

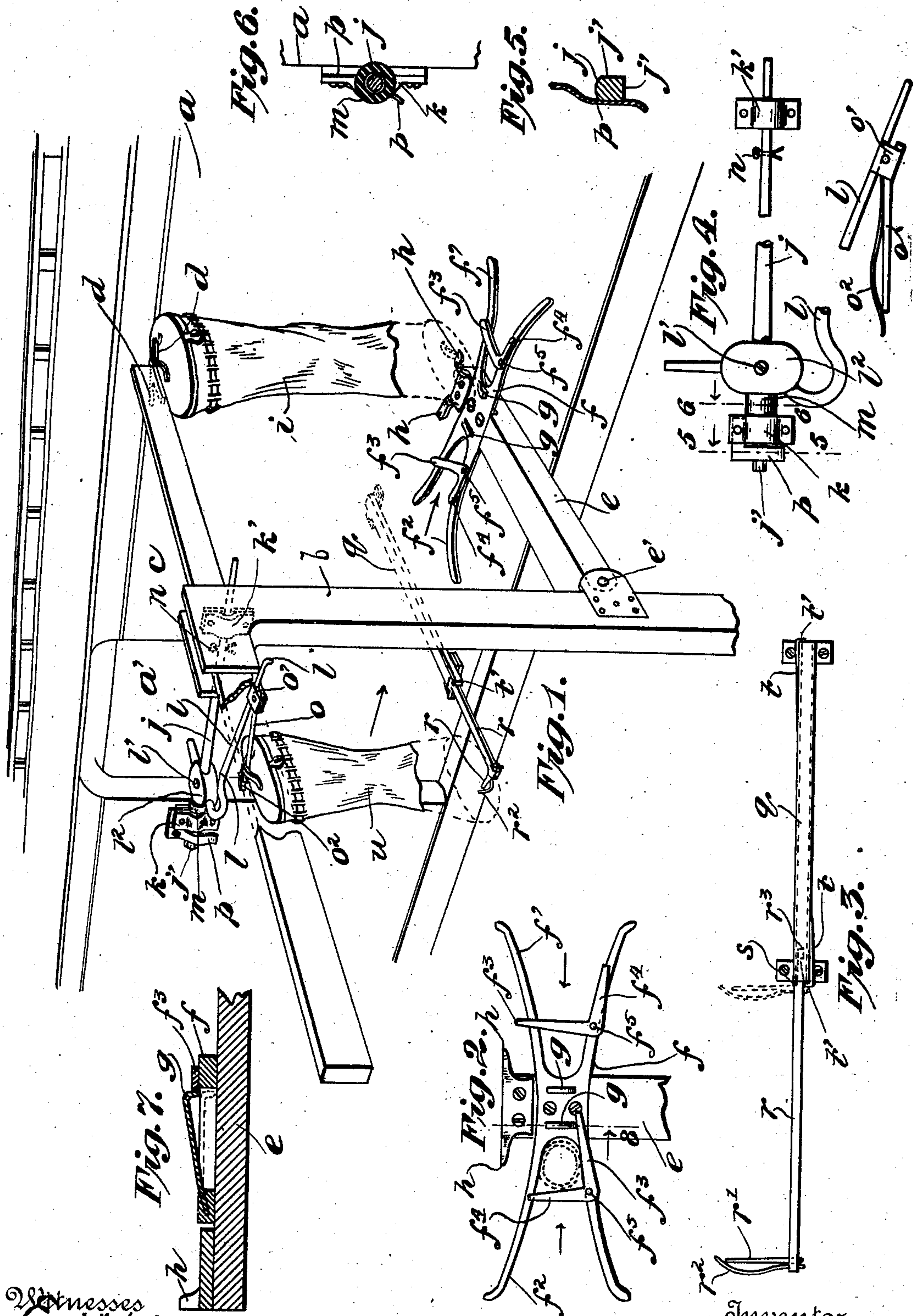
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J. N. THOMAS.
MAIL BAG CATCHER AND DELIVERER.

APPLICATION FILED AUG. 21, 1903.

NO MODEL.



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JAMES NICHOLAS THOMAS, OF LEADVILLE, COLORADO.

MAIL-BAG CATCHER AND DELIVERER.

SPECIFICATION forming part of Letters Patent No. 747,663, dated December 22, 1903.

Application filed August 21, 1903. Serial No. 170,260. (No model.)

To all whom it may concern:

Be it known that I, JAMES NICHOLAS THOMAS, a citizen of the United States, residing at Leadville, in the county of Lake, State of Colorado, have invented certain new and useful Improvements in Mail-Bag Catchers and Deliverers, of which the following is a specification.

This invention relates to mail-bag catchers and deliverers, whereby considerable trouble and wear on the mail-sacks is prevented and the duties of the postal or mail clerk made lighter.

The objects of the present invention are to simplify and render more effective and serviceable such devices.

One of the main objects of my invention is to provide means at the station, as well as upon the moving car, for both catching and delivering a mail-bag, these devices being so constructed and arranged as to assure that the mail-bags will be properly delivered at the station and taken up by the car.

A further object of the invention is to so construct the mail-bag catcher at the station as to take up the bag when the train is moving in either direction.

A still further object is to so construct the apparatus that those portions which are mounted on the car may be removed from one side of the car and set up on the opposite side, so that the devices on the car may be used in whatever direction the train may be moving.

These being some of the objects in view, my invention consists of certain features of construction and combinations of parts to be hereinafter described, and then particularly claimed, reference being had to the accompanying drawings, showing a desirable form of my invention, and in which—

Figure 1 is a perspective view showing my improved mail-bag catcher and deliverer, such parts only being shown as are necessary to illustrate the invention, parts being broken away for the sake of clearness and other parts being in dotted lines. Fig. 2 is an enlarged top view of the lower portion of the mail-bag catching and delivering device at the station. Fig. 3 is a plan view of the portion of the mail-bag-holding device mounted on the floor of the car. Fig. 4 is an enlarged

plan view of the swinging device mounted on the car, which serves to support the upper end of the bag which is to be delivered and also to take up the bag at the station. Fig. 5 is a cross-section on the line 5 5, Fig. 4. Fig. 6 is a cross-section on the line 6 6, Fig. 4; and Fig. 7 is an enlarged transverse section through the double arm of the catching and delivering device at the station.

Only a portion of the car *a* is shown and only a portion of the standard or upright *b*, which is located at the station, is shown. The upright *b* supports at its upper part a lever *c*, the rear end of which is preferably heavier than the outer end, which engages with the mail-bag, and at this outer end the said lever is provided with a double hook consisting of two horns *d*, extending laterally in opposite directions. Below the lever *c*, located at a distance therefrom preferably corresponding with the length of the mail-bag, is an arm *e*, pivoted to the standard *b* at *e'*, which at its opposite swinging end supports a double arm *f*, which extends transversely to the arm *e* and is secured thereto by suitable fastening devices. The double arm *f* extends in a direction parallel with that of the movements of the train, one end, *f'*, being forked or bifurcated and the other end, *f''*, being likewise constructed. Pivoted to each of the bifurcations is a dog composed of two portion, *f³* *f⁴*, located at an angle relatively to each other, the portion *f³* forming a trip and the other portion, *f⁴*, a keeper. The pivots *f⁵* of these dogs are both located on the same side of the double arm *f*. These dogs swing in planes parallel with the plane of the double arm and may be moved so that the trips *f³* may bridge the gap or throat of each bifurcation and so that the keepers *f⁴* may be thrown by the impact of the mail-bag against the trips to bridge the gap or throat, and thereby serve to catch the bag and hold it in place. Arranged at the middle portion of the double arm *f* are two catches *g*, which are preferably in the nature of umbrella-catches, which permit the trips *f³* to snap past them and to be engaged and held thereby. At the outer end of the swinging arm *e*, beyond the double transverse arm *f*, is located a pair of oppositely-projecting hooks *h*, these hooks lying under the

horns *d*. The horn at one side of the lever *c* and the hook at the corresponding side of the arm *e* serve to support a mail-bag *i* to be taken up by the train if moving in one direction, while the horn and hook at the opposite sides of the lever and arm support the bag to be taken up by the train if moving in the opposite direction.

The mail-car *a* likewise carries devices for delivering a bag to the device at the station and for catching a bag which is supported at the station to be taken up. To this end there is arranged across the door *a'* of the car a transverse rock-shaft *j*, which is journaled in bearings *k k'*, located at opposite sides of the door. A forwardly-projecting arm *l* is mounted at its rear end on the rear end of the shaft *j* by means of a set-screw or other removable fastening device *l'*, which permits the arm *l* to be loosened or rigidly held on the shaft. Between the portion *l²* of the arm and the bearing *k* is located a suitable elastic cushion *m*, which may be of rubber or a helical spring. The shaft *j* is so mounted in its bearings that it may have a slight longitudinal reciprocation therein, which permits the cushion *m* to act as a buffer and take up any shock. At the other end of the rock-shaft *j* a cotter-pin *n* passes through a suitable hole in the shaft. By removing the cotter-pin and loosening the arm *l* the shaft *j* may be slid out from its bearings and be placed in bearings at the opposite side of the car, so that the devices supported thereby may be used when the train is moving in opposite direction. The arm *l* supports near its outer end a backwardly-projecting hook *o*, the same being removably held on the arm by means of a clamp *o'*. This hook *o* supports a clip-spring *o²*, the free end of which extends in the direction of the free end of the hook. As shown in detail in Fig. 5, the shaft *j* is provided with flat portions *j'* and upon these flat portions a spring *p*, which is secured to the side of the car, presses. It will be seen that by giving the shaft a forward rotation the spring *p* will bear upon one of the flat portions, and thus support the arm *l* and the hook *o* in a differently-adjusted position. It is evident that the number of faces *j'* on the shaft may be altered as desired. A corresponding spring and likewise corresponding bearings *k k'* are located at the opposite side of the car.

Another portion of the device mounted on the car is arranged on the floor of the car and comprises a transverse guide *q*, preferably open at each end and similarly constructed at each end, so that a slide *r*, which is guided therein, may be shifted for use at one side of the car or the other. The slide *r* is of sufficient length so that when shifted out longitudinally a hook *r'* on its outer end will be located approximately under the hook *o* above it. Fixed alongside of the hook *r'* is a snap-spring *r²*, the free end of which extends in the direction of the free end of the hook, so as to form a spring holding device. At the same

side of the slide *r* as the hook *r'* is a shoulder *s*, the inner end of the slide beyond the shoulder being reduced at *r³*. A spring *t*, provided with a projecting portion *t'*, is fixed at the end of the guide *q*, and a corresponding spring is fixed at the other end of the guide. This spring bears at this projecting portion *t'* upon the slide *r* and serves to press the slide, so that when the same is slid out as far as allowed by a suitable limiting device the shoulder *s* is pressed into engagement with the end of the guide, and the slide cannot be pushed in until this tendency of the spring is counteracted by pressing the slide toward the spring.

The entire apparatus is used and operates as follows: When a mail-bag *i* is to be delivered to a moving train, the baggage-master causes the loops in the ends of the mail-bag to be engaged with the horn *d* and the hook *h*, which lie or extend in the direction of the movement of the train. The dog *f³ f⁴*, adjacent to the moving train, is set so that the portion or trip *f³* will bridge the gap of the bifurcation *f²*. The bag *u* is engaged by its loops with the backwardly-projecting hook *o* and the hook *r'* on the train. When the bag *u* is so supported, the parts will be in the position shown in Fig. 1 and the throat or gap between the arm *l* and the shaft *j* will be in position to catch or gather up the bag *i* at the station. As soon as the devices on the train meet the devices at the station the bag *i* is gathered up and the bag *u* delivered into the bifurcation *f²*. On being received into the bifurcation *f²* the middle portion of the bag *u* strikes the trip *f³* and throws the dog so that the keeper *f⁴* will be brought across the bifurcation behind the bag and the trip will be sprung into engagement with its catch *g*. Thus the bag will be securely retained in the double arm *f* by means of the dog *f³ f⁴*.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The combination of the station-standard, a double arm supported thereon having oppositely-extending forked ends, pivoted angular dogs on the forked ends, one end of each dog forming a trip and the other end a keeper, catches between the forked ends for engaging the trips to retain the keepers across the forks, and means on the car for delivering a bag to the arm, for substantially the purposes set forth.

2. The combination of the station-standard, a double arm supported thereon having oppositely-extending forked ends provided with means to be tripped by and to engage and retain a bag, oppositely-projecting hooks adjacent to said arm for catching the lower end of the bag to be delivered to the train, means provided also with oppositely-projecting hooks or horns for supporting the upper end of the bag to be delivered, means on the car for catching the bag at the station, and means

for delivering a bag to said arm, for substantially the purposes set forth.

3. The combination with a car, of a pivoted mail-bag support thereon, the pivot of which 5 has flat portions, and a spring for engaging said flat portions and for holding the support at various angles, for substantially the purposes set forth.

4. The combination with a car of a pivoted 10 mail-bag support thereon, provided with a forwardly-projecting arm for catching a bag and a backwardly-projecting hook for delivering a bag, said hook being adjustably secured to said arm, for substantially the purposes set forth. 15

5. The combination with a car of a pivoted mail-bag support thereon, provided with a forwardly-projecting arm for catching a bag, a backwardly-projecting hook, and a spring 20 fixed to said hook and the outer end of which is free to cooperate with the hook for retaining and delivering a bag, said hook being adjustably secured to said arm, for substantially the purposes set forth.

25 6. The combination with a car, of a pivoted mail-bag support thereon, provided with a forwardly-projecting arm for catching a bag, a backwardly-projecting hook for delivering a bag and a clamp for removably securing 30 the hook to the arm, for substantially the purposes set forth.

7. The combination with a car provided

with bearings, of a shaft in said bearings, means located on the shaft for catching a bag, and a spring device acting on the shaft 35 to hold it and the said means in more than one position, for substantially the purposes set forth.

8. The combination with means on a car for supporting the upper part of a mail-bag 40 to be delivered, of a slide mounted to move longitudinally on the floor of the car and provided at its outer end with a hook, and a spring fixed to the hook and having a free end adapted to cooperate with the hook to retain 45 the lower end of the mail-bag for delivery, for substantially the purposes set forth.

9. The combination with means on a car for supporting the upper part of a mail-bag, of a slide on the floor of the car and provided 50 with a shoulder, means at the outer end of the slide for catching the lower part of the bag, and a spring pressing against the slide to engage the shoulder with a portion at the floor of the car, for substantially the purposes set forth. 55

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

JAMES NICHOLAS THOMAS.

Witnesses:

EVERETT LORD FAHNESTOCK,
ROBERT S. APLIN.