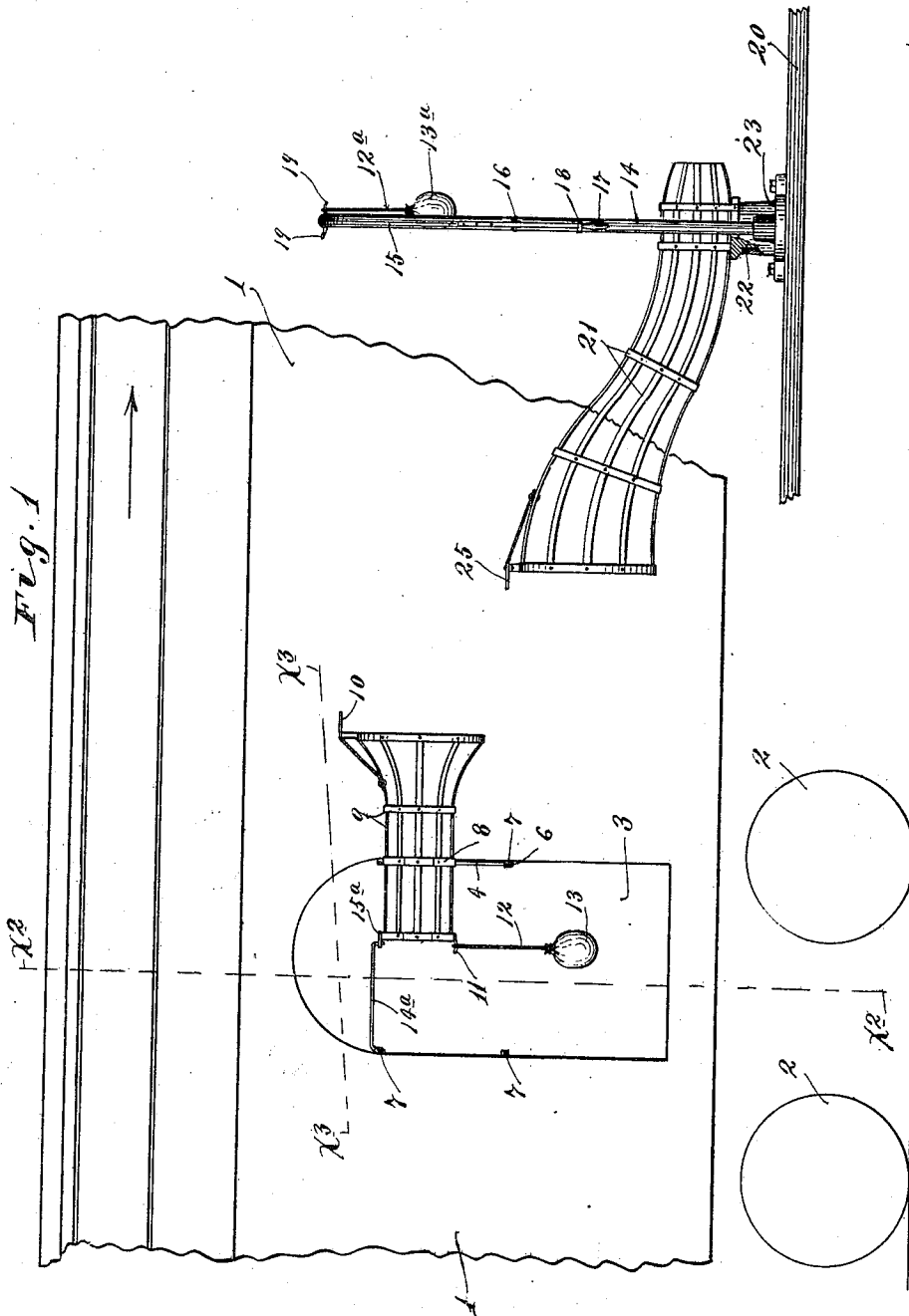


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RAILWAY MAIL DELIVERING AND RECEIVING APPARATUS.
APPLICATION FILED DEC. 10, 1909.

972,530.

Patented Oct. 11, 1910.

2 SHEETS—SHEET 1.



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Fig. 3

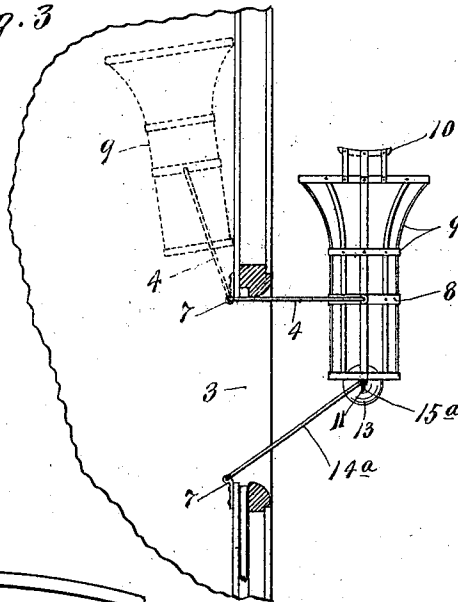
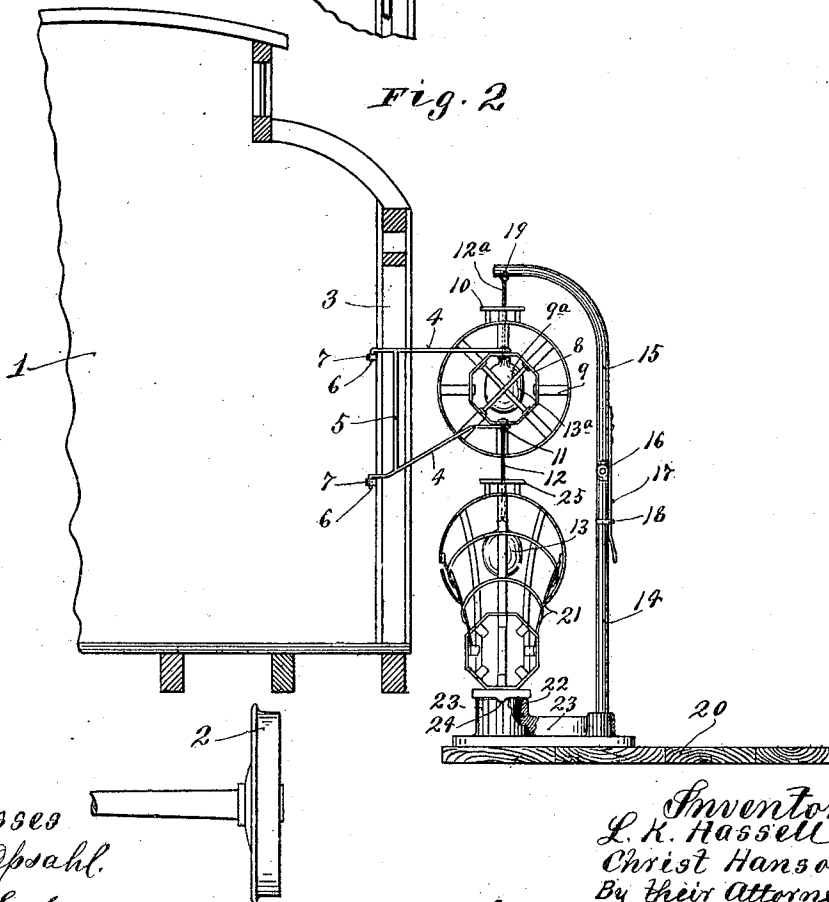


Fig. 2



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UNITED STATES PATENT OFFICE.

LARS K. HASSELL AND CHRIST HANSON, OF GRAND FORKS, NORTH DAKOTA.

RAILWAY MAIL DELIVERING AND RECEIVING APPARATUS.

972,530.

Specification of Letters Patent.

Patented Oct. 11, 1910.

Application filed December 10, 1909. Serial No. 532,353.

To all whom it may concern:

Be it known that we, LARS K. HASSELL and CHRIST HANSON, citizens of the United States, residing at Grand Forks, in the county of Grand Forks and State of North Dakota, have invented certain new and useful Improvements in Railway Mail Delivering and Receiving Apparatus; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in mail bag catching and delivering devices for railway train service, and has for its object to improve the same in the several particulars hereinafter noted.

The invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view in side elevation, partly in diagram and with some parts broken away, showing our improved bag catching and delivering device applied to a car and to a station platform; Fig. 2 is a vertical section taken on the line $x^2 x^2$ of Fig. 1, some parts being broken away; and Fig. 3 is a fragmentary view, in horizontal section, on the line $x^3 x^3$ of Fig. 1.

The numeral 1 indicates the body and the numeral 2 the truck wheels of an ordinary mail car, the same having in its sides the customary door openings 3, only one of which is shown in the drawings. Mounted inside of the car, adjacent to the door opening, and in a position to swing outward through the door opening, is a so-called car crane which, in its preferred form, is made up of upper and lower arms 4 connected by a vertical tie bar 5. The arms 4, at their inner ends, are provided with depending trunnions 6 that are pivotally and detachably seated in lugs 7 rigidly secured to the frame of the door opening. These lugs 7 are arranged in duplicate at both sides of the door opening and the said car crane is adapted to be pivotally connect-

ed to either pair thereof at will, according to the direction of the travel of the car.

The outer ends of the crane arms are pivotally connected to one of the intermediate hoops 8 of a skeleton tubular bag catcher 9, the receiving end of which is made flaring and is open, while the other end of the said catcher is closed against the passage of a bag therethrough, as shown by transverse end slats 9^a. Projecting from the upper portion of the flaring open end of the bag catcher 9 is a cord engaging strip 10, the purpose of which will presently appear. Secured to and projecting from the lower portion of the closed rear end of the bag catcher 9 is a hook-like finger 11, which is adapted to detachably hold the looped upper end of a cord or rope 12, to the lower end of which the mail bag 13 is attached.

When the bag catcher 9 is set in a position to catch a bag from a platform or station crane, at the side of the track, it is turned outward into the position shown by full lines in the drawings, with its open flaring end projecting in the direction of the travel of the car, and, in this position, it is adapted to be held by a truss rod 14, the down-turned inner end of which is engaged with the upper rear lug 7 and the down-turned outer end of which is engaged with a perforated clip 15^a secured to the upper portion of the rear end of the said bag catcher 9. After the bag has been caught in the catcher 9, the truss rod 14^a may be disconnected and then the catcher, with the bag held thereby, may be swung into the car, as shown by dotted lines in Fig. 3, by an inward swinging movement of the car crane.

In this apparatus, as in various prior analogous devices, the mail bag which is to be delivered into the bag catcher of the car crane, is detachably supported by a so-called platform or station crane. Preferably, this station crane is made up of lower and upper sections 14 and 15 pivotally connected at 16, and a spring latch lever 17 is secured to said upper section and is engageable with a latch hook 18 on the lower section, to normally hold the said upper section 15 in its uppermost or operative position shown in the drawings. The upper end of the upper crane section 15 is curved toward the track

and is provided with oppositely extended hook-like fingers 19, to either of which the looped upper end of a cord or rope 12^a, which supports the mail bag 13^a, is adapted to be detachably applied. The purpose of pivotally connecting the crane section 15 to the crane section 14 is to permit the upper end of the former to be turned down close to the platform 20, for the purpose of applying the looped end of the cord 12^a to one of the fingers 19. When the said platform crane is in operative condition, as shown in the drawings, the mail bag 13^a, which is suspended therefrom, will be held in position to enter the flaring front end of the bag catcher 9 which is carried by the car and it will, of course, be understood that the bag supporting cord 12^a should be applied to the finger 19 that projects from the platform crane in the direction of the travel of the car.

The bag catcher on the platform 20 at the station is preferably in the form of a skeleton tube 21, which is open at both ends and tapers from its receiving toward its delivery end or, in other words, increases in diameter in a direction from its discharge end toward its receiving end. This local bag catcher is preferably rigidly secured at its delivery end to a heavy depending trunnion 22 that is swiveled in a base casting 23 to which latter the lower end of the station crane is rigidly secured. The flanged upper end of the trunnion 22 is shown as provided with a radial rib 24 on its under side, which is adapted to engage with notches in the upper edge of the hub of the base casting 23, to quite securely hold the bag catcher 21 in either one of two positions. In both of its operative positions, the bag catcher 21 projects in a plane parallel to the track and it should also be set with its flaring receiving end projecting in a direction opposite to that of the travel of the car from which the mail bag is to be taken. On the upper portion of its receiving end, the said bag catcher 21 is provided with a cord engaging trip 25.

Fig. 1 best illustrates the action of the device, both in delivering a mail bag from the station crane into the bag catcher on the car and from the car into the bag catcher at the station. Assuming that the car is traveling in the direction of the arrow marked thereon in Fig. 1, it is evident that, under movement of the car, the cord trip 10 of the bag catcher 9 will strike the cord 12^a and disengage the same from the crane finger 19, thereby causing the mail bag 13^a to be deposited within the said bag catcher 9; and at approximately the same time, the cord trip 25 of the station bag catcher 21 will engage the cord 12 and thereby disengage said cord from the finger 11 and cause the mail bag 13 to be delivered within the said station bag catcher 21.

The mail bag receiving and delivering

mechanism above described is of small cost, and is simple and highly efficient in its action. It may be readily installed on mail cars and station platforms at comparatively small cost.

What we claim is:

1. The combination with a car and a station crane, which latter is adapted to hold a mail bag suspended, of a car crane pivotally mounted in the side door opening of said car, a tubular bag catcher pivotally supported by said car crane, and having at its receiving end a trip for releasing a mail bag suspended from said station crane and having at its delivery end means for holding a mail bag suspended, and a trip associated with said station crane for releasing a mail bag suspended from said tubular bag catcher, substantially as described.

2. The combination with a car and a station crane, which latter is adapted to hold a mail bag suspended, of a car crane pivotally mounted in the side door opening of said car, a tubular bag catcher pivotally supported by said car crane and having at its receiving end a trip for releasing a mail bag suspended from said station crane and having at its delivery end means for holding a mail bag suspended, a trip associated with said station crane for releasing a mail bag suspended from said tubular bag catcher, and a truss rod applicable to said bag catcher and to said car body for holding said tubular bag catcher in an operative position, substantially as described.

3. The combination with a car and a station crane, which latter is adapted to hold a mail bag suspended, of a car crane pivotally mounted in the side door opening of said car, tubular bag catchers, one of which is pivotally supported by said car crane and having at its receiving end a trip for releasing a mail bag suspended from said station crane and having at its delivery end means for holding a mail bag suspended and the other of said tubular bag catchers being associated with said station crane, is pivotally movable so that it may be reversed and thereby adapted to receive a mail bag in either direction of travel of a car and is provided at its receiving end with a trip for releasing a mail bag suspended from the said car bag catcher substantially as described.

4. The combination with a car and a station crane, which latter is adapted to hold a mail bag suspended, of a car crane pivotally mounted in the side door opening of said car, skeleton tubular bag catchers, one of which is pivotally supported by said car crane and having at its receiving end a trip for releasing a mail bag suspended from said station crane and having at its delivery end means for holding a mail bag suspended and

the other of said tubular bag catchers being
associated with said station crane, is pivot-
ally movable so that it may be reversed and
thereby adapted to receive a mail bag in
5 either direction of travel of a car and is
provided at its receiving end with a trip
for releasing a mail bag suspended from the
said car bag catcher, and a truss rod ap-
plicable to said bag catcher and to said car
10 body for holding said tubular bag catcher

in an operative position, substantially as
described.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

LARS K. HASSELL.
CHRIST HANSON.

Witnesses:

JOSEPH Z. BENSON,
JAS. ELTON.