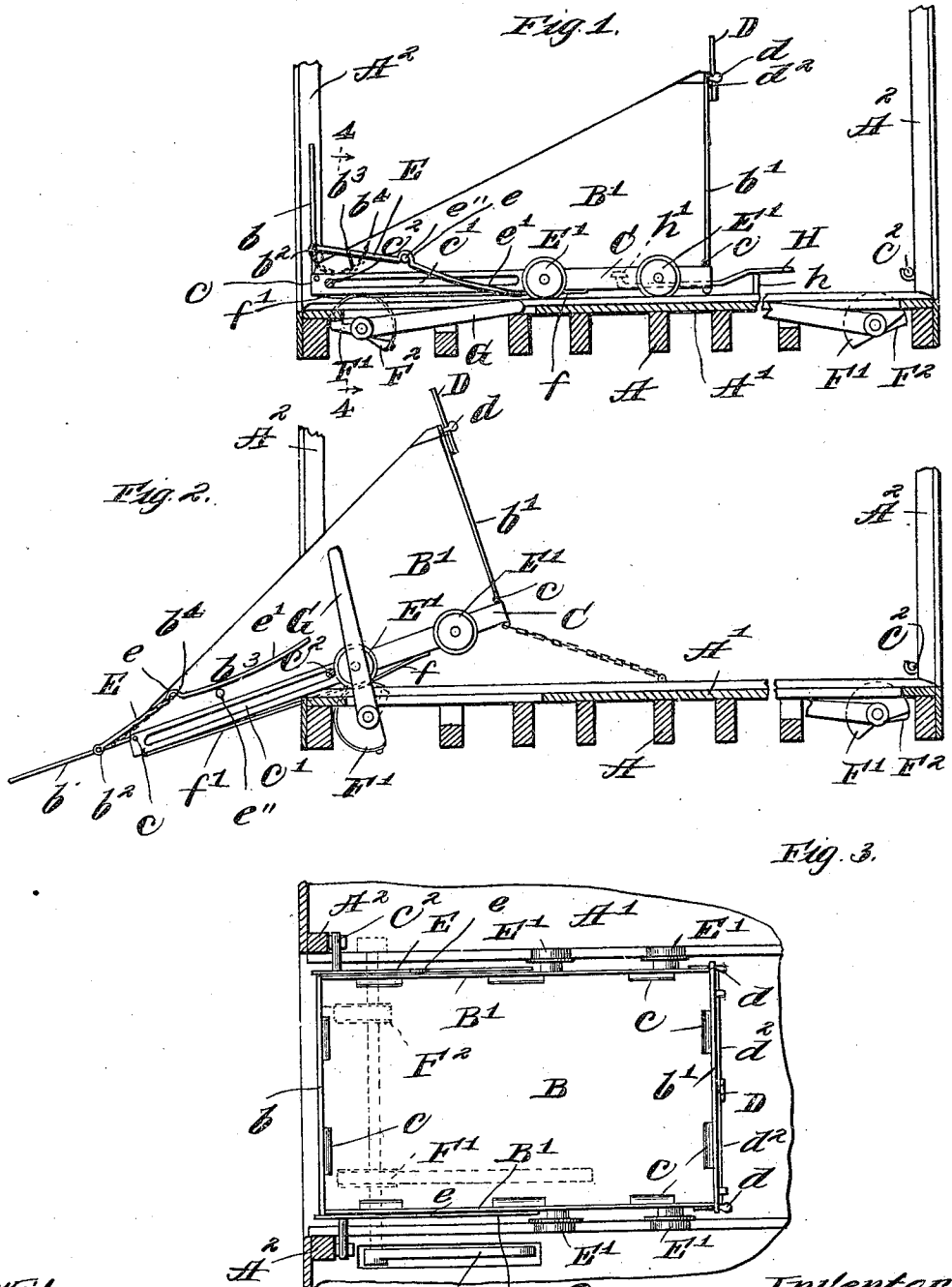


J. R. ENGLAND.
MAIL DISCHARGING APPARATUS.
APPLICATION FILED OCT. 20, 1909.

961,943.

Patented June 21, 1910.

2 SHEETS—SHEET 1.



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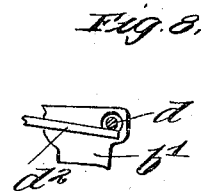
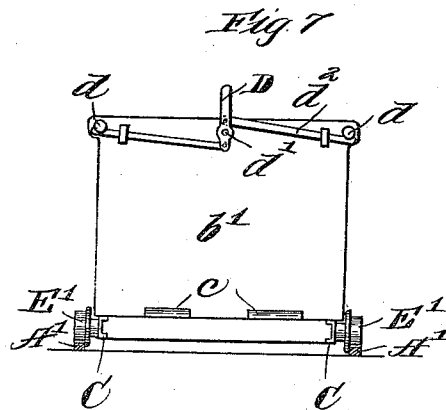
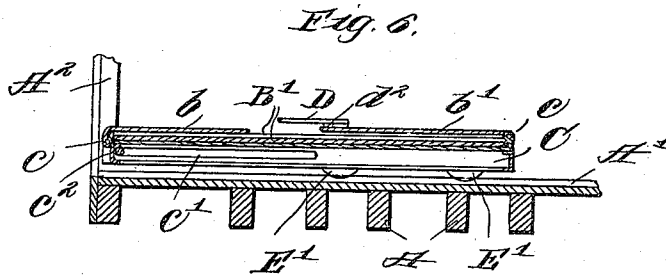
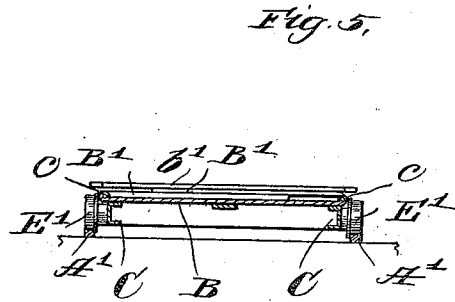
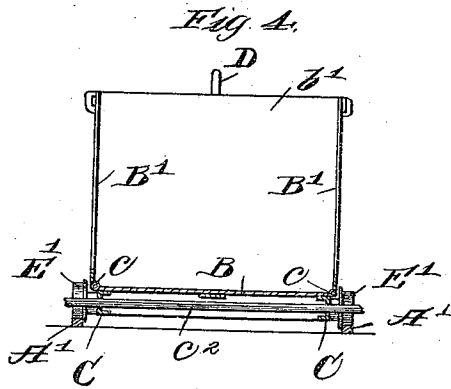
By *James Ros England*
Att'y

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2 SHEETS—SHEET 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES ROSS ENGLAND, OF CHICAGO, ILLINOIS.

MAIL-DISCHARGING APPARATUS.

961,943.

Specification of Letters Patent. Patented June 21, 1910.

Application filed October 20, 1909. Serial No. 523,617.

To all whom it may concern:

Be it known that I, JAMES ROSS ENGLAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mail-Discharging Apparatus, of which the following, taken in connection with the drawing, is a description.

My invention has for its object the production of apparatus for discharging mail, principally newspapers, from moving trains, and is designed for handling mail in a much quicker and easier way than is now done, and by means of which the number of clerks now required to handle and distribute the mail is greatly lessened.

A further object of my invention is to produce such a discharge receptacle that may be arranged inside of and operated in the mail cars as now constructed, and one which may be operated to discharge from either of the side doors of the mail car.

A further object of the invention is to produce such a device which may be folded when not in use, into a small space upon the floor of the car.

Various modifications in detail and touching the construction and arrangement of the different parts of the device will suggest themselves to persons skilled in the construction of devices of this kind, and I do not desire to be limited in these regards, as the form illustrated is but an embodiment of my invention.

In the accompanying drawings, forming part of this specification and in which like letters of reference indicate corresponding parts, Figure 1 illustrates a sectional view of part of a car body having my invention arranged between the side doors thereof; Fig. 2 is a like view of the car body illustrating my invention in the discharge position; Fig. 3 is a top plan view of the discharge receptacle; Fig. 4 is a sectional view taken on line 4—4 of Fig. 1; looking in the direction of the arrow; Fig. 5 is a view similar to Fig. 4 with the sides folded down; Fig. 6 is a longitudinal view of the receptacle illustrating the entire receptacle in folded position; Fig. 7 is a rear view illustrating means for locking the sides and end in upright position, and illustrating in side elevation a device upon which the receptacle may be swung to discharge mail from either side of the car; Fig. 8 is a fragmen-

tary detail of one of the upper corners of the rear end piece.

In the drawings A represents the longitudinal sills of the car underframe, A' the floor and A², A², the door casings of a railway mail car which may be of the form and construction now in service.

Positioned between the oppositely facing doors of a car is my discharge receptacle which is designed to fit just inside of a door casing and to be projected therethrough to discharge mail therefrom at the stations desired as the train is moving. This receptacle is preferably made of sheet metal and is provided with a floor or bottom B, two upright side members B', B' and front and rear end members b, b' respectively. The sides and front and rear members are movably secured to the bottom B by hinges c or the like, and are adapted when not in use to be collapsed and folded together as shown in Fig. 6.

Secured beneath the floor B of the receptacle are the channels C, C, each of which has an elongated opening c', c' therein which forms a guideway for the projecting arms c², c² which are secured to the door casings and project into said openings forming abutments which limit the outward movement of the receptacle as shown in Fig. 2.

Extending from the upper corners of the side members B' of the receptacle are the bosses or knobs d, d, which project through apertures in the rear end piece b'. Pivotal-ly secured at d' to the upper edge of the rear end piece b' is a double acting lever D, which has outwardly extending arms d², d² secured thereto upon each side of the fulcrum point, Fig. 7. When the end piece b' is in upright position and the projections d, d extend through coincident openings in said end piece, the lever is turned to the position shown in Fig. 7 which braces the arms d², d² against the projections d, d, and locks them in position holding the sides B', B' and rear end piece b' in upright position, as shown in Fig. 1.

The forward end piece b' is provided with pins b² upon the outer edges thereof. To one of these pins upon each edge of the end piece b' is secured a strap or chain b³ which is attached at its opposite end to the side pieces B' as at b⁴, for a purpose hereinafter described.

E, E, are rods which extend through the rear end piece b' and are locked in position

by the hook *e*. Each of these rods extend along a side member *B'* and is provided upon the free end thereof with a hook *e'* which is adapted to engage over a pin *b*² projecting from the edge of the end piece *b* and hold it in upright position, Fig. 1.

E', *E'* are wheels which are mounted upon bosses extending from the channels *C*, *C*.

Secured to the floor of the car and extending across the door opening upon each side of the car is a rod *F*, upon which is mounted two spring cams *F'*, *F*². A strap or other connection *f* is secured to the lower rear edge of the receptacle and to the cam *F'*, and a like strap *f'* is connected to the forward edge of the receptacle and to the cam *F*². A lever *G* is secured to the rod *F* preferably near one of the door casings. In the operation of the device the tension of the spring in the cam *F'*, when the lever *G* is released, will carry the receptacle forward to discharge position, and when the lever *G* is raised the spring in cam *F*² will move the receptacle back to normal position inside the car.

I have described the receptacle thus far as operated from one side of a mail car. When it is desired to discharge mail from the opposite side of the car the receptacle is swung around to bring the forward end *b* between the door casings *A*², *A*² on that side of the car. This is accomplished by means of a lever *H*, which is fulcrumed at *h* and having one end thereof provided with a head *h'* which extends beneath the receptacle from the rear thereof. When it is desired to swing the receptacle to operate it in the opposite direction, the attendant presses down upon the lever *H* with his foot which will raise the receptacle from the floor when it may be easily turned by swinging it on the pivot *h'*, the pressure on the lever is released and the receptacle drops into position in front of the opposite door, the arms *c*² *c*² are adjusted in the slots *c'*, *c'* and the straps *f*, *f'* are secured to the corresponding cams arranged on the opposite side of the car, and the receptacle is ready for operation as before.

When the receptacle is not in use, the lever *D* is released, and the ends and sides are folded together as shown in Fig. 6. When it is to be operated for discharging mail, the forward and rear end pieces and the sides are raised and secured in position as heretofore explained, the mail bags or packages are placed in the receptacle and when the place at which they are to be discharged is reached the operator disengages the hooks *E*, *E*, and throws the lever *G*, when the force exerted upon the strap *f* by the spring in cam *F'* will immediately carry the receptacle forward to the position shown in Fig. 2, at the same time the end piece *b* is automatically unlocked and has dropped to the position shown in said figure, which then

forms an extension to the bottom of the receptacle over which the mail passes before it drops therefrom.

It will be seen that the mail bags or packages being discharged are traveling at a downward angle and deposited much closer to the ground or other receptacle into which they are to be deposited than is possible as they are at present thrown from the train, by reason of which there is no danger of the mail being drawn under the wheels of the moving train. As soon as the mail is discharged the operator moves the lever *G* in the opposite direction which exerts the tension of the spring in cam *F*² through the strap *f'* and moves the receptacle inside of the car. The time consumed in moving the receptacle in either direction is but a second or two for each operation.

It will thus be seen that I have provided a device which is easy of operation, occupies but little space in the car, is quickly operated, and is effectual in the performance of its functions.

As is obvious, I contemplate, instead of turning the receptacle to operate from either side of the car as I have described in this specification, a separate receptacle may be provided for each side of the car.

I claim:—

1. A discharge receptacle comprising a bottom, sides and end pieces detachably secured together, and means for tilting said receptacle into discharge position, substantially as described.
2. A discharge receptacle having a bottom, sides and ends detachably secured together, means for tilting said receptacle into an inclined position and dropping the forward end piece to form an elongation of the bottom of the receptacle, substantially as described.
3. A discharge receptacle having the bottom, sides and ends thereof detachably secured together, means for moving it forward and tilting said receptacle into an inclined position, and means for limiting its forward movement, substantially as described.
4. A discharge receptacle having the bottom, sides and ends thereof detachably secured together, means for moving said receptacle forward and tilting it into an inclined discharge position and simultaneously dropping the forward end piece to form an elongation of the bottom of the receptacle, means for limiting the forward movement of the receptacle, and means for moving said receptacle to normal position, substantially as described.
5. A discharge receptacle, having a bottom, side and end members hinged thereto and adapted to be raised and secured in upright position, wheels upon which said receptacle is mounted, mechanism cooperating with said receptacle to simultaneously

move it forward into discharge position, means for limiting its forward movement, and means for restoring it to normal horizontal position, substantially as described.

5 6. In a device of the class described, the combination of the car body having door openings therein, a rod extending across each of said openings, cams mounted on said rods, a discharge receptacle connected with
10 said cams, a lever operating the aforesaid rod to move the receptacle into discharge position and to reverse its movement to normal position.

15 7. In a device of the class described, the combination of the car body having side

door openings, a rod extending across each of said openings, spring cams mounted on said rods, a discharge receptacle connected to said cams, a lever operated to move said receptacle forward and back, and means for 20 limiting its movement in either direction, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES ROSS ENGLAND.

Witnesses:

A. V. WELDON,
WELLS GOODHUE.