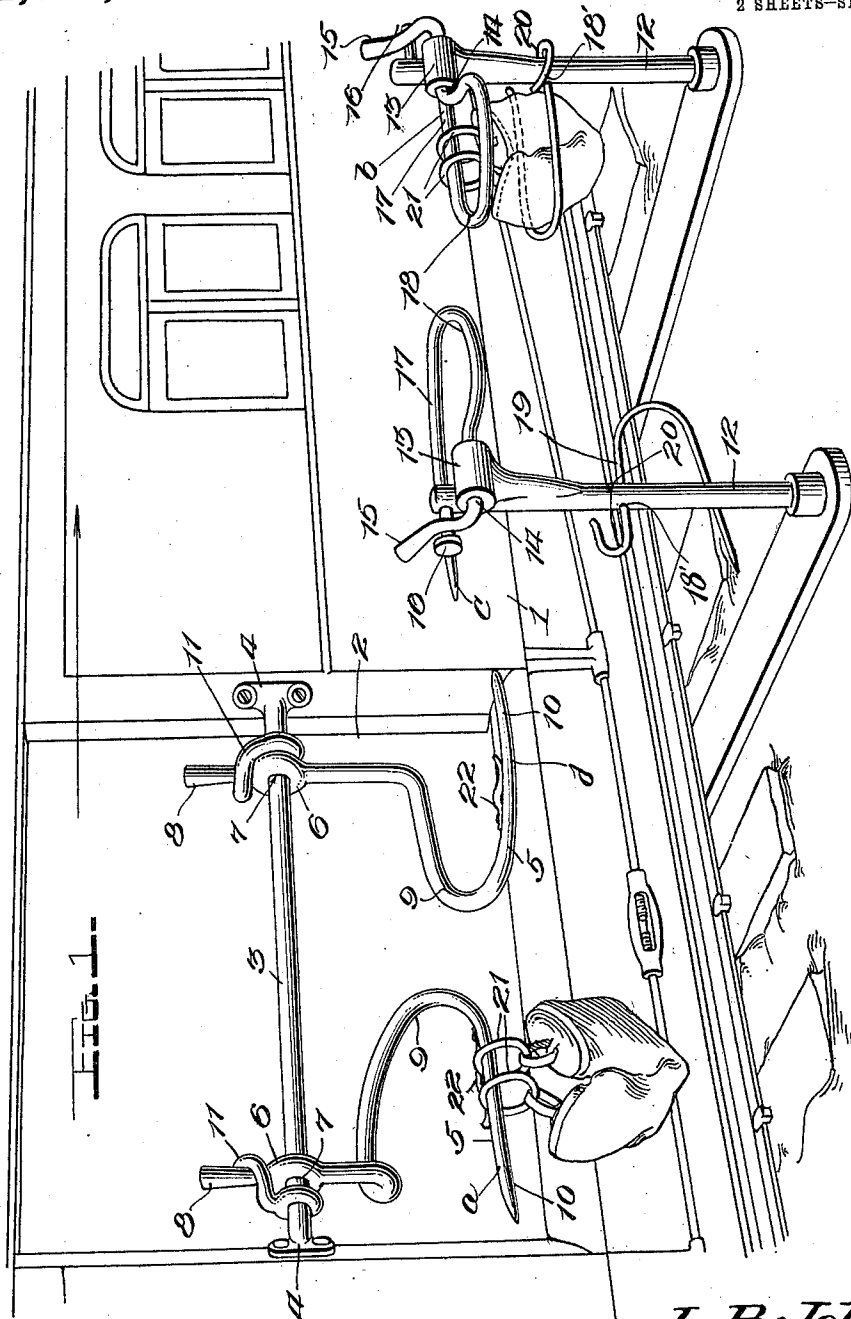


L. B. JOHNSTON.
MAIL HANDLING DEVICE.
APPLICATION FILED MAR. 30, 1912.

1,032,483.

Patented July 16, 1912.

2 SHEETS—SHEET 1.



Inventor.
L. B. Johnston

Witnesses

Chas. L. Griebauer.
G. B. Norton.

By

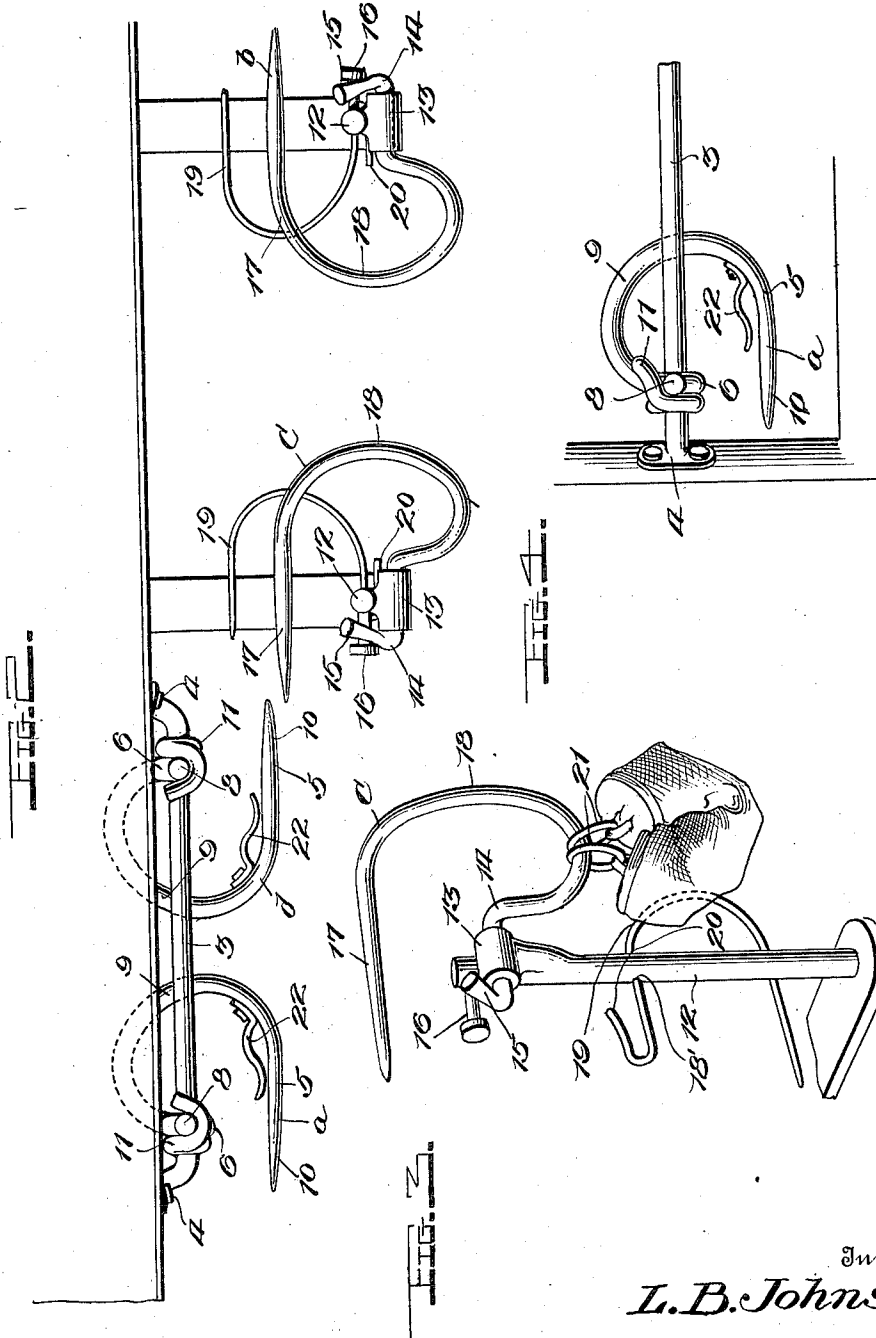
Watson E. Coleman.
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UNITED STATES PATENT OFFICE.

LASURE B. JOHNSTON, OF LORAIN, OHIO.

MAIL-HANDLING DEVICE.

1,032,483.

Specification of Letters Patent.

Patented July 16, 1912.

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To all whom it may concern:

Be it known that I, LASURE B. JOHNSTON, a citizen of the United States, residing at Lorain, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Mail-Handling Devices, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to new and useful improvements in devices for transferring mail from and to moving trains, the invention has for one of its objects to provide a simple mail handling mechanism designed
15 to be applied to a railway mail coach, and so arranged that it will be positive in its action to receive the mail into the car from a crane along side of the track and to subsequently swing a bag to be delivered out
20 from the car so that it will be caught by a crane or the like and be deposited at the station without any liability of injury to the bag and the mail contained therein.

Another object of the invention is to provide an improved construction of crane designed to be arranged along side of a track to cooperate with the device carried by a car.

A further object of the invention is to provide a device of this character which will possess advantages in points of efficiency and durability, is inexpensive of manufacture and at the same time simple in construction and operation.

35 With the above and other objects in view, the invention consists in the novel features of construction and the arrangement and combination of parts, hereinafter more fully described, pointed out in the claims, and shown in the accompanying drawings, in which,

40 Figure 1 is a perspective view illustrating the arrangement of my novel device when a mail bag is to be put on and another mail bag taken from the car moving in the direction indicated by the arrow. Fig. 2 is a top plan view showing the mail bag holding arms in operative position. Fig. 3 is a perspective view of one of the mail bag holding arms which are applied to a crane along
45 side the track showing the same in an inoperative position, and Fig. 4 is a top plan view of one of the mail bag holding arms

carried by the car showing the same in an inoperative position.

Referring more particularly to the drawings, 1 indicates a railway mail coach having the usual door openings 2 in the side thereof. A horizontal bar 3 is arranged across one of the openings and having its ends fixed to the side of openings as shown at 4. Mounted for swinging and sliding movement upon the bar are oppositely disposed mail holding arms 5, said arms having an enlarged portion 6, which is provided with the opening 7 adapted to receive the bar 3. Formed integral with the enlarged portion on one side is a handle member 8 whereby the mail holding arms may be either swung or slid upon the bar. On the opposite side of the enlarged portion the arm is curved as shown at 9 and terminates into a holding arm 10. A retaining hook 11 is mounted on each end of the bar 3 adapted to receive the handle member 8 whereby the arm 5 will be securely held in an operative position as shown in Fig. 1. After the mail bags have been delivered and received the arms 5 are to be swung to an inoperative position as shown in Fig. 4, whereby the handle member 8 will be engaged on the opposite side of the hook as shown in Fig. 4, the arms 5 being arranged in the car in a substantially vertical position.

The cranes along side the track are suitably supported upon the platform of a station or any other platform suitable for the purpose. These cranes comprise an upright or standard 12 having a bearing sleeve 13 secured to the upper end thereof. Rotatably mounted in this sleeve is a rock shaft 14 having a handle member 15 at one end thereof, which is adapted to engage with the headed pin 16 to hold the bag holding arm 17 in an operative position. A curved portion 18 is formed integral with the other end of the rock shaft and terminates in the bag holding arm 17. A transverse opening 18' is formed in the standard 12 about midway of its length, adapted to receive a retaining arm 19. This arm 19 comprises a suitable length of heavy wire or rod having one of its ends curved to form a retaining arm and its other end bent to form a hook member 20, which is adapted to engage with the standard as shown in Fig. 1 to hold the retain-

ing arm in a substantially horizontal position.

In mounting the mail bags upon the holding arms, I provide the bags with suitable rings 21 whereby the mail bags can be easily deposited on or taken from the holding arms. The holding arms 5 which are mounted on the car are provided with the spring clips 22 adapted to engage the rings on the bags and prevent them from slipping off before being removed by the holding arms on the crane.

When the bags are mounted on the arms 17 the retaining arms 19 are swung to a horizontal position and adapted to partially encircle the bags to prevent any swinging movement of the bag during a wind storm or by the suction from the train so that the bags will be held in position and not swing out and come in contact with a moving train. After the bags have been removed from the arms 17 the retaining arms are to be dropped to an inoperative position by sliding the arm in the opening 18 until the hook 20 is disengaged from the standard, the arms being dropped to the position shown in Fig. 3.

In Fig. 1 I have illustrated the direction in which the train is moving by means of an arrow, in order to drop a mail bag from the car and receive a bag from the cranes along side the track the bag in the car must be placed on the arm indicated at *a* and the bag to be taken from the crane along side the track is to be hung on the arm indicated at *b* so that as the train passes the crane the arm *c* will receive the bag from the arm *a* on the train and the arm *d* on the train will receive the bag from the arm *b* on the crane. The mail bag received from the train will be received upon the arm *c* with such force that the same will slide on the arm until it reaches the curved portion 18, the weight of the bag swinging the arm to a vertical position. To remove the mail bag from the arm *d* the arm is swung into the car by engaging the handle member 8 with the outer side of one of the hooks 11, the bag being removed and the arm remaining in an inoperative position. After the mail bag has been removed from the arm *b* on the crane the same is to be swung to an inoperative position as shown in Fig. 3 so as to be entirely out of the way of any other passing trains, the arm *a* on the car being also swung to an inoperative position as shown in Fig. 4.

From the above description taken in connection with the drawings it will be seen that I have provided a simple and durable mail handling mechanism whereby the mail bags can be easily and quickly taken from or delivered to passing trains.

While I have shown and described the preferred form of my invention it will be obvious that various changes in the details

of construction and in the proportions may be resorted to for successfully carrying my invention into practice without sacrificing any of the novel features or departing from the scope thereof.

What I claim is:—

1. In a device of the character described, the combination with a railway mail coach having a door opening in one of its side walls, of a horizontal bar transversely arranged across said opening and having its ends fixed to the side thereof, bag holding arms mounted on said bar for sliding and swinging movement, retaining hooks mounted on said bar at each end thereof, a handle member on the holding arms adapted to engage with the hooks to hold said arms in an operative or an inoperative position.

2. In a device of the character described, the combination with a railway mail coach having a door opening in one of its side walls thereof, of a horizontal bar transversely arranged across said opening and having its ends fixed to the side thereof, bag holding arms mounted on said bar for sliding and swinging movement, said arms comprising an enlarged portion provided with an opening to receive said bar, a handle member formed on one side of said portion, a curved portion formed integral the other side of the enlarged portion and terminating into a holding arm, hooks mounted on said bar at each end thereof, the handle member of said holding arms being adapted to engage said hooks to hold said arms in an operative or an inoperative position.

3. In a device of the character described, the combination of a standard, a bearing sleeve secured to the upper end thereof, a rock shaft mounted in said bearing, a bag holding arm formed integral with one end of said rock shaft, a handle member formed integral with the other end of said rock shaft, and a headed pin on the upper end of said standard upon which the handle member rests to hold said arm in an operative position.

4. In a device of the character described, the combination of a standard, a bearing sleeve secured to the upper end thereof, a rock shaft mounted in the bearing sleeve, a curved portion formed integral with the rock shaft and terminating into a bag holding arm, a handle member formed integral with the other end of the rock shaft, a headed pin at the upper end of the standard upon which the handle member rests to support said arm in an operative position, said arm adapted to be swung to an inoperative position when a weight is applied to said curved portion.

5. In a device of the character described, the combination of a standard, a bearing sleeve secured to the upper end thereof, a rock shaft mounted in said sleeve, a bag

holding arm formed integral with one end of said rock shaft, a handle member formed integral at the other end, a headed pin at the upper end of the standard upon which the handle member rests to hold said arm in an operative position, a retaining arm slidably mounted in the standard and arranged beneath said holding arm, said retaining arm being adapted to partially encircle a mail bag, to hold the same against swinging movement, and means for holding said retaining arm in an operative position.

6. In a device of the character described, the combination of a standard, a bearing sleeve secured to the upper end thereof, a bag holding arm mounted in said sleeve for swinging movement, means for holding said arm in an operative position, said standard having an opening formed therein about midway of its height, a retaining arm mounted in said opening, said arm comprising a single length of heavy wire or other suitable material having a straight portion adapted to slide in said opening, a hook member formed at the end of the wire opposite the arm and adapted to engage with the standard to hold the same in operative position, said hook member being disengaged from the standard by sliding movement of the straight portion and allow the retaining arm to drop to an inoperative position.

7. In a device of the character described, the combination of a standard, a sleeve secured to the upper end thereof, a sleeve mounted in said sleeve, a bag holding arm formed integral with one end of said rock shaft, a handle member formed integral with the other end of said rock shaft, a headed pin at the upper end of said standard upon which the handle member rests to hold said arm in an operative position, in combination with a railway coach having door openings in the side walls thereof, of a horizontal bar transversely arranged across said opening and having its ends fixed to the side thereof, bag holding arms mounted on said bar for sliding and swinging movement, a handle member formed integral with said arms, and retaining hooks mounted on each end of the bar with which the handle mem-

ber is adapted to engage to hold said arms in an operative or an inoperative position.

8. In a device of the character described, the combination of a standard, a bearing sleeve secured to the upper end thereof, a rock shaft mounted in said bearing sleeve, a bag holding arm formed integral with one end of said rock shaft, a handle member formed integral with the other end of said rock shaft, means upon the upper end of said standard upon which the handle rests to hold the arm in an operative position, and a retaining arm slidably mounted in the standard and arranged beneath said holding arm to hold a mail bag against swinging movement.

9. In combination with a railway coach having a door opening in each of its side walls, a horizontal bar transversely arranged across one of said openings and having its ends fixed to the sides thereof, oppositely disposed bag holding arms, formed on said bar for sliding and swinging movement, a handle member formed integral with said arm, and a retaining hook mounted on each end of the bar with which the handle member is adapted to engage to hold said arms in an operative or an inoperative position, of a standard, a sleeve secured to the upper end thereof, a rock shaft mounted in said sleeve, a bag holding arm formed integral with one end of said rock shaft, a handle member formed integral with the other end of said rock shaft, a headed pin at the upper end of said standard upon which the handle member rests to hold said arm in an operative position, a retaining arm slidably mounted in the standard and arranged beneath said holding arm, said retaining arm being adapted to partially encircle the mail bag to hold the same against swinging movement, and means for holding said retaining arm in an operative position.

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

LASURE B. JOHNSTON.

Witnesses:

JOHN M. HARDING,
JAS. T. HORSLEY.