J. A. CHAMBERS.

HANDLING DEVICE.

APPLICATION FILED MAY 14, 1917.

1,291,404. Patented Jan. 14, 1919.

Fig. 1.

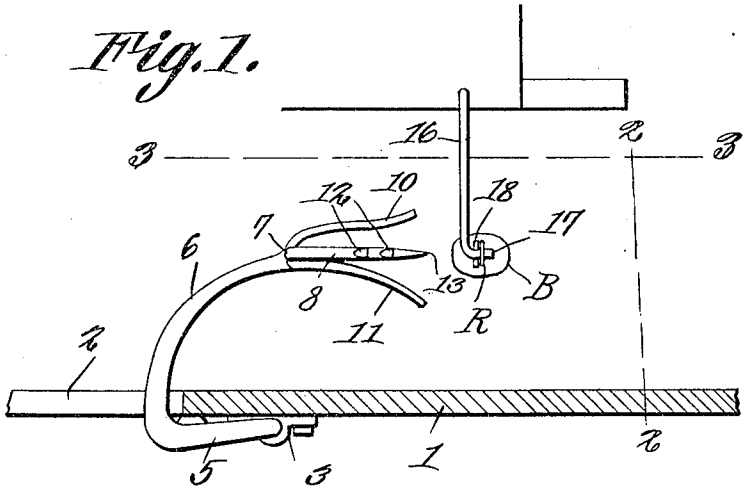


Fig. 2.

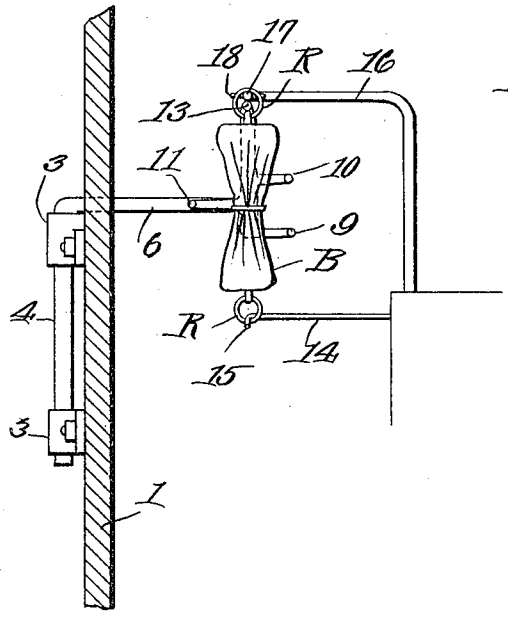
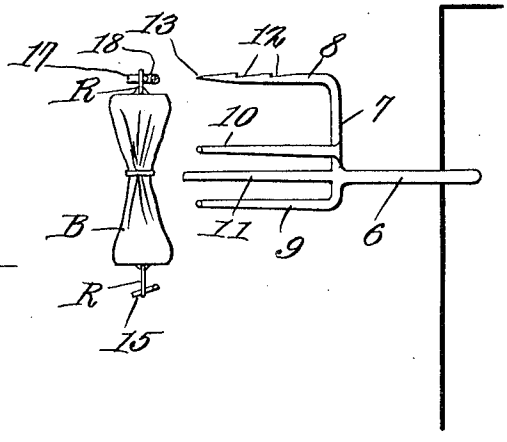


Fig. 3.



Witness

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HANDLING DEVICE.

1,291,404. Specification of Letters Patent. Patented Jan. 14, 1919.

Application filed May 14, 1917. Serial No. 168,443.

To all whom it may concern:

Be it known that I, JOHN A. CHAMBERS, a citizen of the United States, residing at Newburg, in the county of Phelps and State of Missouri, have invented a new and useful Handling Device, of which the following is a specification.

This invention relates to apparatus for handling mail and is designed more particularly for use in connection with the mechanism disclosed, for example, in Patent No. 1,150,340 issued on August 17th, 1915.

One of the objects of the invention is to provide novel, simple and efficient means for gripping the sack while it is suspended from a supporting structure, the gripping means serving to hold the sack without injuring it and without requiring the use of relatively movable jaws or other gripping elements such as used in some apparatus of this character.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of the parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the 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 plan view of the apparatus constituting the present invention, a portion of the car structure being as shown in section.

Fig. 2 is a section on line 2—2 Fig. 1.

Fig. 3 is a section on line 3—3 Fig. 1.

Referring to the figures by characters of reference 1 designates a portion of the wall of a car and secured to the inner surface of this wall close to the car door opening 2 is a bearing 3 in which is journaled a vertical shaft 4. Extending from the upper end of this shaft is a radial arm 5 which merges at its free end into an arcuate arm 6. When the arm 5 is swung against the inner surface of the car wall, this arcuate arm 6 is adapted to swing outwardly and forwardly through the opening 2.

Connected to or formed with the free end of the arcuate arm is a vertical bar 7. Upper and lower fingers 8 and 9 extend from the ends of this bar. The finger 8 is extended straight forwardly from the upper end of the bar and the finger 9 is curved laterally and forwardly. Extending from the bar 7 near the center thereof is another finger 10 corresponding in shape to the finger 9 and arranged directly above it. Extending from the bar 7 between the fingers 9 and 10 is a finger 11 which is curved from end to end and diverges forwardly away from the fingers 9 and 10 as shown particularly in Fig. 1.

Notches 12 are formed in the upper face of the finger 8 and said finger is pointed at its free end as shown at 13.

The means for supporting a mail sack includes an arm 14 having a terminal finger 15 extending in the direction of movement of the car. Extending above this arm 14 is another arm 16 having a finger extending in the direction of movement of the car, this finger being indicated at 17 and being located directly over the finger 15. Studs 18 extend laterally from the finger 17.

The mail bag is indicated at B and has a ring R at each end thereof. The upper ring R is adapted to engage the finger 7 and to bear against the studs 18 while the lower ring R is adapted to engage the finger 15. When the bag is thus supported it is held directly in the path of the gripping member on the car when said member is swung out to active position as shown in Fig. 1. As the car passes the station where the bag is supported, said bag will be received between the fingers 9 and 10 and the finger 11 and at the same time the upper finger will enter the upper ring R so that said ring will rest in one of the notches 12. The impact of the bag against the fingers 9, 10 and 11 will cause the bag to become wedged between the back portions of the fingers, this being particularly true in view of the fact that the finger 11 is opposite the space between the fingers 9 and 10. Consequently the bag will be subjected to a cushioning action and will not only be supported by the ring R on the finger 8 but will also be supported by frictional engagement with the fingers 9, 10 and 11. The impact of the bag against the gripping element will cause the arm 6 to swing backwardly into the car opening so that the bag can thus be easily removed and placed in the car.

A similar gripping element can be mounted on a suitable standard at the station and similar means for supporting the bag can be

mounted on the side of the car so that a bag can thus be delivered as readily to a station as it can be received therefrom.

Apparatus such as described will be found useful in effecting the interchange of mail to and from a fast moving train and the danger of dropping a bag of mail to the ground and injuring it is reduced to the minimum.

What is claimed is:

1. Apparatus for effecting the interchange of mail, including superposed members for engaging the upper and lower ends of a flexible mail holding receptacle, and means movable against said receptacle to grip and support it and remove it from said superposed members, said means including forwardly diverging fingers adapted to receive the receptacle therebetween and to wedge thereupon, one of said fingers being disposed opposite the space between the other fingers.

2. Apparatus for effecting the interchange of mail, including superposed members for engaging the upper and lower ends of a flexible mail holding receptacle, there being a ring upon said receptacle, and means movable toward said receptacle to grip and support the same and remove it from the superposed members, said means including a finger pointed in the direction of movement of said means and movable into the ring on the receptacle, and fingers diverging in the direction of movement of said means for receiving the receptacle therebetween and wedging upon the receptacle, one of the fingers being arranged to engage the receptacle at one side and press said receptacle into the space between the other fingers at the other side.

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

JOHN A. CHAMBERS.

Witnesses:
JOHN A. POTTER,
EMORY SPRULLING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."