2 Sheets—Sheet 1.

C. D. MERRY.
Mail-Bag Catch.

No. 197,388. Patented Nov. 20, 1877.

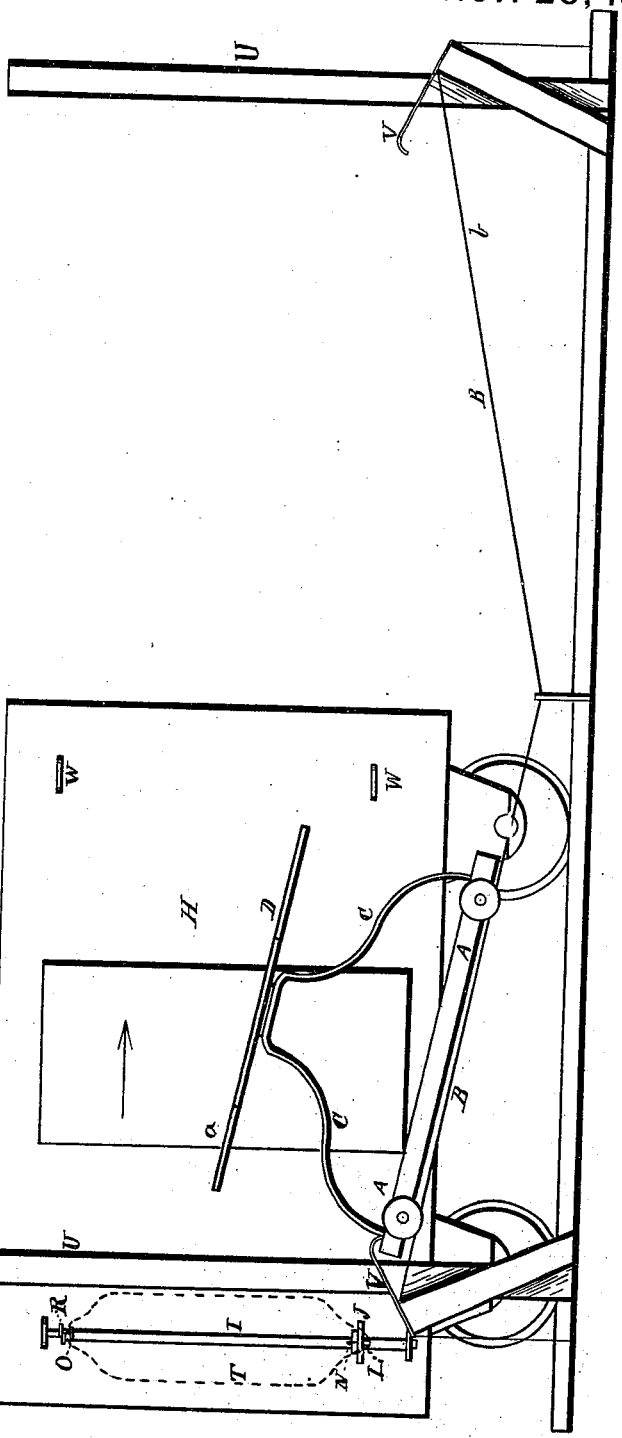

Fig. 1.

Witnesses.
Charles Ruprich
B. H. Price

Inventor.
C. D. Merry
By Burridge & Co
attys.

2 Sheets—Sheet 2.

C. D. MERRY.

Mail-Bag Catch.

No. 197,388. Patented Nov. 20, 1877.

Fig. 2.

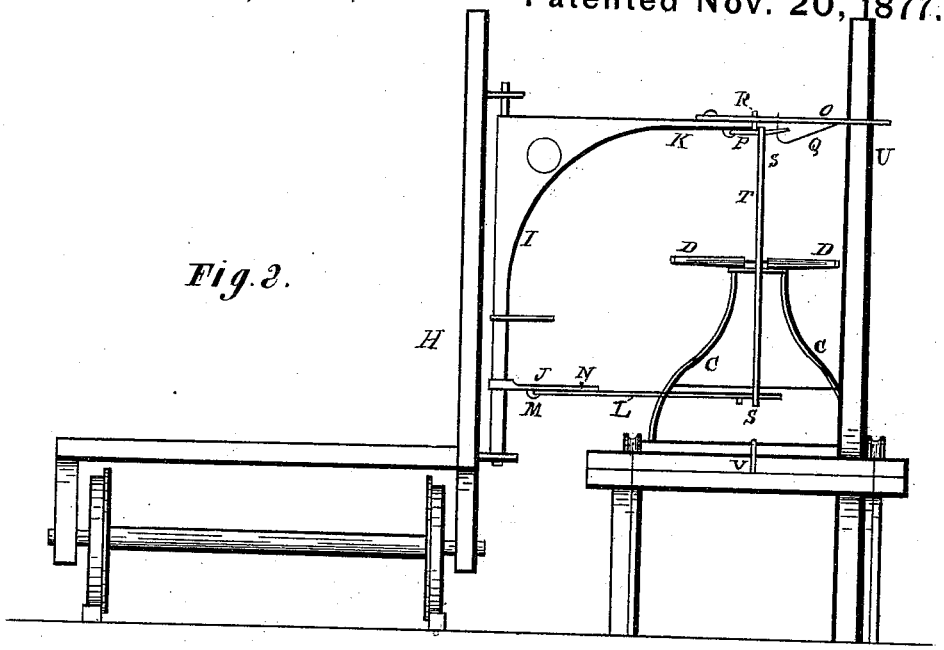

Fig. 3.

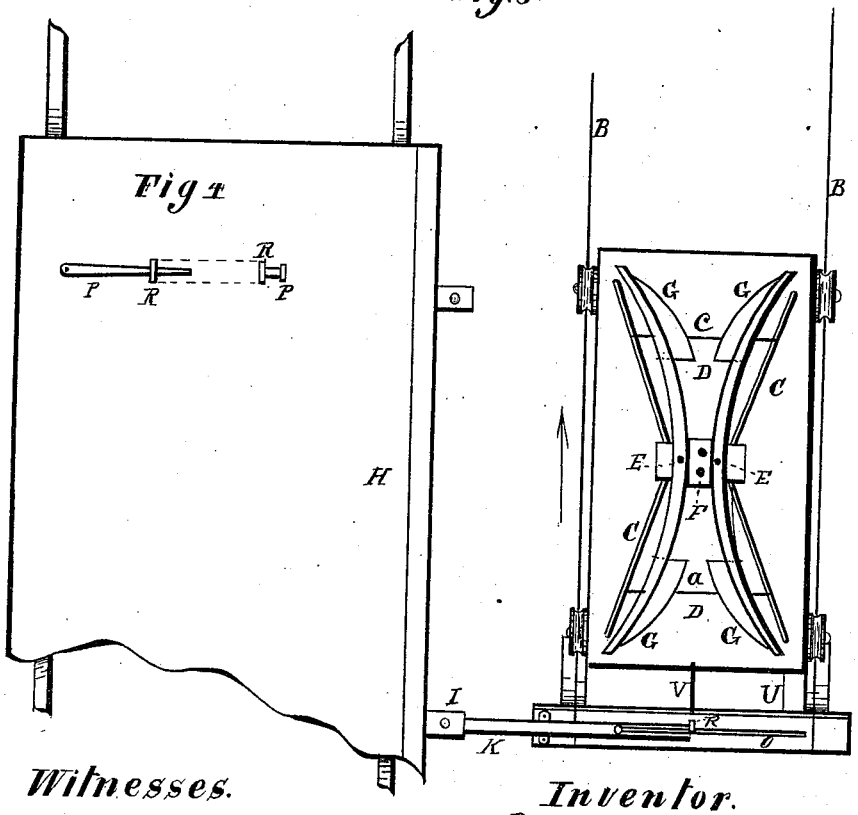

Fig 4

Witnesses.

Charles Ruprecht

D K Price

Inventor.

C. D. Merry

Per Burridge & Co.

Attys.

UNITED STATES PATENT OFFICE.

COURTLAND D. MERRY, OF BURGH HILL, OHIO.

IMPROVEMENT IN MAIL-BAG CATCHES.

Specification forming part of Letters Patent No. **197,388**, dated November 20, 1877; application filed September 28, 1877.

To all whom it may concern:

Be it known that I, COURTLAND D. MERRY, of Burgh Hill, in the county of Trumbull and State of Ohio, have invented a certain new and Improved Apparatus for Receiving and Delivering Packages to and from Railway-Cars; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings, making a part of the same.

Figure 1 is a side view of the apparatus, and showing its relation to a railway-car. Fig. 2 is an end view of Fig. 1. Fig. 3 is a top view of the apparatus in connection with a railway-car, and Fig. 4 is a detached section.

Like letters of reference refer to like parts in the several views.

The object of this invention is for the purpose of receiving and delivering mail-bags and other packages to and from the various stations by railway-cars in motion, and also to avoid the injury to the package and personal danger in delivering mail-packages by the means now used with the train in motion.

The construction and operation of the said invention will be understood from the following specification.

The truck A, Fig. 1, is provided with four or more grooved wheels, which run and carry the truck along the track or way B B, which forms two inclined planes, as seen in Fig. 1. These planes or tracks are made of manifold wire, or are made in a single piece of iron rod.

The ends of the track are secured to suitable frame-work at their extreme ends, in such way as to give the proper tension to the tracks, and also support the load of the truck. To said truck is connected a frame-work, C, upon which is pivoted the spring-jaws D, Figs. 2 and 3, at the points E E, Fig. 3, to a top plate of said frame.

Between the jaws is placed a spring, F, which is also secured to the plate, and to which the jaws are hinged or pivoted. The spring F may be connected with the jaws otherwise than as stated, to produce the result required. At or near the ends of the jaws or levers D are connected springs G, Fig. 3, the outer ends of which are fastened to the jaws, from which point they curve to the angle, and from which point the springs extend through the levers, as seen in Fig. 3. This return or angle of the springs G through the jaws acts as a support and guide for the free ends of the springs.

In Figs. 2 and 3, H represents the section of a railway-car, to which is connected another part of the apparatus to be used in connection with the mechanism before described, as follows: To the side of the car is hinged the crane I, as near the side door as may be for the purpose, and for the convenient manipulation of the apparatus. To the lower limb of the crane is connected an arm, J, which admits of a vertical adjustment upon the shaft or lower limb of the crane, according to length or size of the bag or package to be placed between the arm J and the crane-arm K for delivery.

The rod L, Fig. 2, is hooked or hinged at M to the arm J, and from the rod projects a pin, N, which extends through a hole in the arm J, as seen in Figs. 1 and 2.

Near the end of the arm K is jointed the rod O, and to the under side is hinged the adjustable finger P. To the rod O is also fastened one end of the spring Q. The free end of this spring turns and passes through the end of the finger P and the rod O, as shown in Fig. 2.

Attached to and projecting from the finger P is a T-headed hook, R, which overlaps on the rod O on either side, depending upon the direction of the train, or whichever side the package is to be delivered, as will hereinafter be more fully set forth.

The bag may be made with loops at its ends, the bottom loop receiving the rod L and the top loop the finger P, as indicated at S S, Figs. 1 and 2; or the bag or package may be connected to suitable frames, as shown at T, with rings or loops at the ends for hanging the frame with its contents to the rod L and finger S S, in the same way as before mentioned.

The extreme end of the rod L is curved down, and at a short distance from the end is a pin. This pin and the curved end referred to prevent the loop of the bag or frame from slipping out of place while being held ready to be delivered as the train is moving rapidly along to the station where is located the ap-

paratus just described for receiving the package from the express or mail car.

Each station where the bag is to be delivered is provided with the said apparatus, and the described mechanism for delivering the package from the train is adapted to all the local stations where the apparatus is placed on the line of the road.

The crane, as before stated, is hinged to the side of the car, that it may be turned round against the side thereof to be out of the way after the package has been delivered, and also for the purpose of attaching the bag to the crane from the inside of the car through the side door while the train is going. After the bag has been attached to the crane in the manner before mentioned, and on nearing the station, the crane is turned at a right angle to the car, and as the train passes the station the rod O is brought in contact with the post U. This contact moves back this rod, and in moving back disengages the T-headed hook R from this rod, and at once causes the finger P to be disengaged or hang down, freeing the upper end of the bag at the same instant that the upper end of the bag is freed from its suspension to the finger P. The lower end, at S, is also free by the dropping down of the rod L, which moves down the pin N from the hole in the arm J, so that the rod L is free to move down and laterally by its jointed connection at M. Hence, the suspension of the package at S S is instantly relieved by the contact of the rod O and post U as the train passes along.

At the same moment that the bag is disengaged from the crane it is carried between the jaws D at *a*, Fig. 3.

Supposing the train to be going in the direction of the arrow, when the bag is received by the jaws, the crane swings back against the side of the car, out of the way, by the momentum of the train.

The truck upon which the jaws or levers are mounted is placed upon the highest point or grade of the track B before the approach of the train, and is retained in this position, as seen in Fig. 1, by a spring hook or catch, V. This catch is so arranged that it has but a slight hold upon the truck, and from which the truck is easily detached by the force of the package as it enters the jaws; hence, as soon as the jaws receive the bag, the truck becomes detached from the catch, and slides down the track by its own gravity, and the force which may have been exerted upon the truck by the momentum of the train in delivering the package is to a great extent neutralized by the movement of the truck down the track B in the line of direction with the passing train.

The movement of the truck prevents any sudden jar or strain in any part of the apparatus, and the bag or package is not subject to any rough or sudden resistance, as is the case when the bag is thrown off the train upon the platform of the station. By the latter mode of delivery the bag soon becomes worn, cut, or torn by the rough and severe usage to which it is thus subjected.

This practice of delivery is also dangerous to persons about the platform and station, which objections are avoided by the use of the described improvement.

The momentum attained by the truck in its descent is retarded by its attempt to ascend the upgrade *b*. The resistance of this upgrade to the moving truck will cause it to be brought to rest at the base of the grades, and this resistance to the moving truck will be easy, and without any precipitate jar or strain to the package or the apparatus.

The spring F is of sufficient force to hold the levers in close contact with the bag, in connection with the springs G. These springs also ease the strain upon the bag when received into the jaws, and also upon the apparatus, thereby avoiding any tearing or breaking in delivering.

In case a train is going in a course opposite to the arrow, the working of the apparatus will be the same as before described, as it makes no difference, so far as the practical operation of the said invention is concerned, in which direction the train may be passing over the road.

In delivering packages to the passing train, the package is first placed between the jaws at *c*, which are on the opposite side from the jaws which receive the package from the train, the bag being extended or raised up above the jaws as far as possible, at the same time allowing sufficient of the lower part to be held in place between the jaws.

The car for receiving the package is provided with the mechanism now used for taking mail-bags or other similar apparatus. By this means the package is taken from the jaws and received on the train, and the action of the truck, in moving in the direction of the passing train, relieves the bag or package, and also the apparatus, from undue strain and casualties, substantially in the same way as described in delivering the bag from the train to the jaws.

In case the train is going in an opposite direction to the arrow, the crane and its devices may remain as shown, or be connected to the car by the staples or lugs at W. The truck would be placed on the opposite grade at *b*, which arrangement in result would be the same as described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The jaws or levers G, pivoted to the truck, and provided with springs D, in combination with the spring F, and truck mounted upon the track or way, substantially as and for the purpose specified.

2. The pivoted or hinged jaws G, in combination with the truck and way, as and for the purpose substantially as described.

3. The crane I, arm J, and rod L, in combi-

nation with the finger P and rod O, substantially as and for the purpose set forth.

4. The rod O, jointed to the crane, in combination with the finger P and T-headed hook R, arranged to operate conjointly with the post U and rod L, substantially as and for the purpose set forth.

5. The spring Q and rod O, in combination with the crane-finger P and hook R, substantially as and for the purpose specified.

6. The crane having connected therewith the hinged rod L, rod O, and finger P, with its hook, in combination with the jaws, mounted upon a truck, and post U, substantially as described, and for the purpose set forth.

COURTLAND D. MERRY.

Witnesses:
F. F. MERRY,
A. R. FELL.