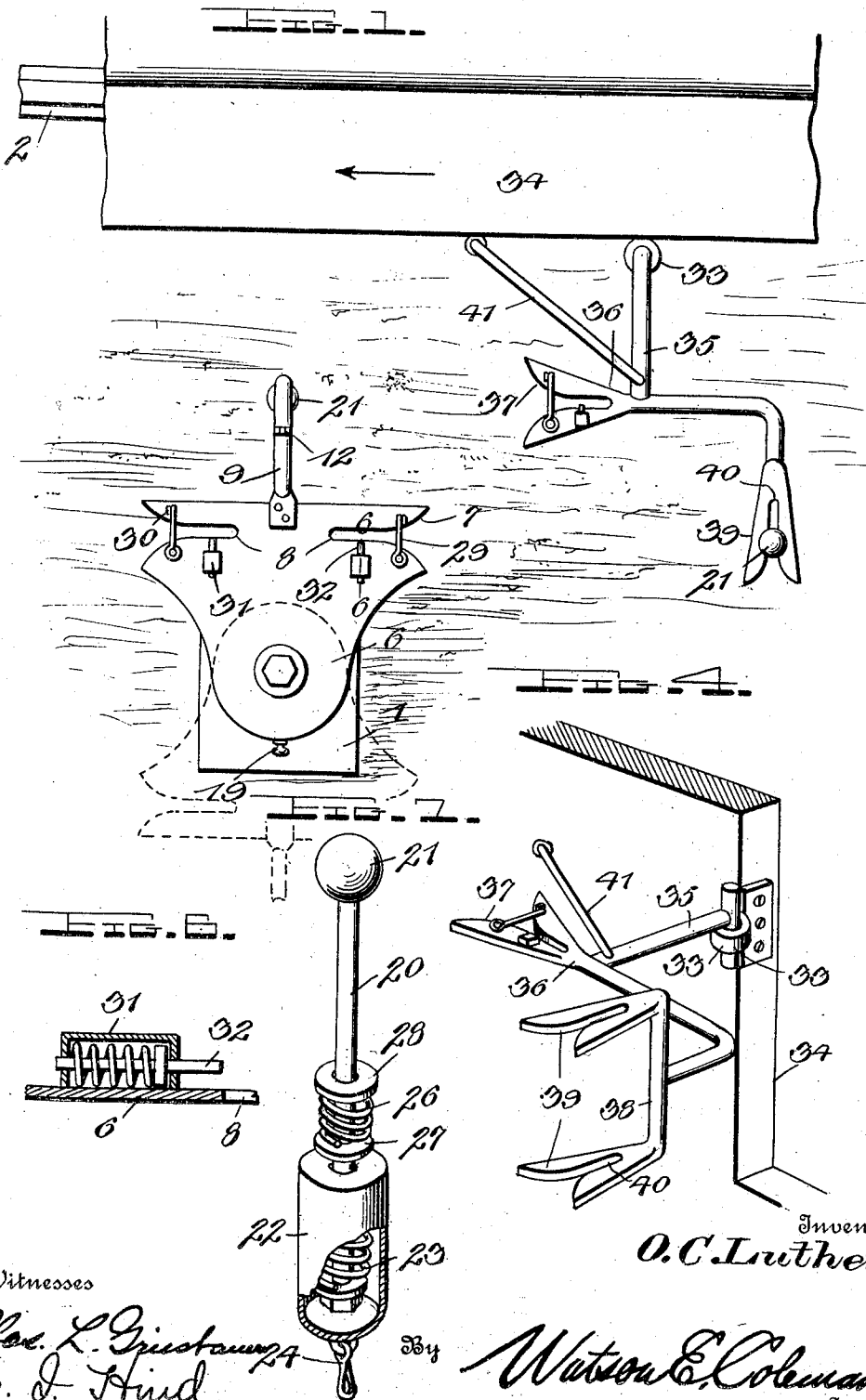


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MAIL BAG HANDLING APPARATUS.
APPLICATION FILED AUG. 10, 1912.

1,043,020.

Patented Oct. 29, 1912.

2 SHEETS—SHEET 1.



Witnesses

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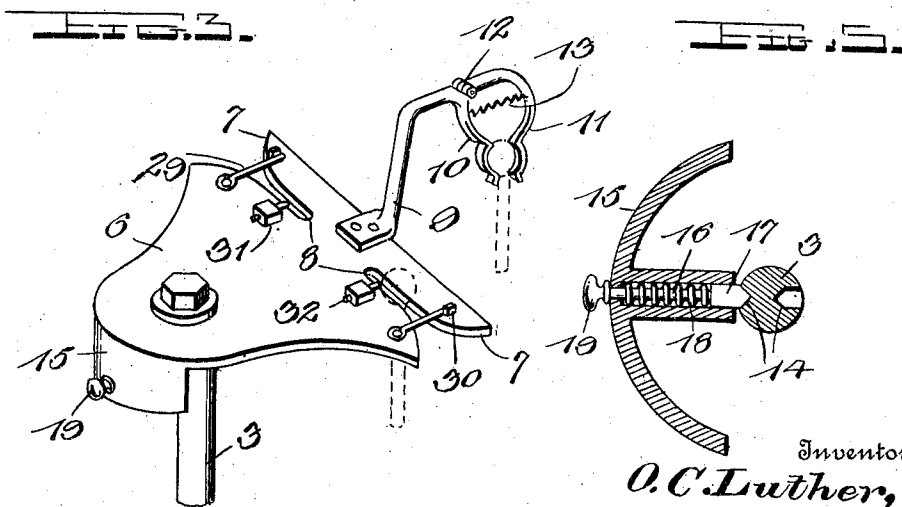
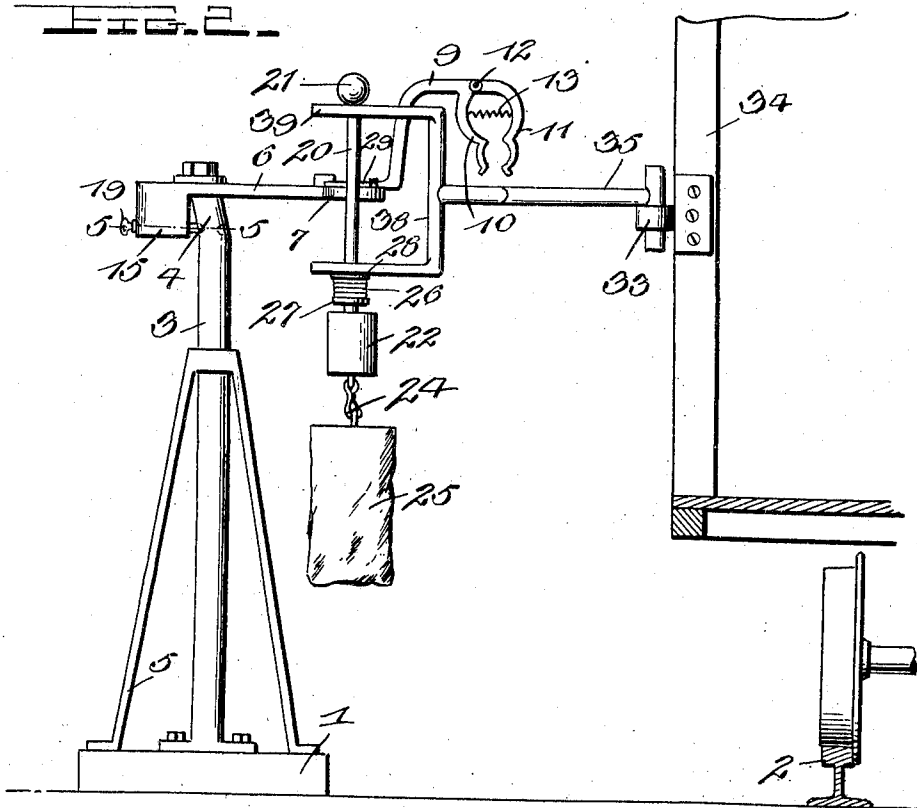
Watson E. Coleman,
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MAIL-BAG-HANDLING APPARATUS.

1,043,020.

Specification of Letters Patent.

Patented Oct. 29, 1912.

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To all whom it may concern:

Be it known that I, OTTO C. LUTHER, a citizen of the United States, residing at Rugby, in the county of Pierce and State of North Dakota, have invented certain new and useful Improvements in Mail-Bag-Handling Apparatus, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to new and useful improvements in mail bag handling apparatus and more particularly to a catching and delivering device between moving and stationary objects and the primary object
15 of the invention is to provide a device of this character which will permit a mail bag to be delivered from a moving train to a stationary object at a station and also permit a mail bag to be removed by the moving
20 train from the stationary object.

A further object of the invention resides in providing a device which will effectively carry out the purpose for which the same is designed without injuring the parts forming the device, nor the mail bags which are
25 caught and delivered and a further object resides in providing a means which will positively lock the bags in their respective members after being caught and delivered.

30 Still another object of the invention resides in providing a device which is extremely simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

35 With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the
40 specification and claims.

In the accompanying drawings forming a part of this application, Figure 1 is a plan view of the device applied to use. Fig. 2 is a rear elevation of the same showing a
45 portion of a car in section. Fig. 3 is a perspective view of a portion of the device carried on the stationary object. Fig. 4 is a similar view of that portion carried on the movable object. Fig. 5 is a horizontal section as seen on line 5-5, Fig. 2. Fig. 6 is a vertical section as seen on line 6-6, Fig. 1; and Fig. 7 is a perspective view partly in
50 section of the member carrying the mail bag.

In describing my invention, I shall refer
55 to the drawings in which similar reference characters designate corresponding parts

throughout the several views and in which 1 indicates a base or platform adapted to be mounted on a platform or the ground adjacent the rails 2 and suitably mounted on the base 1, is a supporting post 3, the upper end of which is inclined rearwardly from the rails, as shown at 4. The post 3 is supported on the base or platform 1 by means of the bracing arms 5 and rotatably mounted on the upper end of the post 3 is a head plate 6 of peculiar design, the sides of which are provided with flaring mouths 7 which terminate in slots or the like 8 and mounted on the upper face of the plate 6, adjacent the outer edge thereof is a goose neck hook member or the like 9, said hook member being provided with a pair of arms 10 and 11, the former being stationary, while the latter is hinged thereto by means of the hinge 12. The lower free ends of the arms 10 and 11 form jaw members or the like and extend to points in a plane slightly above the plane of the plate 6 and a coil spring 13 engaged with the arms 10 and 11 normally retains said jaw members on said arms in effective position with respect to one another.

As stated above, the head plate 6 is rotatably mounted on the upper end of the post 3 and in order to retain the same in operative or inoperative position and against rotation, said post is provided at diametrically opposite points thereon with the notches 14, the rear walls of which are beveled toward the centers thereof. A depending portion 15 formed on the rear edge of the plate 6 has a locking bolt 16 slidably disposed therethrough and encircling said locking bolt between the outer end 17 thereof which forms a head or the like and the wall of the depending portion 15, is a coil spring 18. The normal tendency of the spring 18 is to force said locking bolt toward the post 3, whereby the head 17 of the bolt may enter the notches 14 to lock the plate in operative or inoperative position and a finger piece or head member 19 formed on the opposite end of said bolt permits of the same being drawn to its ineffective position at any desired time. When the locking bolt is engaged with one of the notches 14, the plate is held in its operative position so that the goose neck hook 9 is disposed immediately adjacent the rails 2 and when said bolt is engaged with the opposite notch the plate is disposed in its inoperative position, as shown in dotted lines in Fig. 1.

The jaws formed at the lower ends of the arms 10 and 11 on the goose neck hook 9 form a means for supporting a mail bag to be delivered from a stationary object to a movable object and the mouths 7 terminating in the slots 8 form a means for receiving the mail bag delivered from the movable object to the stationary object and in order to facilitate the delivering and catching of the mail bags, of the usual type, a stem or rod 20 is provided, the upper end of which is enlarged to form a substantial spherical head 21 and slidably mounted on the lower end thereof is a sleeve 22. Encircling the lower end of the stem or rod 20 between the extreme free end of the stem and the upper end of the sleeve and inclosed within the latter is a coil spring 23, which normally draws said sleeve 22 in position on the stem, but which permits of said sleeve yielding thereon, and carried on the lower end of the sleeve 22 is a snap hook 24 with which may be engaged a mail bag 25 of the usual or any preferred type. The head 21 on the upper end of the stem or rod 20 is adapted to be received in the jaws at the lower ends of the arms 10 and 11 to hold the same and the mail bag extending therefrom to be readily grasped by the movable object in a manner to be hereinafter and more particularly described, and the stem or rod is also adapted to be readily received in the mouths 7 of the slots 8 and the head 21 thereof will retain said stem in position on the plate. Also encircling the stem 20 above the sleeve 22 is a coil spring 26 which is held between a stationary collar 27 and a movable collar 28 the purpose of which will be hereinafter and more particularly described.

As stated, the stems or rods 20, from which the mail bags 25 are suspended are adapted to be readily received in the mouths at the opposite sides of the plate 6 and in order to lock the same, after having been once delivered therein, pawls 29 are pivotally mounted on the plate to one side of the mouths therein and adapted to extend thereacross. The free ends of these pawls 29 are adapted to abut studs or stops 30 mounted on the plate on the opposite sides of the mouths therein, thereby limiting the movement of said pawls in one direction and also mounted on the plate toward the transverse center thereof are the housings 31 in which are mounted the spring forced studs or the like 32. The free ends of these studs 32 project beyond the housings 31 and are disposed in the path of the pawls 29, when disposed in their rearward positions. When the pawls 29 are forced against the projecting portions of the studs 32, the latter will force the same under tension to their initial positions against the stops 30, and if the stems 20 are disposed in the slots 8, the same will be locked therein.

The above is a description of that portion of the apparatus which may be termed the stationary portion thereof or that portion which is mounted at the station, but I have also provided an improved delivering and catching apparatus to be carried on the movable object or train. Journaled in a bearing 33 which is mounted on the side of a car 34, immediately adjacent the doorway therein is the inner end of an arm 35, said arm extending in a horizontal plane and formed on the outer end of said arm is an additional arm 36, extending at right angles thereto and in the same horizontal plane therewith. The one end of said arm 36 is formed into a catch fork or the like 37, the outer end of which is provided with a flaring mouth which terminates in a slot or the like similar to the slots 8 in the plate 6 and the opposite end of the arm 36 has an additional fork-like member 38 formed thereon. This latter member 38, extends in a vertical plane at right angles to the plane of the fork 37 and arm 36 and the upper and lower arms thereof are provided with flaring mouths 39 which terminate in slots 40 similar to the mouths and slots described and shown in connection with the plate 6. The slots 40 in the upper and lower ends of the member 38 are adapted to receive there- through the stem 20, the head of the latter resting on the upper face of the upper arm thereof and the upper movable collar 28 on the stem 20 is adapted to contact with the under face of the lower arm of said member 38. When so positioned, the spring 26 is contracted and placed under tension so as to substantially lock said stem in said member to prevent casual disengagement therefrom. In order to retain the arm 35 with its adjunctive parts in operative position, a bracing arm 41 is provided which is pivotally carried on the side of the car 34 and adapted to engage an opening in said arm 35.

In operation, assuming that the plate 6 has been drawn to its operative position with a mail bag suspended from the delivery fork 9 thereon, and also assuming that the arm 35 has been drawn to its operative position, and a mail bag suspended from the delivery member 38 thereof, as the moving train passes the apparatus at the station, the fork 37 will engage the stem 20 suspended from the fork 9 and the arm 11 will, of course, yield and allow said stem to be released therefrom.

As the fork 37 is provided with a locking apparatus, such as has been described in connection with the mouths of the plate 6, it will be seen that the stem with the mail bag thereon will be securely held to said fork. At the same time the fork 37 engages the stem suspended from the hook 9, the stem 20 which is carried in the fork member 38 is received in one of the mouths 7 of the

plate 5. As the same enters therein, with considerable force, the locking bolt 16 will be disengaged from the notch 14 and the plate 6 swung on the post 3, said stem 20 being simultaneously disengaged from the member 38. The plate 6 will turn on the post until the locking bolt engages the opposite notch 14 and thereby lock said plate in its in-operative position and dispose the delivery mail bag in position to be released by the station keeper. It will thus be seen that a mail bag may be effectively delivered and received in both a moving and stationary object and in both instances, the bag will be locked in its respective positions.

From the foregoing it will be seen that I have provided a device which is extremely simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation and while I have particularly described the elements best adapted to perform the functions set forth, it is obvious that various changes in form, proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described this invention, what I claim is:—

1. In a mail catching and delivering apparatus, the combination with a stationary post, a plate revolubly mounted on the upper end thereof, said plate being provided with flaring mouths terminating in slots in opposite ends of said plate, means to lock said plate in predetermined positions on the post, a hook carried by said plate and projecting therefrom, said hook being provided with a movable and a stationary arm adapted to form a pair of jaws to retain a member therebetween, and means to yieldingly retain said jaws in their closed positions; of means carried on a movable object to remove the member carried by the arms on said hook and simultaneously deliver a member into one of the mouths formed on said plate.

2. In a mail bag delivering and catching apparatus, the combination with a stationary supporting post, a plate revolubly mounted on the upper end thereof, said plate being provided with flaring mouths terminating in slots in opposite ends thereof, means to yieldingly retain said plate in predetermined positions on the post, a hook carried on said plate and projecting therefrom, said hook being provided with a stationary and a movable arm adapted to form a pair of jaw members, spring means between said arms to normally retain said jaw members in their closed positions, whereby the latter may securely retain a member therebetween and means whereby a member may be locked

within the slots at the termination of said mouths; of means carried on the movable object to remove the member carried between the jaws on said hook and simultaneously deliver an additional member into one of the mouths formed on said plate.

3. In a device of the class described, a stationary post, a plate revolubly mounted on the upper end thereof, said plate being provided with mouths terminating in slots in opposite ends of the same, means to yieldingly lock said plate in predetermined positions on the post, pivoted locking pawls carried on said plates and adapted to be disposed across said mouths, additional means to limit the outward swinging movement of said pawls, yielding means to limit the opposite movement of said pawls, and means projected from said plate to suspend a member therefrom.

4. In a device of the class described, the combination with a stationary post, a plate revolubly mounted on the upper end thereof, said plate being provided with mouths in opposite ends of the same, means to yieldingly lock said plate in predetermined positions on the post, and a hook member projected from the plate, said member being provided with yielding jaws adapted to retain a member therebetween; of an arm carried on a movable object and provided with a pair of forks at the outer end thereof, one of said forks being adapted to carry a member therein to deliver the same to one of the mouths of the aforesaid plate, and the other of said forks being adapted to receive therein the member carried between the jaws of the aforesaid hook on said plate.

5. In a mail catching and delivering apparatus, a bar provided with a spherical head at one end thereof, a coil spring encircling said bar at the lower end of the same, a sleeve-like housing inclosing said spring and slidably arranged on said bar, means to engage an object on said sleeve-like housing, and additional means to limit the movement of said housing on the bar.

6. In a mail catching and delivering apparatus, a bar provided with a head at one end thereof, means to suspend an object from the opposite end of the same, a collar secured on said bar at a predetermined point thereon, an additional collar loosely mounted on said bar above the aforesaid collar, and a coil spring encircling said bar between said collars.

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

OTTO C. LUTHER.

Witnesses:

GEORGE WATSON,
MARTIN TOPNESS.