No. 860,571. PATENTED JULY 16, 1907.

H. G. ROBINSON.

MAIL RECEIVING AND DELIVERING APPARATUS.

APPLICATION FILED FEB. 16, 1907.

3 SHEETS—SHEET 1.

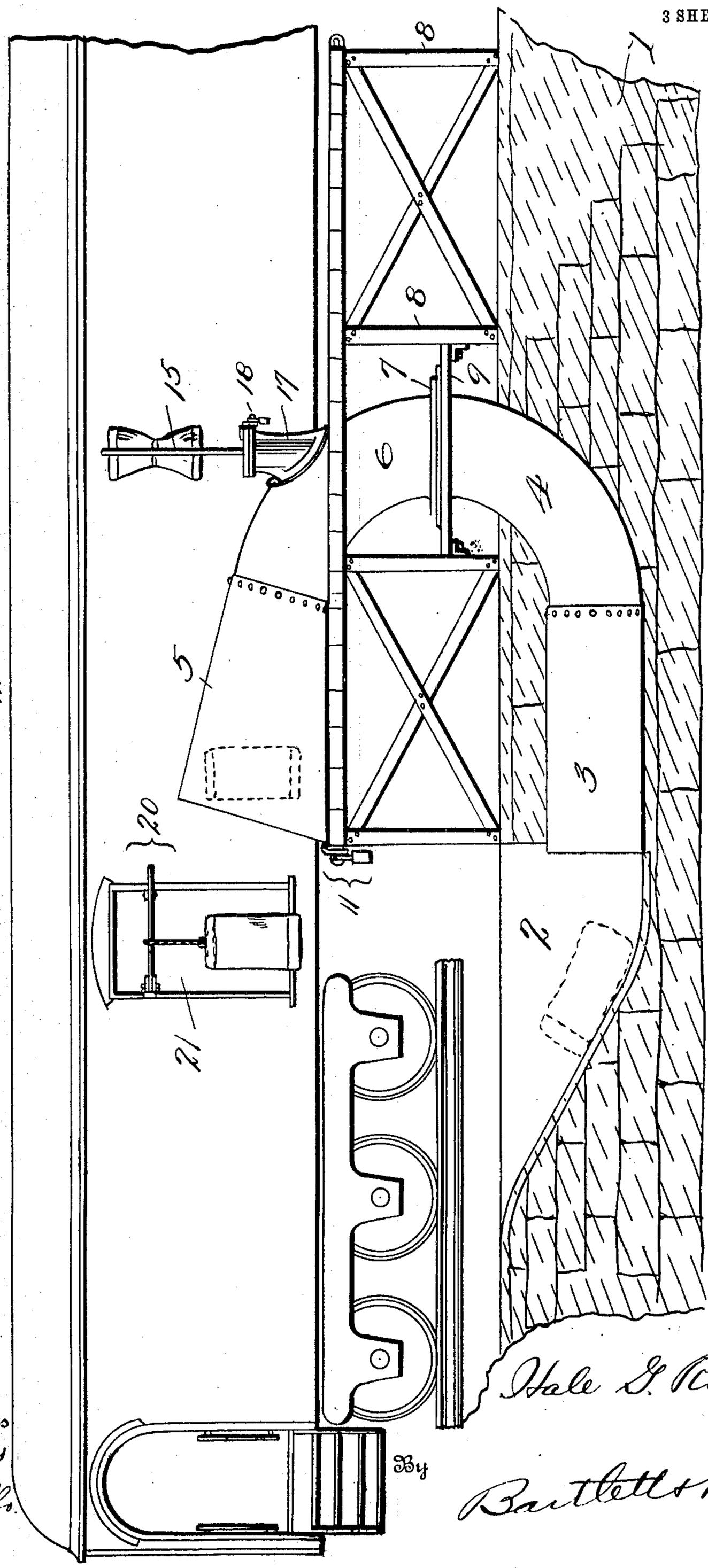

Fig. 1.

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3 SHEETS—SHEET 2.

Fig. 2.

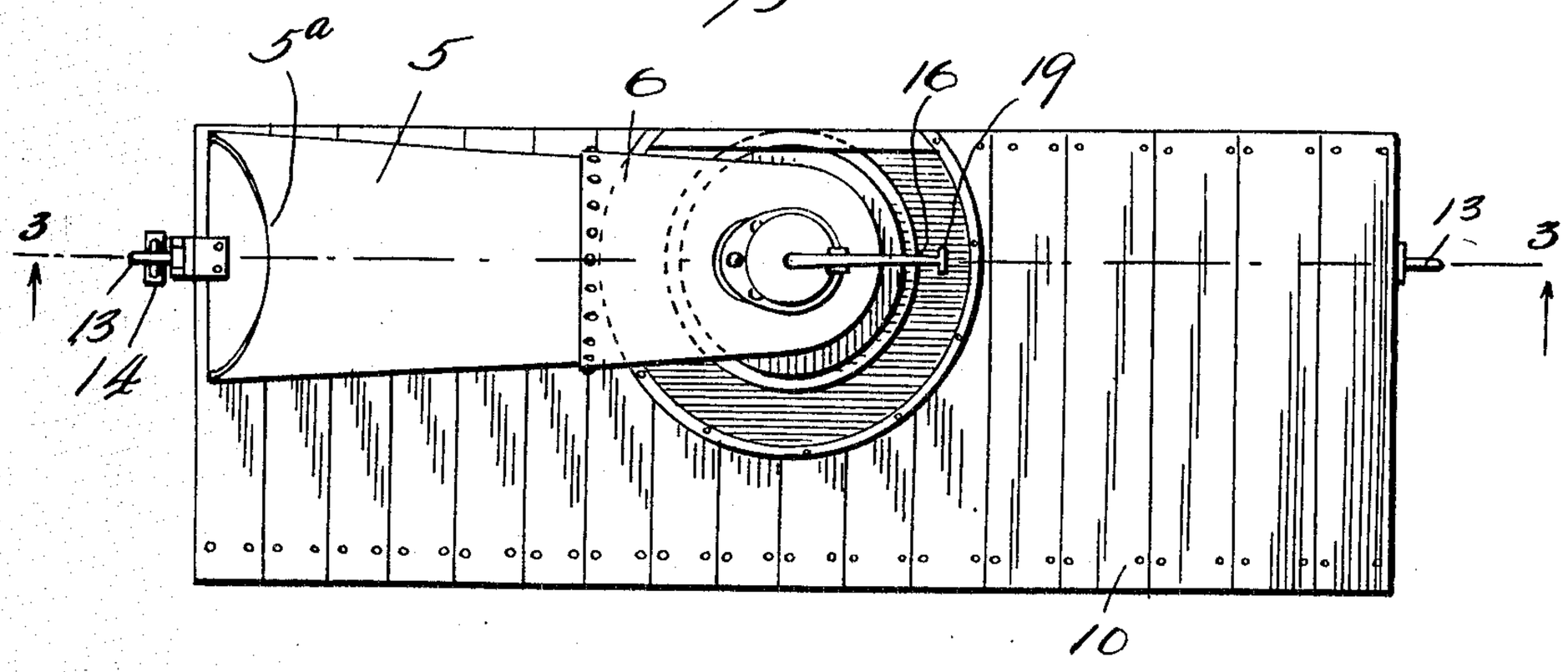
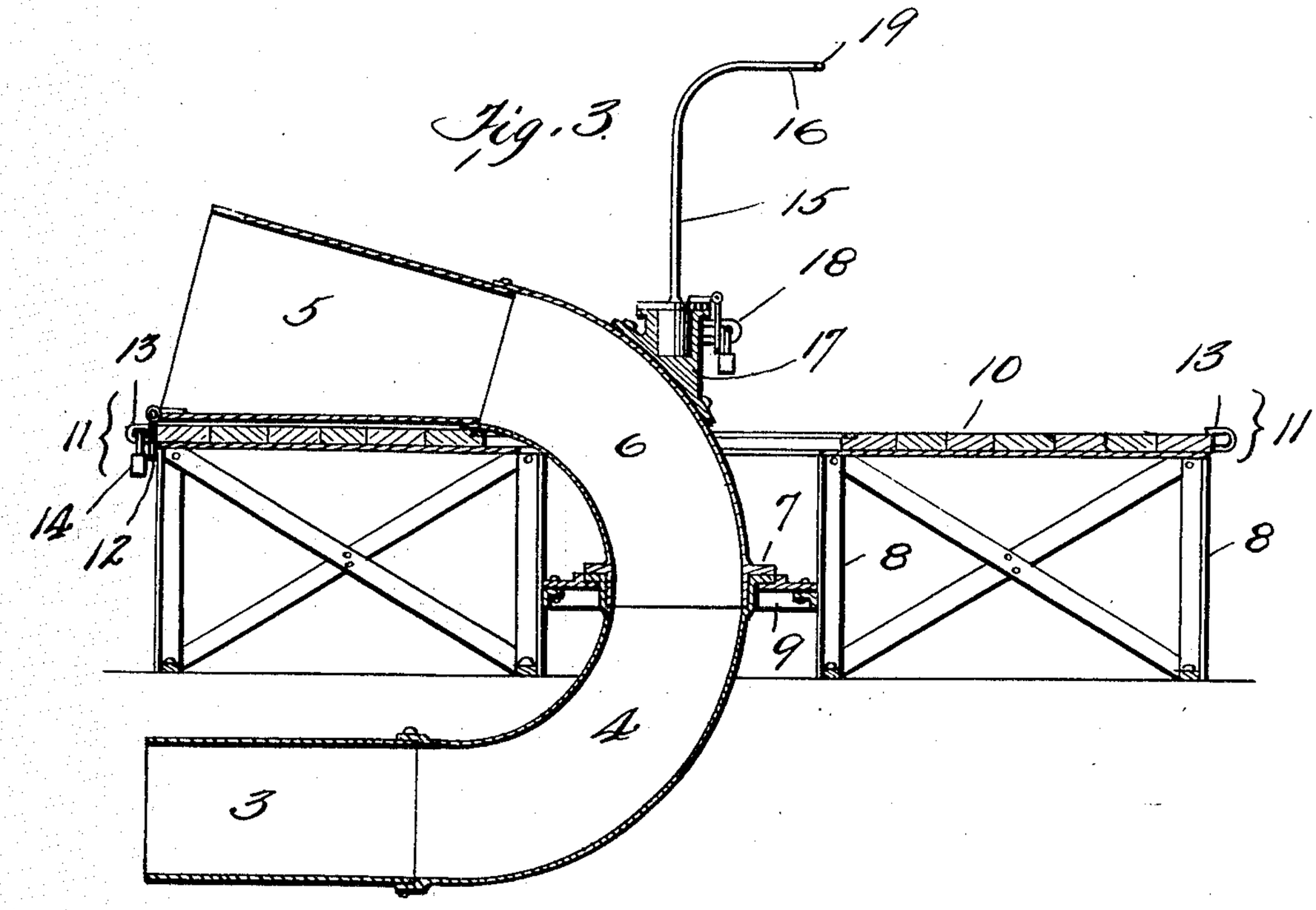


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 4.

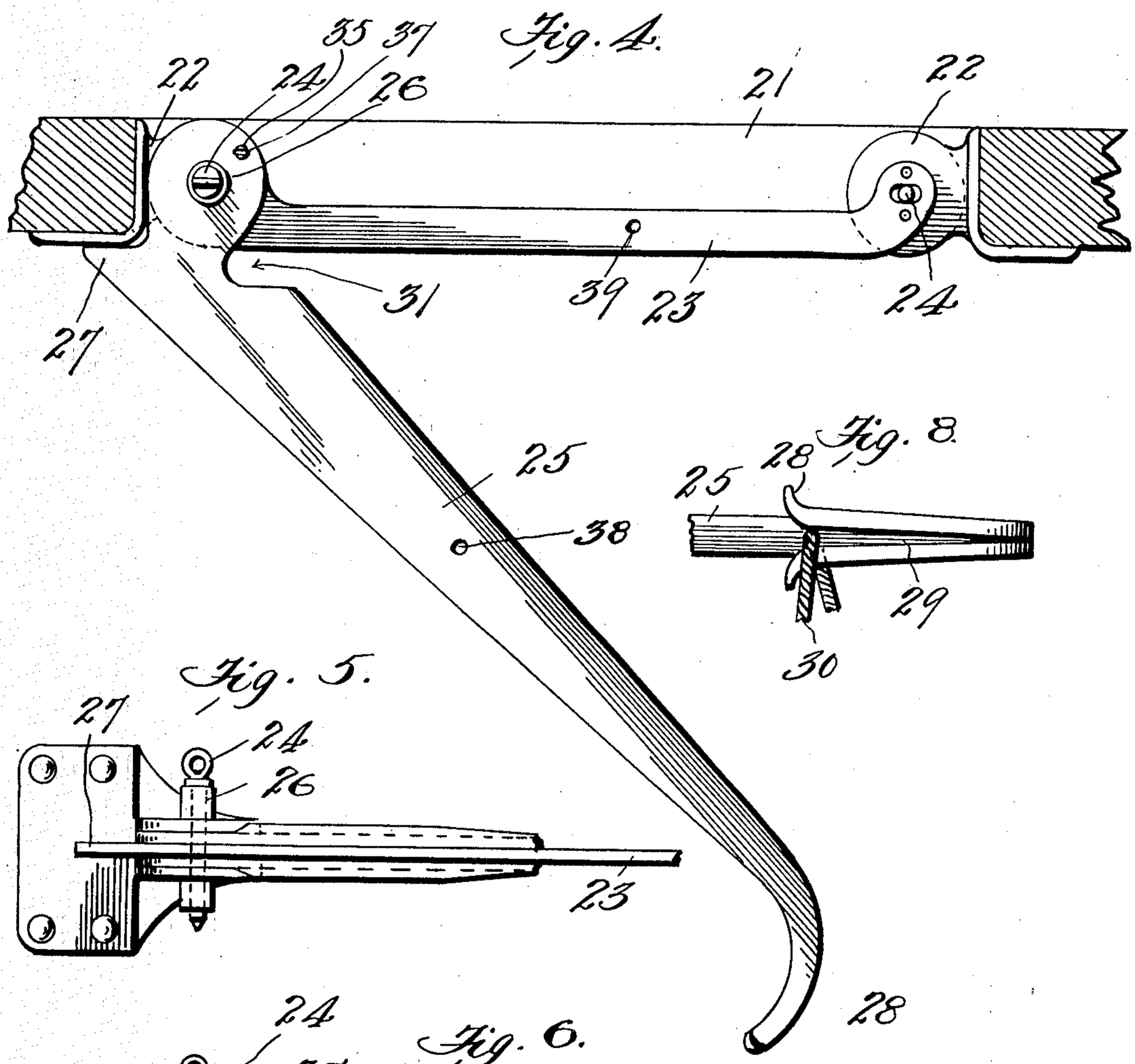


Fig. 8.

Fig. 5.

Fig. 6.

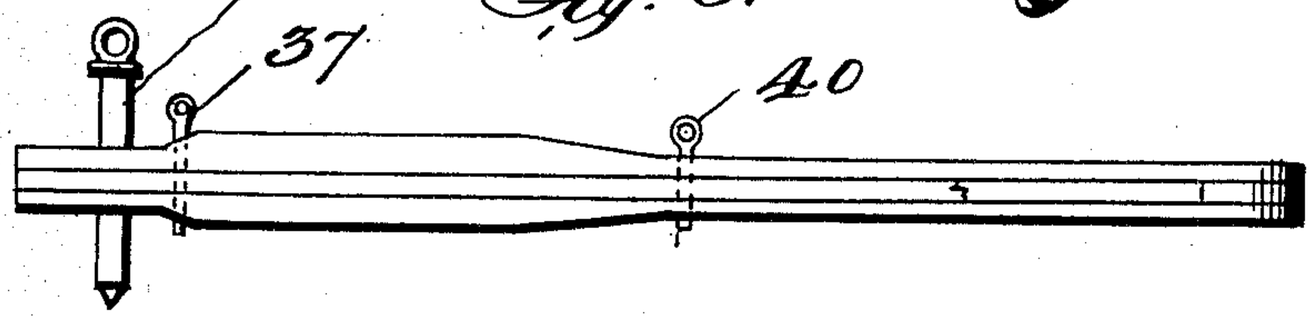
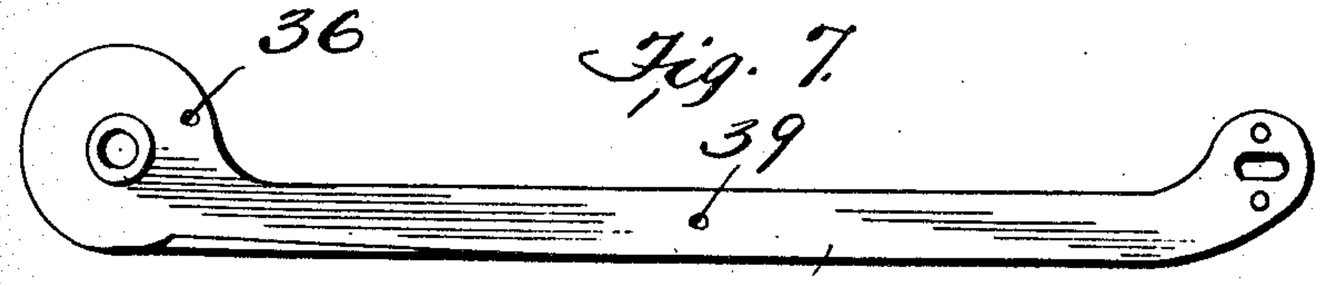


Fig. 7.



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UNITED STATES PATENT OFFICE.

HALE G. ROBINSON, OF SANDUSKY, OHIO.

MAIL RECEIVING AND DELIVERING APPARATUS.

No. 860,571. Specification of Letters Patent. Patented July 16, 1907.

Application filed February 16, 1907. Serial No. 357,714.

To all whom it may concern:

Be it known that I, HALE G. ROBINSON, a citizen of the United States, and a resident of Sandusky, in the county of Erie and State of Ohio, have invented a certain new and Improved Mail Receiving and Delivering Apparatus, of which the following is a specification.

My invention relates to a stationary catcher to receive mail bags from moving cars to devices carried by the cars for delivering bags into the catcher and for taking bags from a stationary device preferably forming a part of the stationary catching apparatus.

The characteristics and advantages of the invention are hereinafter more fully set forth in connection with the detailed description of the accompanying drawing which illustrates exemplifying structures embodying the invention, and in which,

Figure 1 is a diagrammatic view partly in elevation and partly in section of the invention; Fig. 2 is a plan view of the stationary catcher and bag support; Fig. 3 a vertical section of the same; Fig. 4 a plan view of the part of the invention carried by the car; Fig. 5 is a fragmentary edge view of Fig. 4; Fig. 6 an edge view of the car catcher arm; Fig. 7 a detail view of the cross bar, and, Fig. 8 a detail of the jaw for holding the bag.

Referring first to Figs. 1, 2 and 3, reference numeral 1 designates a masonry foundation adjacent to a railroad track, 2 a pit therein, 3 a delivery tube in the foundation opening into the pit, 4 the upper grooved end of the tube, 5 the receiving chute, 5ª the inwardly curved upper edge of the mouth of the chute, 6 a curved continuation thereof, of which the end fits within the upper end of stationary tube 4, 7 a flange on tube 6 resting on a corresponding flange formed on the fixed tube, 8 a frame-work, 9 supporting means for the upper end of fixed tube 4 carried by the frame-work, 10 a platform on the frame-work, and, 11 the general designation of locking means carried by receiving chute 5 and by the platform at two different points consisting in a preferred construction of a hasp 12 carried by the chute, staples on the platform and a pad-lock 14.

The flange 7 and the lower end of tube 6 fitting in tube 4 form a swivel connection so that chute 5 can be placed either in the position in which it is seen in the drawing or swung around so that it points in the opposite direction and it can be locked in either position by means of locking devices 11.

15 is a post having a bag supporting arm 16, and having a swiveled mounting in socket 17 carried by the swinging part of the chute, preferably on the turning center.

18 are locking devices which may be similar to those already described in connection with the chute for securing the arm 16 in either of its two positions.

19 are projections at the end of arm 16 for suspending the bags.

20 is the general designation of receiving and delivering mechanism carried by the car.

21 is a doorway, 22 lugs on the side frames of the doorway, 23 a cross bar secured in lugs 22 by linch pins 24, so that its position can be reversed by removing the pins turning the cross bar bodily over and replacing the pins, 25 a catcher arm pivotally connected to cross bar 23 at one end by means of a hollow pivot 26 through the bar of which one of the linch pins 24 passes, 27 a projection on arm 25 limiting its outward movement by contact with the door-frame of a part of the lug 22, 28 the outwardly curved end of catcher arm 25, 29 a cleft therein dividing the end of the arm so that the two parts thus formed can be sprung apart and the cord, ring, or other device, connected to the bag represented by the numeral 30 placed in the cleft, 31 a recess formed by properly shaping the inner end of catcher arm 25 between the arm and cross bar 23 so that the caught bag will wedge in place.

35, 36 are holes in arm 25 and cross bar 23 respectively; 37 a linch pin which may be inserted through the holes when the catcher arm is in its outward position to hold it in place, 38, 39 are holes in the catcher arm and cross bar respectively, and 40 another linch pin which may be inserted through the holes when the catcher arm is in active position to hold it in place.

In operation, supposing the car to be moving in the direction of the arrow, Fig. 1, chute 5 is swung and locked in the position shown in the drawings and stationary arm 16 is swung out toward the track and locked in position. The bag to be caught by the car is then hung on the projection 19 pointing in the direction in which the car is moving and the mail clerk on the car inserts the cord or ring attached to the moving bag in the cleft of the catcher arm 25 whose end is pointed in the direction in which the car is moving and is swung outwardly in the position shown in Fig. 4. As the car passes the chute the curved edge 5ª of the chute's mouth encounters the suspending device which is snatched from the cleft in catcher arm 25 and the bag by its momentum passes into the mouth of the chute and around the curved portions 6 and 4 of the stationary catcher, its momentum being gradually absorbed by the curvature until it is discharged into pit 2 with relatively little force. The slant face of the catcher arm 25 thereafter encounters the middle of the stationary bag which folds over the arm and is removed from its stationary support and by inertia is carried back until it wedges between the catcher arm and cross bar 23 and may be removed by the mail clerk.

It will be obvious that if the car is moved in the opposite direction the chute may be swung around to the opposite position, the stationary supporting arm correspondingly adjusted and the cross bar 23 and connected parts carried by the car, reversed in position. Where

trains customarily move in a single direction over a single track there is no necessity for providing the swivel connection in the stationary catcher and this swivel joint may be omitted. The precise form of the curvature of the stationary chute is not essential. The curvature may be varied considerably in order to properly absorb the momentum of the caught bag and properly deliver it into the pit.

Various modifications may be made in my invention without departing from its spirit.

I claim:

1. In devices of the character described, a chute for receiving packages from a moving train, having a fixed tube comprising a horizontal part and a curved part, and a movable tube comprising a horizontal part and a curved part, the tubes being pivotally joined at the ends of their curved parts.

2. In devices of the character described, a stationary tubular member having a horizontal part discharging into a pit and a vertical part curved to join the horizontal part, and a movable receiving tube having a horizontal part and a vertical part curved to join the horizontal part and pivoted to the vertical part of the stationary tube, and means for locking the movable tube to receive packages from trains moving in different directions.

3. Apparatus for receiving packages from moving trains comprising a receiving tube and a discharge tube substantially horizontal and joined by curved tubes having curvatures aggregating 180°.

4. In mail receiving and delivering apparatus for cars, the combination of a cross-bar, a catcher arm having means for supporting a bag to be delivered, and means for reversibly supporting the arm in relation to the bar to receive and deliver bags in either direction of movement of the car.

5. In devices of the character described, a stationary curved chute for receiving packages from a moving train, supporting devices in a car door-way, a cross bar, a catcher arm pivoted to the bar, means for suspending a bag from the end of a catcher arm, and means for reversibly supporting the cross bar and related parts in the door-way.

6. Apparatus for receiving packages from moving trains comprising a tube having a substantially horizontal part with a flared mouth and an inwardly curved upper edge, and having a curved portion serving to absorb momentum of moving packages, and a masonry foundation in which a pit below the track level is formed to receive packages and into which the curved portion of the tube opens at sub stantially the level of the track.

7. The combination with a car doorway, of brackets on the side frames, a cross-bar secured to the brackets by linch-pins, a catcher arm pivotally secured to one of the brackets by a linch-pin and having a projection limiting outward movement and having a cleft end serving to suspend a bag; the parts being constructed so that the catcher arm may be reversed and attached to either bracket to serve for either direction of movement of the car.

In testimony whereof I have affixed my signature in the presence of two witnesses.

HALE G. ROBINSON.

Witnesses:
HENRY J. BEELSTEIN,
CHAS. FIEDLER.