To all whom it may concern:

Be it known that I, GEORGE R. MOORE, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Mail-Bag Catching and Delivering Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention relates to improvements in mail-bag catching and delivering mechanism, and has for its object the construction of a convenient mechanism adapted to be secured in the side of a door of a mail-car, which operates to catch and deliver mail-bags through the car-door into the car and also to deliver mail-bags from the car at stations. These results I accomplish by constructing an outwardly-swinging plate or door having hinges at both sides thereof, which hinges are adapted to be alternately brought into action, so that either edge of this door may be swung outward, and also by providing folding links at the top and bottom of each edge of the door, the inner ends of which links secure to vertical rods pivoted in the doorframe and their outer ends to the edges of the door, by means whereof the outward movement of the edges of the door is limited, and which links operate when a mail-bag contacts with them to close the door. These and other features of my invention are hereinafter more fully set forth and described, and illustrated in the accompanying drawings, in which—

Figure 1 shows in elevation a section of the side of a mail-car with my improved mail-bag catching and delivering mechanism secured in the car-door frame and closed up. Fig. 2 shows in elevation a like section of a mail-car with the catching and delivering mechanism swung back out of the way. Fig. 3 shows in perspective a section of a mail-car with the mechanism in position to catch and deliver mail-bags when the car is moving in the direction of the arrow. Fig. 4 shows an end view in elevation of a section of a mail-car with my improved apparatus catching and delivering mail-bags. Fig. 5 shows a top or plan view of a section of a mail-car, together with my improved mail-bag catching and delivering mechanism. Fig. 6 shows an enlarged horizontal section of a portion of a car and of the catching and delivering mechanism thereon.

In the drawings illustrating my invention, B represents a section of a mail-car, the doorway, and C the car-door therein. To the door-frame C, I secure a frame, the sides D D' of which I preferably construct of angle-iron and the top and bottom of cross-bars E E'. These sides D D' are riveted to the sides D D' of the frame C, as illustrated in Fig. 1, which hooks can be rotated so as to release the side D' of the frame and permit it to be swung back on the hinges a a', as illustrated in Fig. 2. In this frame I hang a plate F, having hinge-eyes f f' 75 on both edges thereof adapted to engage adjustable hinge-hooks f'' which are adapted to be moved vertically in slots d d' in the sides D D' of the frame, as illustrated in Figs. 1 and 3, so that the hinge-eyes f' on either edge of the plate F can be engaged by the hinge-hooks f'' on the frame and permit the opposite edge of the plate F to swing outward thereon, as illustrated by the full and dotted lines in Fig. 6, and on the outside of the plate F, I place springs f', adapted to contact with the sides D D' of the frame when the plate F is swung outward.

Hinged to the top and bottom of each edge of the inside of the plate F there are links H 90 having knuckle-joints h in the centers thereof, so they will fold together, as illustrated in Fig. 6, the inner ends of these links being secured to vertical rods G, pivoted between the cross-bars E E' of the frame, as illustrated in Figs. 2 and 6, so that they will operate in unison and serve to limit the outward movement of the edges of the plate F, as clearly shown in full and dotted lines in Fig. 6. Projecting below the bottom of the plate F, near each edge thereof, there is a hook I, provided with a spring-tongue i, upon which hook a mail-bag to be delivered is suspended, as illustrated in Figs. 4 and 5. For suspend-
ing a mail-bag to be caught by the outturned plate F on a moving car I provide the usual crane K at the side of the railroad-track, which is provided with a hook j, upon which the mail-bag is suspended, as illustrated in Figs. 4 and 5, so that one of the folding links H will strike it as the outturned plate F passes the crane K, which carries the bag J off the hook k and at the same time causes the knuckle-joints h in the links H to fold together and close the plate F against the frame, so as to throw the mail-bag J through the doorway into the car.

At the base of the crane K there is a box L, having doors L' L' at each end thereof swung upon hinges i, so as to open inwardly, and provided with springs l' l', which normally retain the doors in a closed position, the top of the box L being of such height that the hooks I on the plate F will pass over it. The mail-bag M to be delivered from the car A is hung upon the hook I at the outturned edge of the plate F, as illustrated in Figs. 4 and 5, so that when the bag M strikes the end of the box L it is detached thereby from the hook I and forces the doors L' L' open and passes between them into the box, from which it can be removed through a suitable opening (not shown) in the back of the box.

It will be observed from the description of the mechanism hereinbefore given that the plate F can be adjusted so as to swing either edge thereof outward, so that it will operate with the same facility in catching and delivering mail-bags in either direction the car is being run.

I have thus shown and described convenient mechanism for utilizing my invention, so as to enable others to construct and operate the same; but I do not desire to confine myself to the exact details of construction thereof herein shown and described, therefore what I claim as new, and desire to secure by Letters Patent of the United States is:

1. The combination in a mail-bag catching and delivering mechanism, of a plate, detachable hinges at each side thereof adapted to connect it with the side of the car, and folding links extending from each side of the plate to the side of the car, substantially as and for the purpose set forth.

2. The combination in a mail-bag catching and delivering mechanism, of a frame adapted to be secured across a car-door, a plate on said frame, detachable hinges at each side of said plate adapted to connect it to the sides of the frame, and folding links pivoted to the inside of each side of said plate, and to the frame, substantially as and for the purpose set forth.

3. The combination in a mail-bag catching and delivering mechanism, of a frame adapted to extend across a car-door, hinges securing one side of the frame to the car-door frame, a plate on said frame, hinge-eyes on each side of said plate, vertically-moving hinge-hooks in each side of said frame adapted to engage the hinge-eyes on either side of said plate as desired, folding links pivoted to the inside of each side of the plate and to the cross-bars of the frame, and hooks extending downward from each side of said plate, substantially as and for the purpose set forth.

4. The combination in a mail-bag catching and delivering mechanism of a frame adapted to be secured across a car-door, a plate on said frame, detachable hinges at each side of said plate, adapted to connect it to the sides of said frame folding links pivoted to each side of the inside of said plate and to said frame, a hook extending downward from the bottom of each side of said plate for suspending mail-bags to be delivered, a crane for suspending mail-bags to be caught, and suitable mechanism for catching mail-bags to be delivered from the hooks on said plate, substantially as and for the purpose set forth.

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

GEORGE R. MOORE.

Witnesses:

H. M. STURGEON,

F. J. BASSETT.