J. N. ISENBERGER.

MAIL BAG CATCHING AND DELIVERING APPARATUS.

APPLICATION FILED JUNE 18, 1909.

945,395.

Patented Jan. 4, 1910.

2 SHEETS—SHEET 1.

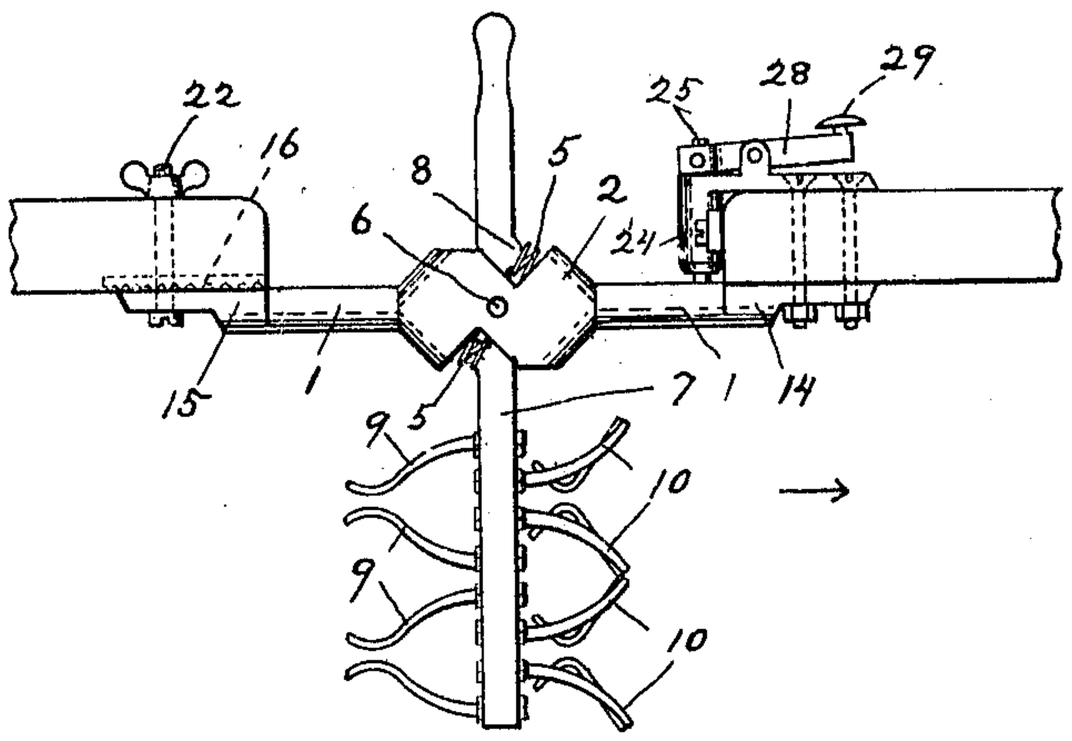

FIG 1

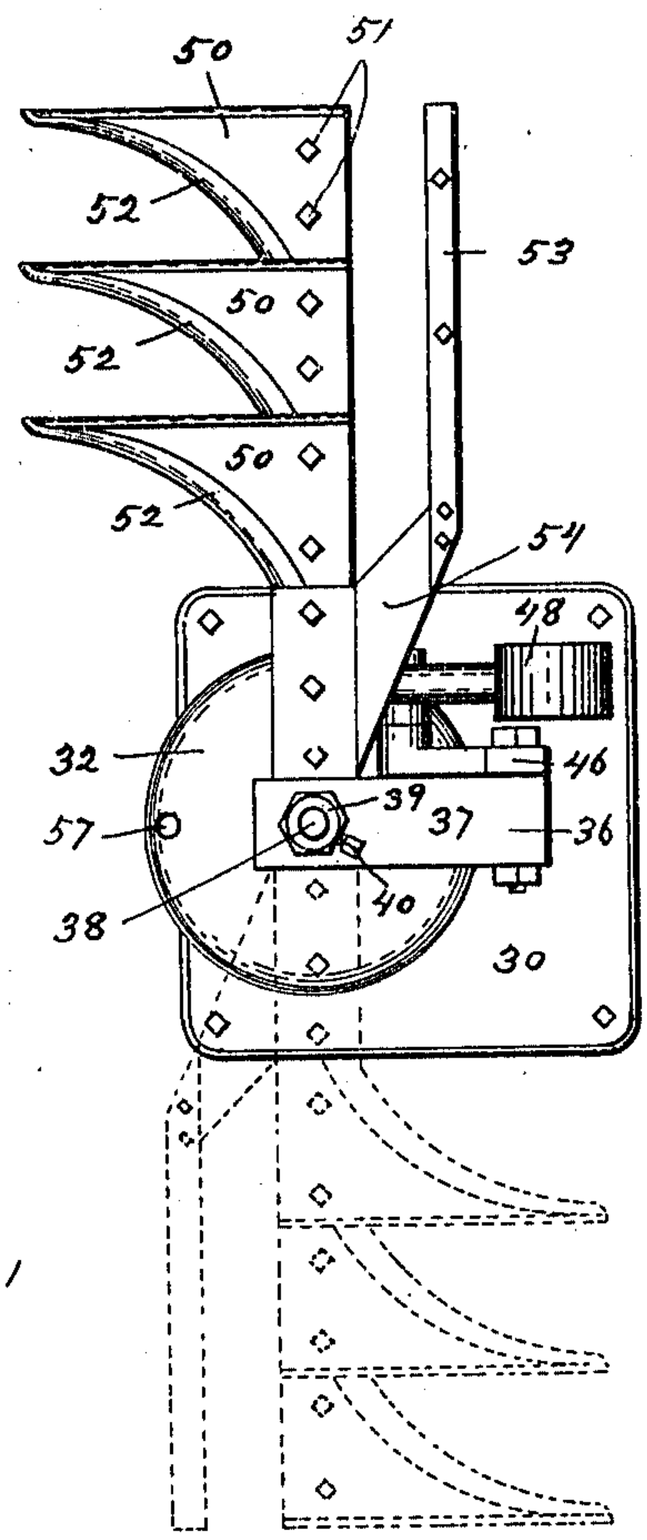

FIG 2

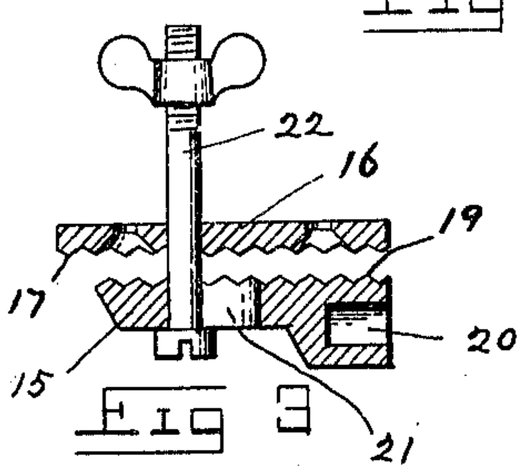

FIG 3

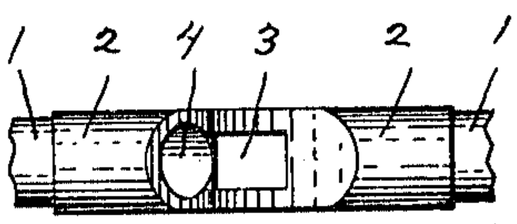

FIG 4

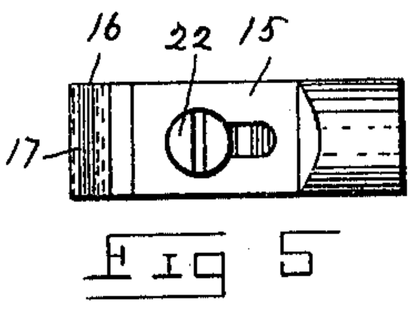

FIG 5

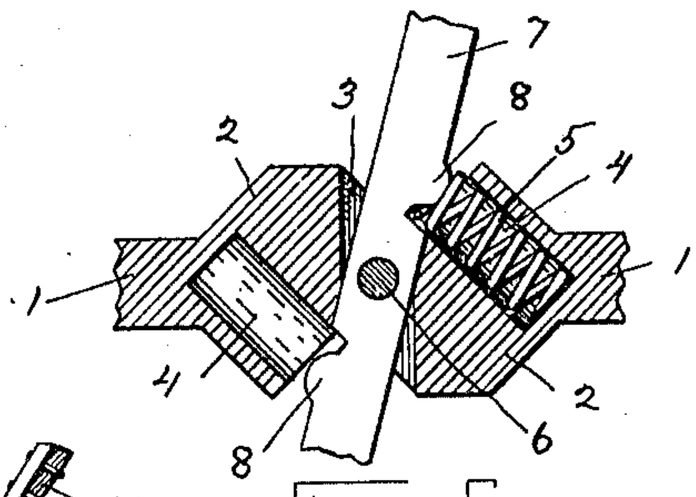

FIG 6

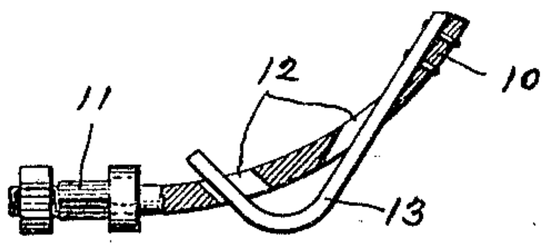

FIG 7

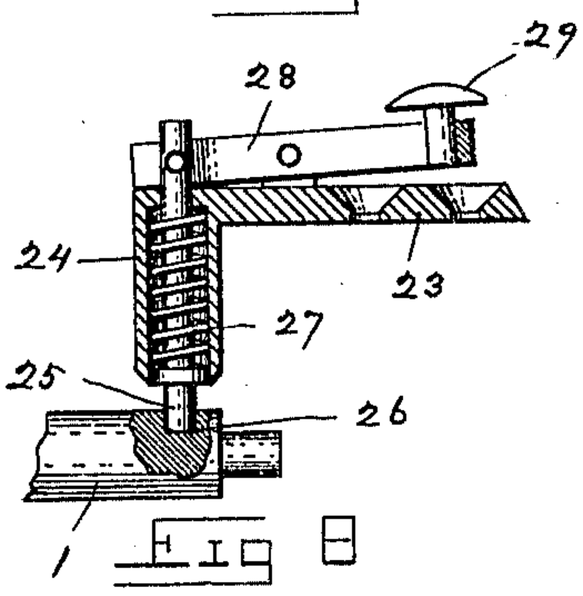

FIG 8

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APPLICATION FILED JUNE 18, 1909.

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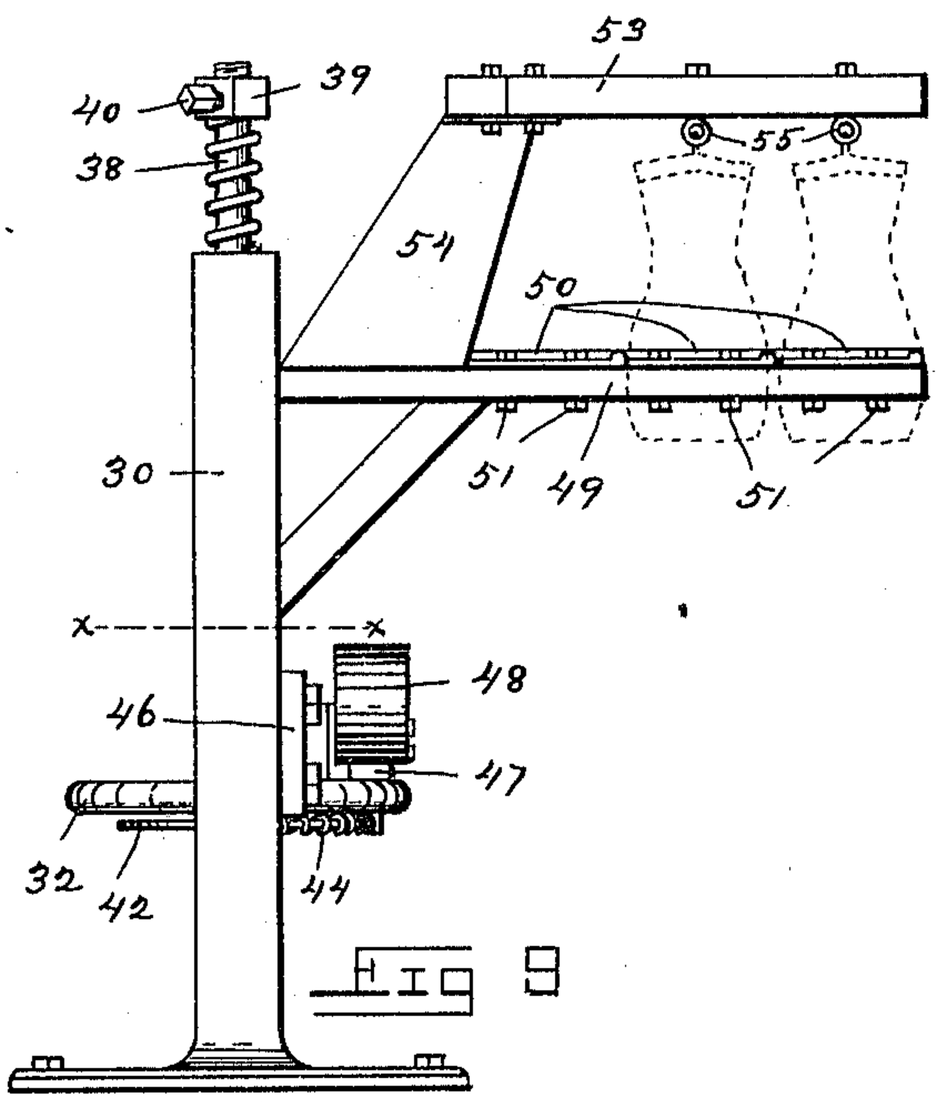

Fig 9

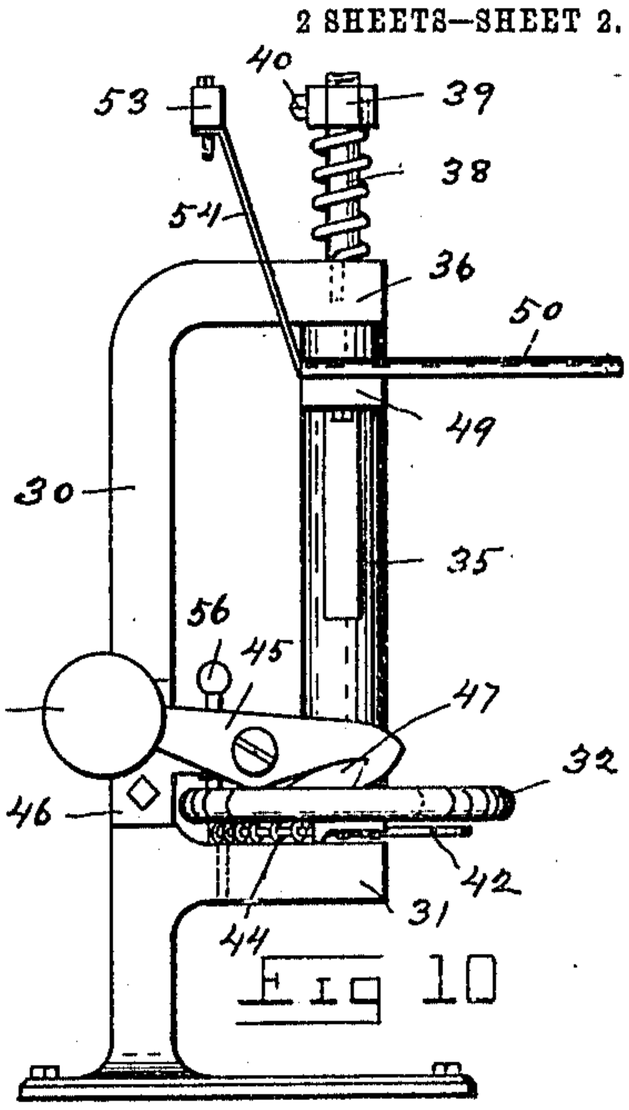

Fig 10

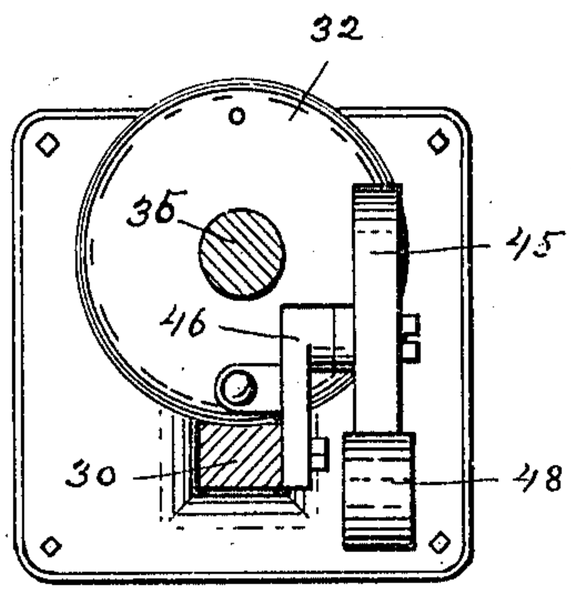

Fig 11

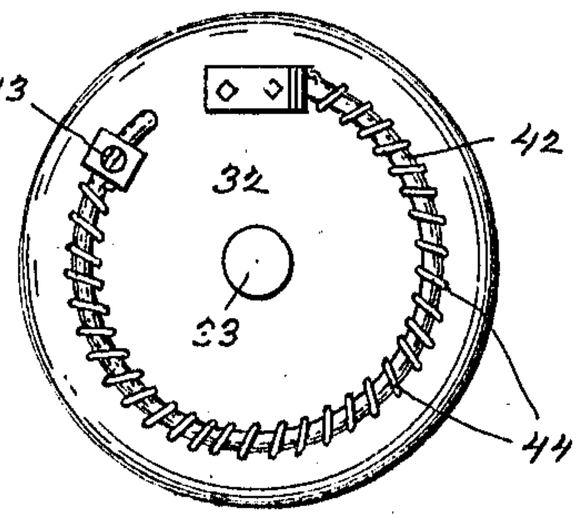

Fig 12

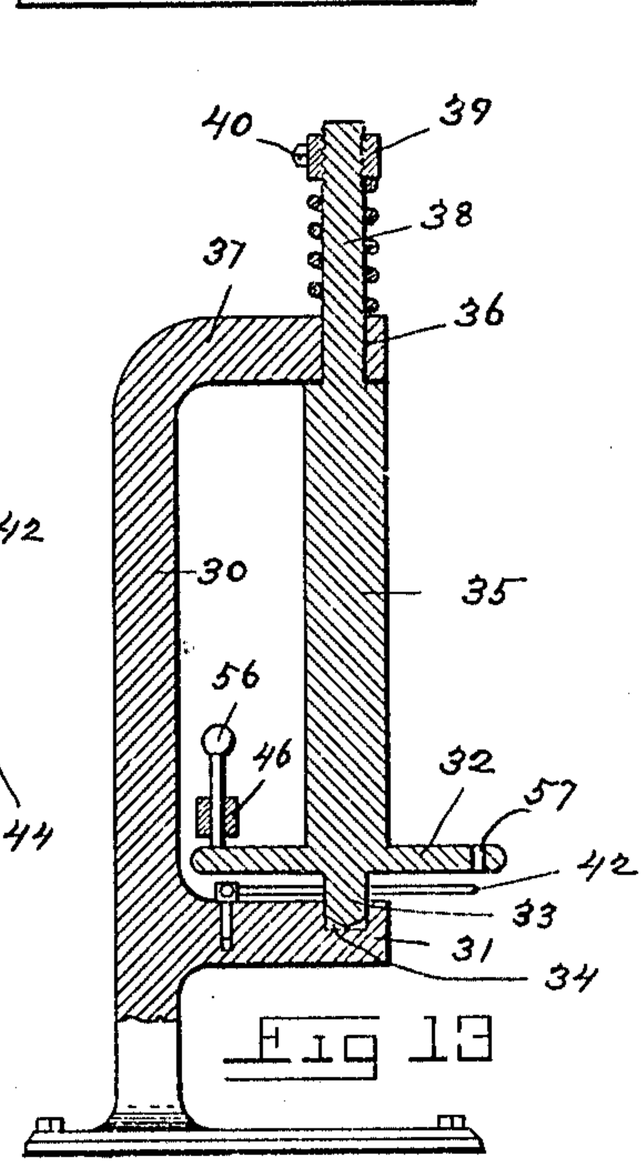

Fig 13

WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB N. ISENBERGER, OF LANCASTER, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO WILLIAM H. PFOUTZ AND ONE-FOURTH TO HENRY C. SHANK, OF LANCASTER, PENNSYLVANIA.

MAIL-BAG CATCHING AND DELIVERING APPARATUS.

945,395. Specification of Letters Patent. Patented Jan. 4, 1910.

Application filed June 18, 1909. Serial No. 502,935.

To all whom it may concern:

Be it known that I, JACOB N. ISENBERGER, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Mail-Bag Catching and Delivering Apparatus, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to a mail bag catcher and deliverer for use in connection with moving trains, and more particularly to that class which is rotatably mounted on a standard beside the track and having a spring controlled relation therearound to compensate for the shock caused by the impact of the bag; and to a deliverer and car fork adapted to operate in conjunction therewith.

One object of my invention is to provide a catcher wherein the bag is received from a moving train without jar, and the rectilinear motion of the bag transformed into a circular motion about the axis of the standard of said catcher.

Another object being to provide means whereby the bag becomes locked upon the catcher immediately upon its reception, so that no rebound will throw it out of the catcher, until released by the attendant.

Still another object of the invention is to provide a device of this class, in which means are provided for both catching and delivering one or more bags at the same time and without requiring change or separate adjustment in the apparatus.

With these and other objects in view my invention consists in certain construction and combination of parts as will hereinafter be fully described and claimed in this specification and illustrated in the accompanying drawings, which form a part of this application, and in which like figures of reference refer to corresponding parts in all of the views; but it is fully understood that while I have here described my device as herewith shown, that I do not confine myself to the exact design as shown, as slight changes may be made in the construction and combination of the several parts without departing from the spirit of the invention.

In the drawings:—Figure 1, is a top plan view of the car fork in an extended position. Fig. 2, is a plan view of the catcher and deliverer, in position to coöperate with the car fork, and also its position after receiving the bag is indicated in dotted lines. Fig. 3, is a sectional detail view of the removable car fork socket or bearing. Fig. 4, is a detail side view of the car fork with the arm removed therefrom. Fig. 5, is a side elevation of the car fork socket or bearing, as shown in Fig. 3. Fig. 6, is a horizontal detail sectional view of the car fork with the arm and one of the impact springs in place. Fig. 7, is a detail view of one of the bag retaining arms of the car fork. Fig. 8, is a detail view of the car fork catch, for retaining the arm in a horizontal position. Fig. 9, is a side elevation of the delivering and catching device. Fig. 10, is a front elevation of the same. Fig. 11, is a top plan view of Fig. 9, taken on the line X X the post 30, and shaft 35, being shown in section. Fig. 12, is a view of the under side of the revolving table. Fig. 13, is a vertical sectional view of Fig. 10.

Referring to the drawings, that part of the apparatus known as the car fork, comprises the bar 1, which is formed midway its ends with the enlargement 2, which is provided with the transverse orifice 3, and the angular spring chambers 4, in the body thereof, for the reception of the impact springs 5; while pivoted by the pin 6, and extending through the orifice 3, is the arm 7, which is formed with the oppositely disposed bosses 8, to engage the impact springs 5, which tend to always keep said arm 7, in a right angular position with reference to the bar 1.

The forward extending portion of the arm 7, is provided with one or more pairs of spring bag delivering arms 9, which are detachably secured to said arm 7; while detachably secured to and extending from the opposite side of said arm 7, are one or more pairs of bag-catching arms 10, which are formed with squared ends 11, for securing them within the arm 7, to keep said catching arms 10, from turning; and in the body of said catching arms 10, are formed the orifices or slots 12, through which is passed the bag-retaining spring 13, which has one of its ends secured to said arm 10, in such a manner that said springs will yield as the bag is forced between the adjacent springs

and fly back into place as the bag has passed their bend to retain the bag and keep it from rebounding therefrom.

The ends of the bar 1, are rotatably mounted in the bearings or brackets 14, and 15; the bearing 14, being permanently secured to the side of the car doorway, while the bearing 15, is detachable and comprises a plate 16, which is formed with a corrugated outer surface 17, and is secured to the side of the car by screws or bolts. The socket member 18, is formed with a corrugated back 19, a bearing socket 20, and a transverse slot 21, for the reception of the securing bolt 22, and is held securely to said plate 16, by said bolt 22. This form of bearing being intended for the purpose of releasing the bar 1, so that the same can be reversed when it is desired to operate the device in the opposite direction or to transfer the car fork to the opposite side of the car.

When the car fork is placed in an operating position, it is retained in place by the catch device which comprises a member 23, secured to the car doorway and formed with a tubular orifice 24, within which works the catch pin 25, which is embraced and retained in an engaging position with the orifice 26, in the bar 1, by the spring 27, contained within said tubular orifice 24. The pin being withdrawn against the action of said spring by the rocker-arm 28, which has one end pivoted thereto, and the other end provided with a hand knob 29, for the purpose of operating the same. A corresponding orifice 26, is provided in the other end of said bar 1, in a proper position to coact with the catch when said car fork is reversed.

The catching and delivering apparatus comprises a standard or crane 30, which is mounted upon the ground in proper relation to the track, and a horizontal arm 31, integral therewith and upon which is rotatably mounted a circular table 32, which is provided with a depending bearing stud 33, engaged by a socket 34, in said arm 31; while from the center of said table 32, extends upward a shaft 35, which is reduced in diameter near the upper end 38, and rotates within a bearing 36, formed in an upper parallel horizontal arm 37, of said crane 30. Surrounding the upper portion 38, of said shaft, with its lower end secured to said arm 37, and its upper end secured to said portion 38, by a nut 39, and a set screw 40, is a spring 41, which is designed to wind upon the shaft portion 38, and create a resistance to the revolving of the shaft 35, in the bearing 36.

Upon the lower surface of the table 32, is secured a circular rod 42, which slides through a swivel bearing or stop 43, which is mounted in the arm 31; while upon said rod 42, is placed a spring 44, with one end bearing against the stop 43, and the other end against the enlarged end of the rod, in such a manner that as the table is revolved in the proper direction, the rod 42, will slide through the stop 43, and the spring will be compressed, thus creating a resistance to said revolution.

The table 32, and the shaft 35, are normally retained with the springs 41 and 44, under compression, as shown in Fig. 10, by the action of a weighted hooked nose-dog 45, which is pivoted to a bracket 46 secured to the crane 30; said dog engaging a stop 47, secured upon the upper surface of the table 32, in such a manner that when the table 32, is slightly revolved in a direction to further compress the springs, the dog will release the table by the dropping of its weighted end 48, and the table will turn in the opposite direction as actuated by said springs.

To the body of the shaft 35, between the arms 31, and 37, is secured a bag-catching arm 49, which is provided with the removable fingers 50, secured thereto by the bolts 51, and formed with the rolled over edges 52; while above, parallel, and to the rear of the said catching arm 49, is supported the delivering arm 53, by the bracket 54, and said arm 53, is provided with the bag-hanging eyes 55.

The operation of the device as a whole is as follows:—A bag or bags having been suspended from the eyes 55, the crane is set with the arms 49, and 53, at right angles to the track and retained in that position against the tension of the springs 41, and 44, by the dog 45. A bag or bags having been placed in the spring arms 9, on the car fork, and the fork being held in a horizontal position by the catch and the train moving in the direction of the arrow (see Fig. 1) and the crane being in the position shown in Fig. 2, the arm of the car fork will pass between the arms 49, and 53, and the bags will be caught out of the arms 9, by the fingers 50, and the spring arms 10, will catch and tear the other bags from the arm 53, and thus both operations will be done at the same time. As the arm 49, receives the impact of the bags it is driven slightly back against the tension of the springs 41, and 44, which will allow the dog to release the table, and allow the arms to swing back into the position indicated by the dotted lines in Fig. 2, where they may be secured in said position by a pin 56, which is mounted in the bracket 46, and drops into a hole 57, provided in the top of the table for that purpose. The impact of the car fork caused by catching the bags is sustained by the springs 5, which allows the arm a slight motion to prevent its being bent.

Having thus described my invention what

I claim as new and desire to secure by Letters Patent is:—

1. In an apparatus of the class described, the combination with a suitable car fork secured to the car, of a bag-receiving device mounted upon the ground in proper relation to the car, and designed to coöperate with said car fork, and comprising a standard, a vertical shaft rotatably mounted in said standard, a table concentric with and carried by said shaft, means secured below and to said table for the purpose of revolving said table and shaft, means carried upon said table and upon said standard for restraining the revolution of said table until released, a bag-catching device comprising a horizontal arm secured to said shaft, and bag-holding fingers detachably secured to one side of said horizontal arm.

2. In an apparatus of the class described, in combination with a bag-receiving means mounted upon the ground, of a car fork detachably and reversibly mounted upon the car, comprising a shaft provided with an enlargement in the body thereof, a bag-catching arm extending through and pivoted within said enlargement, impact cushioning means contained within said enlargement in connection with said catching arm, spring actuated gripping arms detachably secured to said catching arm, elastic bag-holding arms secured to said catching arm, and bearing brackets secured to the car for the purpose of retaining said car fork, and comprising a stationary bearing bracket and a detachable and adjustable bearing bracket.

3. In a device of the class described, in combination with a standard, of a revolving vertical shaft mounted in said standard, a table carried by said shaft, horizontal arms carried by said shaft above said table, a spring actuating revolving means carried by said table, an automatic releasing means carried by said table, and bag-catching fingers detachably secured upon said horizontal arm.

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

JACOB N. ISENBERGER.

Witnesses:
WM. J. COULTER,
MABEL L. LEFEVRE.