

G. A. OLSON.
LITTER CARRIER.

APPLICATION FILED APR. 29, 1910.

978,331.

Patented Dec. 13, 1910.

2 SHEETS—SHEET 1.

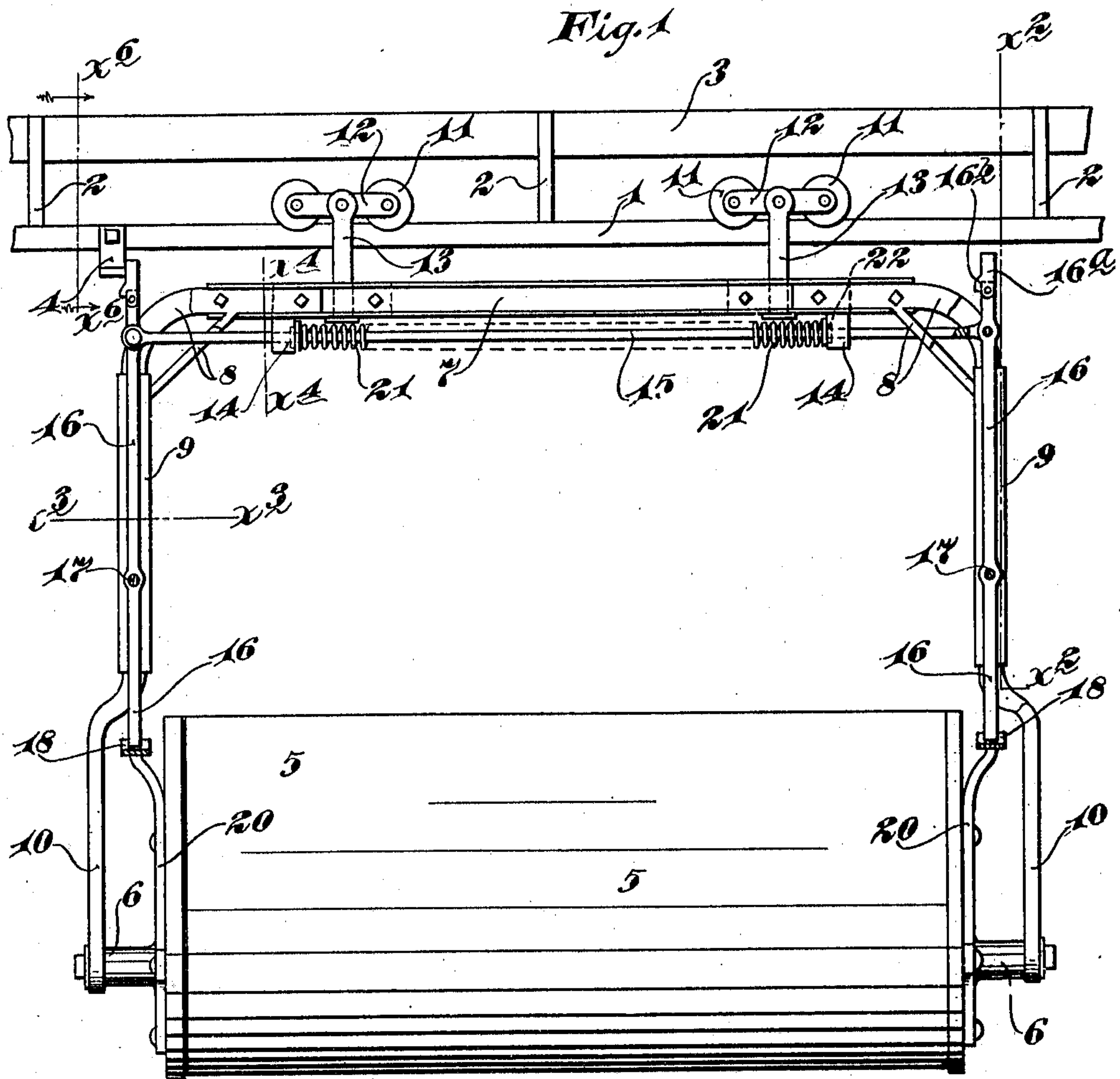


Fig. 6

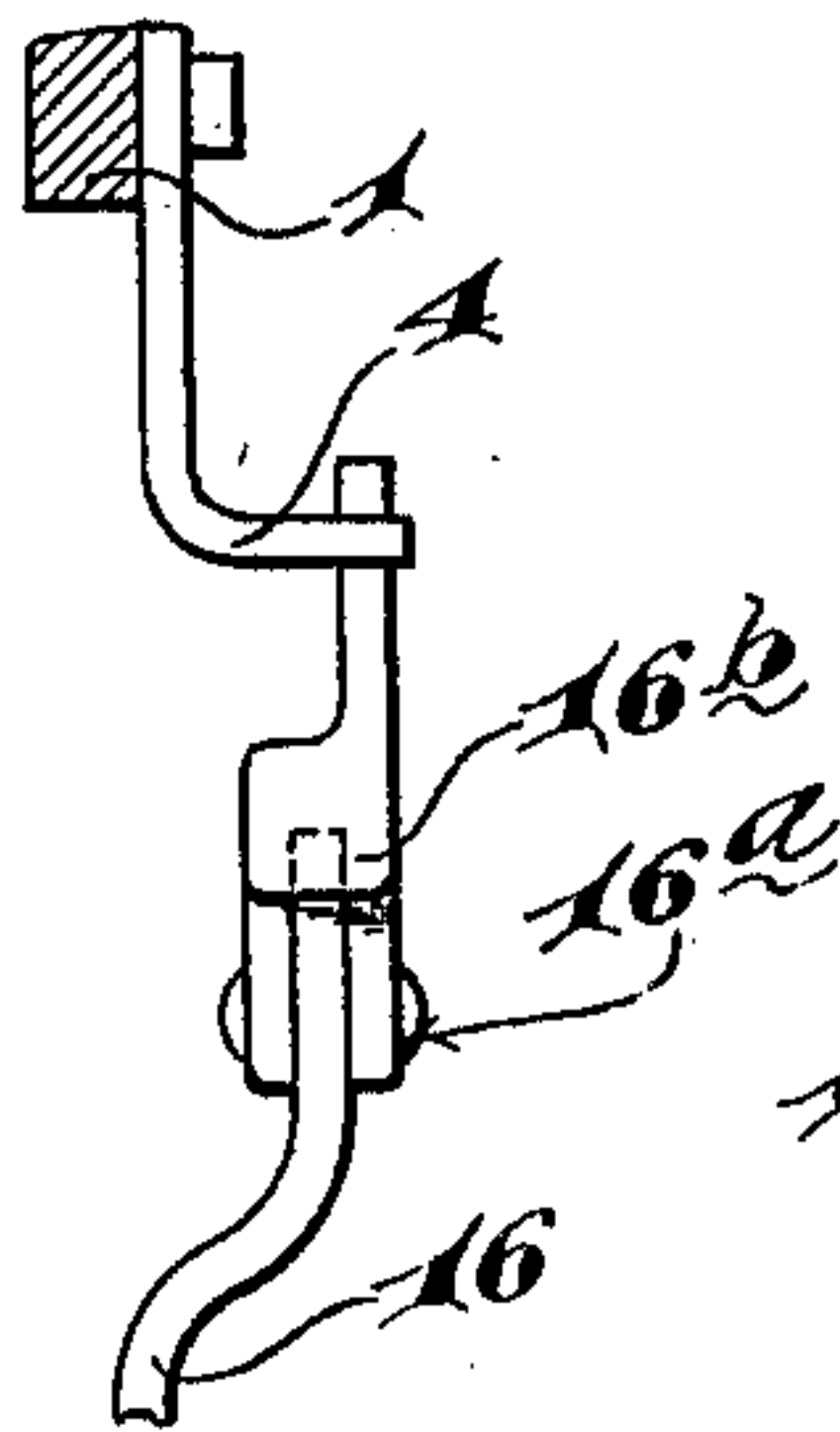
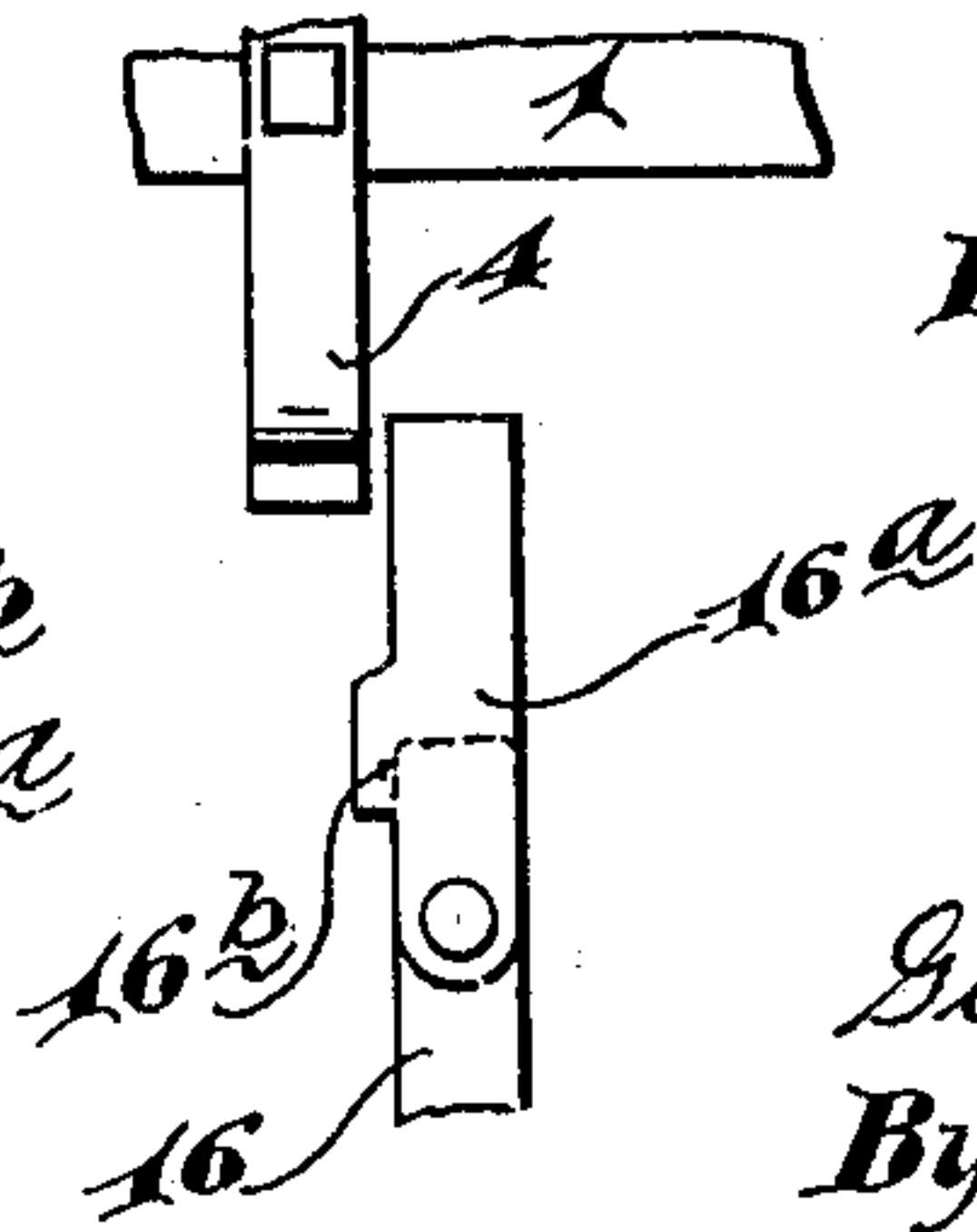


Fig. 7



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2 SHEETS—SHEET 2.

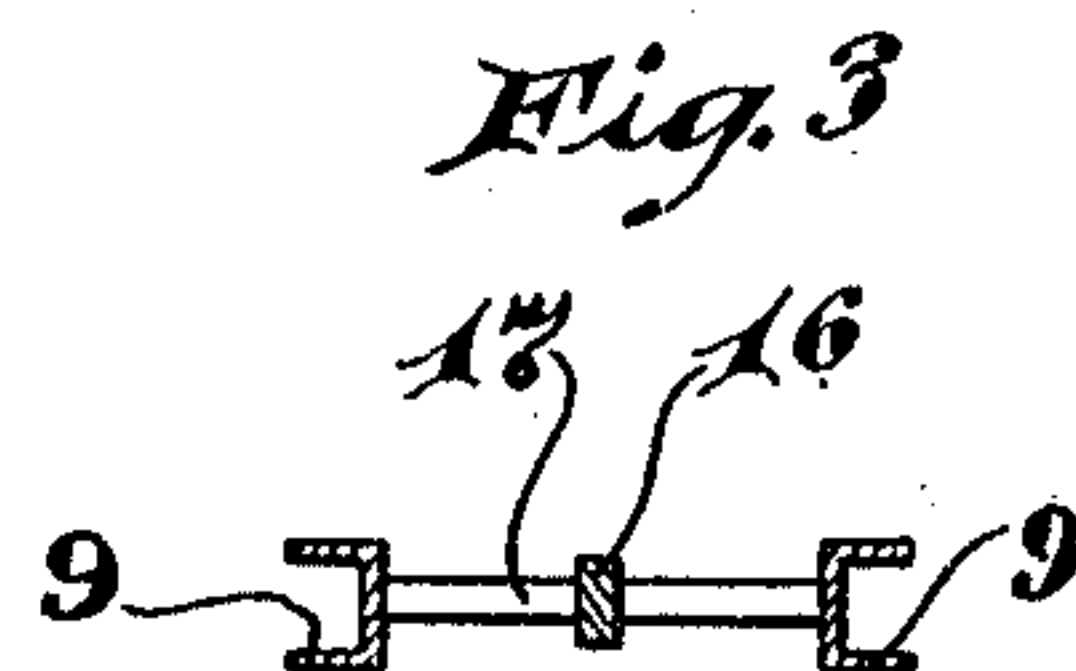
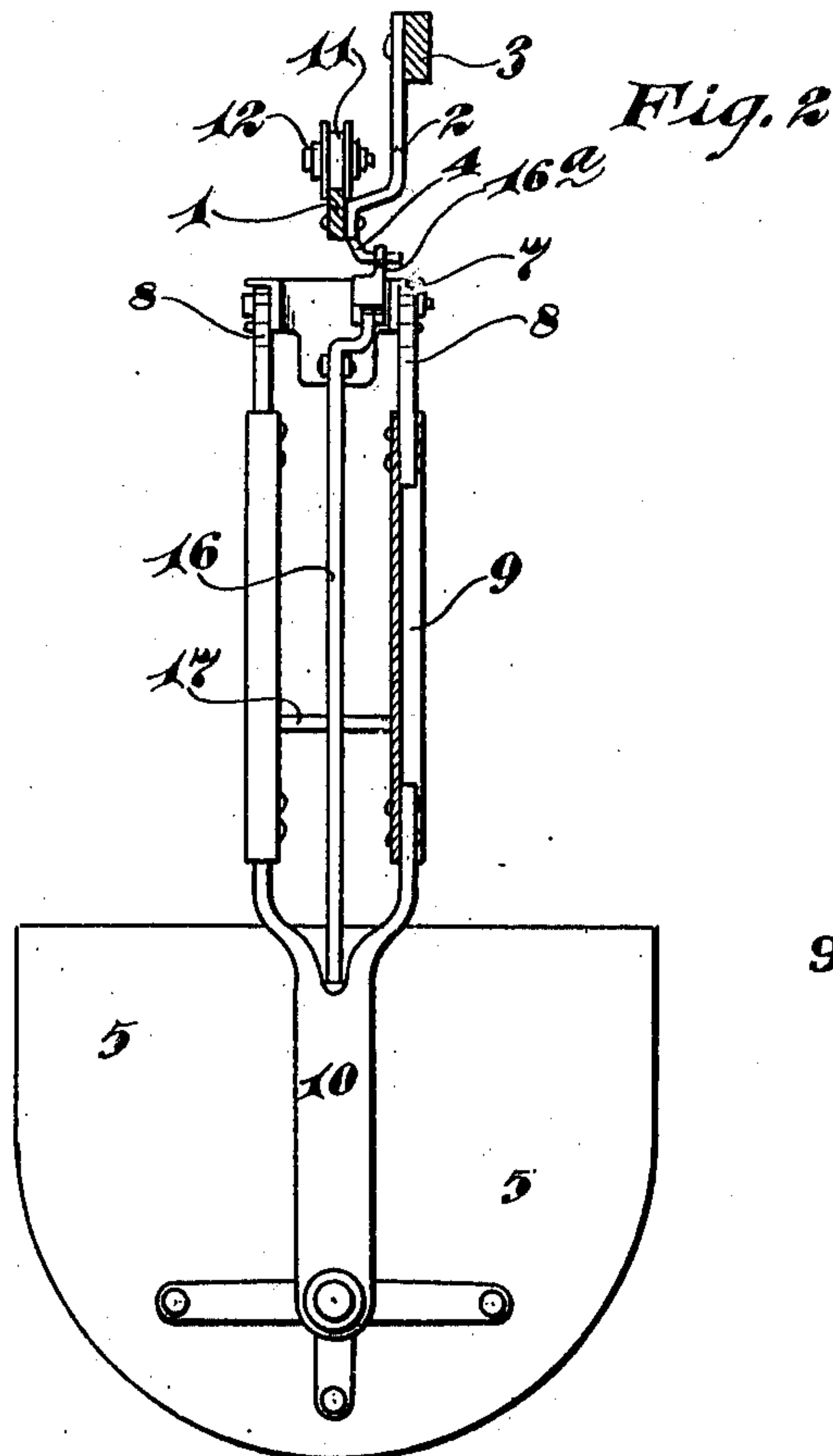


Fig. 5

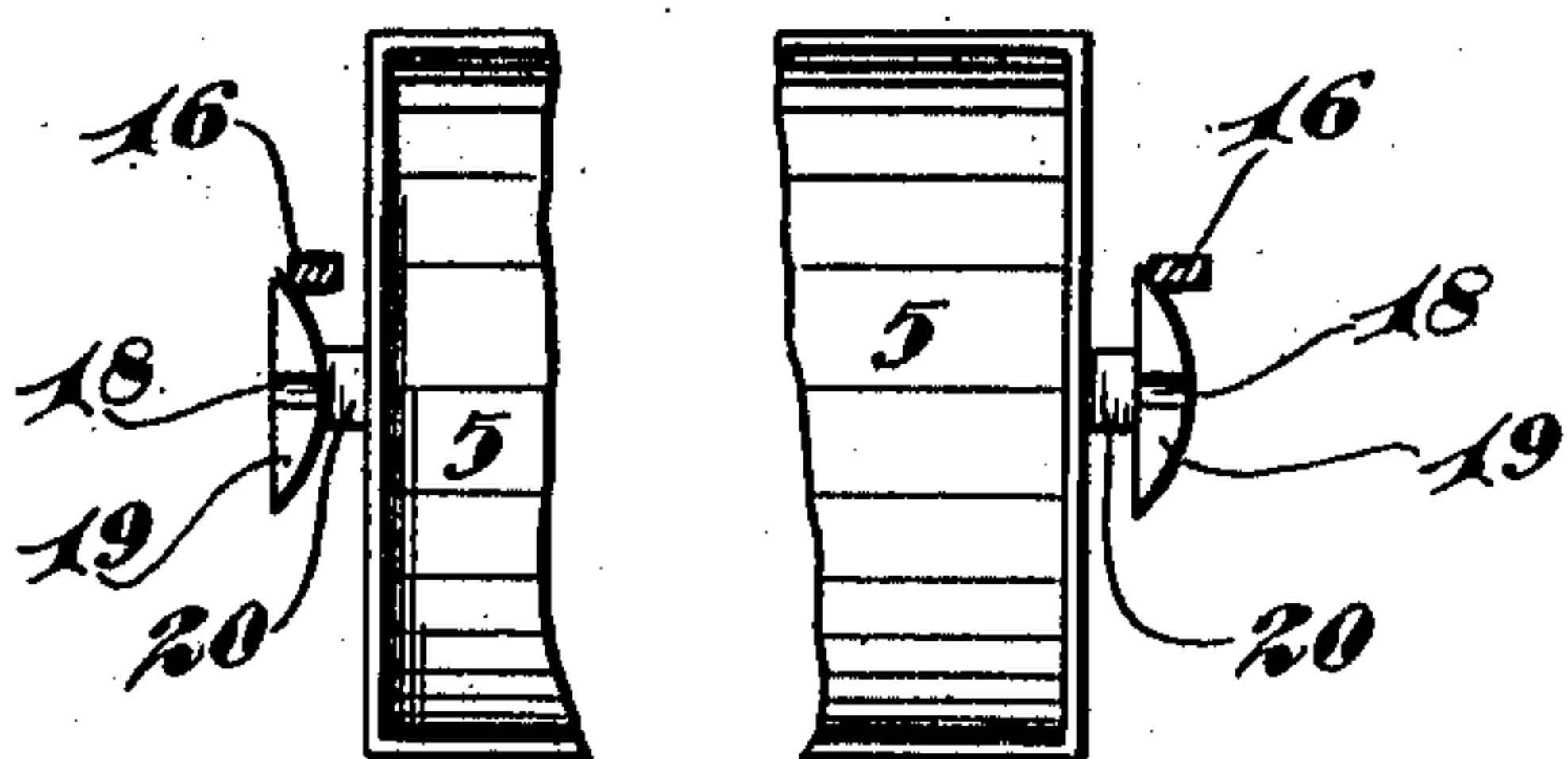
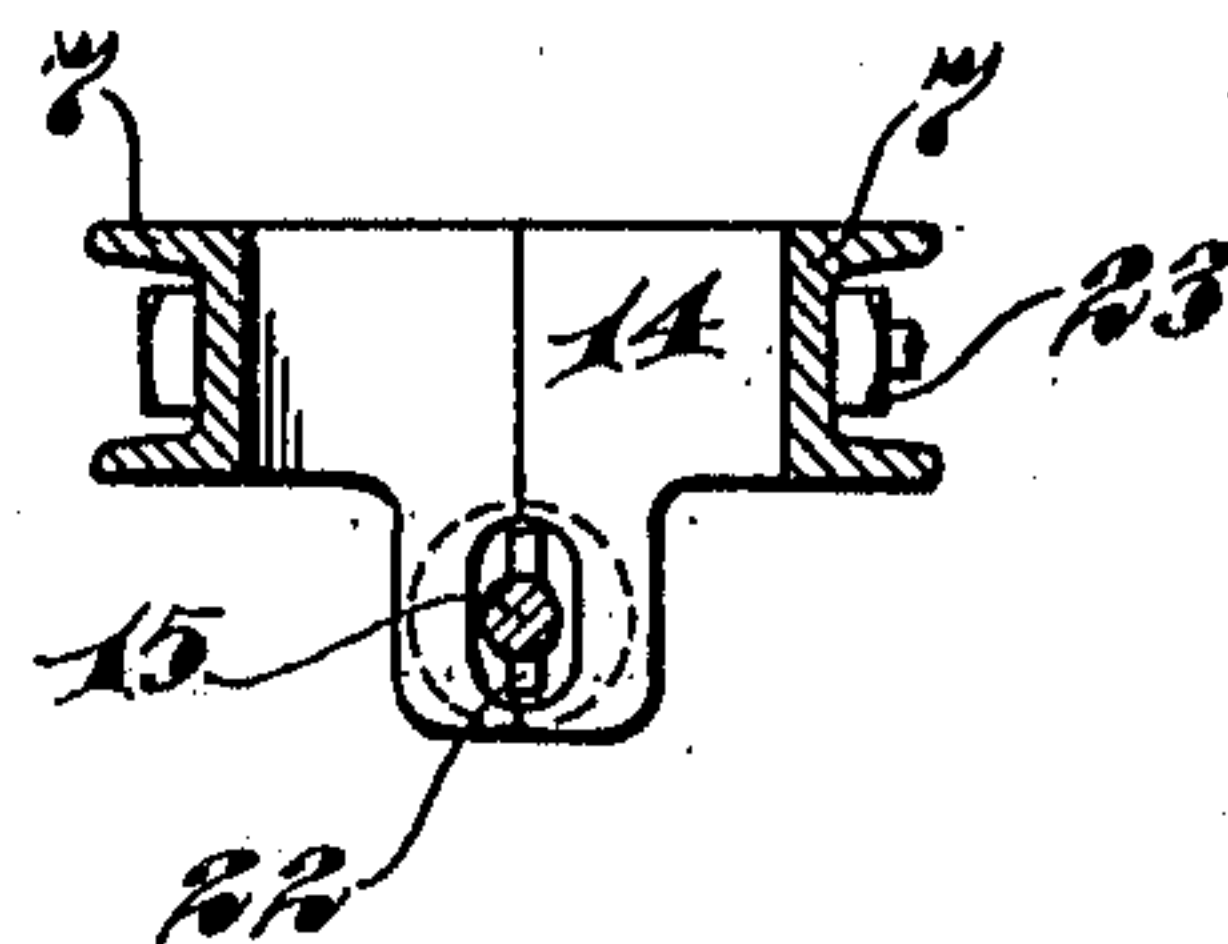


Fig. 4



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UNITED STATES PATENT OFFICE.

GUSTAV A. OLSON, OF ALBERT LEA, MINNESOTA.

LITTER-CARRIER.

978,331.

Specification of Letters Patent.

Patented Dec. 13, 1910.

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To all whom it may concern:

Be it known that I, GUSTAV A. OLSON, a citizen of the United States, residing at Albert Lea, in the county of Freeborn and State of Minnesota, have invented certain new and useful Improvements in Litter-Carriers; 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.

My invention has for its object to provide an improved litter carrier and, to this end, it consists of the novel devices and combination of devices hereinafter described and defined in the claims.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view in side elevation showing my improved carrier and a section of the track upon which it is mounted to run; Fig. 2 is a view in end elevation, with some parts sectioned, on the line $x^2 x^2$ of Fig. 1, showing the carrier and track; Fig. 3 is a section on the line $x^3 x^3$ of Fig. 1; Fig. 4 is a section on the line $x^4 x^4$ of Fig. 1; Fig. 5 is a fragmentary view, showing the bucket and certain cooperating parts, some parts being broken away; Fig. 6 is a detailed view on an enlarged scale, with parts sectioned, on the line $x^5 x^5$ of Fig. 1; and Fig. 7 is a side elevation of the parts shown in Fig. 6.

The numeral 1 indicates a track rail supported by hangers 2 from a suitably supported horizontal beam 3. At one or more points on the track rail 1 is a tripping abutment 4 that is rigidly but preferably adjustably secured thereto.

The bucket 5 is provided, at its ends, with trunnions 6 that are journaled in the lower ends of the arms of an inverted approximately U-shaped truck frame. This truck frame is made up of horizontally extended laterally spaced bars 7, preferably of channel form, which, at their ends, are rigidly bolted to cast elbow brackets 8. Laterally spaced vertically extended bars 9, preferably, also, of channel form, are bolted or otherwise rigidly secured to the downturned ends of

the elbow brackets 8, and the pronged upper extremities of cast arm extensions 10 are bolted or otherwise rigidly secured to the lower ends of the said bars 9. The trunnions 6 are directly journaled in the lower ends of the arm extensions 10.

Grooved truck wheels 11 are arranged to run in pairs on the rail 1 and these, as shown, are journaled to small frames 12 intermediately pivoted to the upper ends of hanger brackets 13, the lower ends of which, in turn, are swiveled in the horizontal portions of the blocks 14, so that the said truck wheels may freely travel on a curved track. Secured between the horizontal portions of the elbow brackets 8 are depending abutments or blocks 14, through which a thrust rod 15 is arranged to work endwise. The ends of the thrust rod 15 are pivotally connected to lock levers 16 which, in turn, are intermediately pivoted by bolts or pins 17, to the frame bars 9. The upper ends of these lock levers 16 are adapted to engage with one or the other of the abutments 4 on the track rail. The lower ends of said lock levers are arranged to engage intermediate lock notches 18 of cam acting lock heads 19 secured to the upper ends of supporting brackets 20 which, in turn, are riveted one to each head of the bucket 5. Both of the lock heads 19 are offset considerably from the adjacent heads of the bucket and both are rounded or made cam-shaped on the same side, to-wit, as shown in Fig. 5, on the right hand sides. The purpose of this will presently appear.

The thrust rod 15 is yieldingly held in an intermediate position by a strong long coiled spring 21, shown partly in full and partly by dotted lines in Fig. 1. This spring is normally compressed between the abutments 14 and it normally engages with stops in the form of pins 22 applied to the said thrust rod and normally held by the said spring in recesses formed in the said abutments.

Normally, the spring 21 holds the lower ends of the lock lever 16 engaged with the notches 18 of the cooperating lock heads 19 and thus the bucket is held locked by both lock levers, one acting on each end thereof. The upper end of either lock lever 16 is, by movement of the bucket in either direction,

engaged with the fixed tripping abutment 4, both levers will be simultaneously moved out of the lock notches 18 of the cooperating lock heads 19 and the bucket will be released and will, by gravity, be turned upside down and caused to dump its load. Under such tripping movement, the spring 21 is, of course, compressed and it then acts as a cushioning spring which brings the bucket to a sudden stop without intense jars or pounding action. As soon as the engaged lever recovers from the force of the impact due to its engagement with the tripping abutment, the spring 21 will simultaneously throw both lock levers 16 back to normal positions while the bucket is in an inverted position. Then, when the bucket is turned pivotally back to its normal position, the rounded or cam faces of the head 18, acting on the lower ends of the lock levers 16, will cam the said levers sidewise and, when the bucket reaches its normal upturned position, the spring 21 will again throw the said lock levers back into the notches 18, thereby again locking the bucket in its normal position ready to be again filled.

As shown in Fig. 4, the so-called abutments 14 are preferably each made up of two sections or, in other words, are split longitudinally and centrally, are rigidly clamped together and to the ends of the bars 7 and 9, by nutted bolts 23.

The levers 16, at their upper ends, are preferably provided with pivoted sections 16^a which, when turned upward, are positioned for engagement with the tripping abutment 4 but which, when turned downward, will pass under said abutment. These lever sections 16^a have stops 16^b that hold the same against pivotal movement when engaged with the abutment 4 by movement of the carrier in a direction from the right toward the left in respect to Fig. 1. Hence, if the lefthand lever 16^a be turned upward, it will engage with the said abutment 4 while, if the lefthand section 16^a be turned downward and the righthand lever 16^a turned upward, the latter will engage the said abutment. By this adjustment of the lever 16^a, and without adjustment of the abutment 4, a distance of four or five feet of variation in the dumping position of the bucket is provided for. Also, when the bucket is run backward on the track, the lever section 16^a, upon striking the abutment 4, will turn downward and permit the carrier to freely pass.

What I claim is:

1. The combination with a track, of a truck frame having wheels arranged to run on said track, a bucket pivotally connected to said frame and provided with lock heads at its ends, a pair of lock levers pivotally

connected to said frame and cooperating one with each of said lock heads when in intermediate positions and movable to either side of said lock heads to release the same, means connecting said levers for common movements and yieldingly holding the same in intermediate positions engaged with said lock heads, and a relatively fixed abutment associated with said track and operative to move said levers simultaneously into releasing positions.

2. The combination with a track, of a frame having wheels arranged to run on said track, a bucket pivotally connected to said frame and provided with lock heads at its ends, lock levers pivotally connected to said frame and normally engaging said lock heads, a thrust rod connecting said levers for common movements, a spring normally holding said thrust rod in an intermediate position, and a tripping abutment associated with said track for forcing said levers into releasing positions, at least one of the said lock heads having a cam acting surface acting on the cooperating lever, to effect re-engagement of the said lever with said lock heads when said bucket is moved from a dumping back to normal position.

3. In a carrier of the kind described, an inverted approximately U-shaped frame made up of elbow brackets, horizontal laterally spaced top bars, depending laterally spaced upright end bars, and depending arm extensions, the said parts being rigidly connected, of wheel frames swiveled to the upper portions of said elbow brackets and provided with truck wheels, a bucket pivotally connected to the said arm extensions, and provided with a lock head, a lock lever pivoted to said frame and normally engaging said lock head, and a spring yieldingly holding said lock lever in an intermediate locking position, substantially as described.

4. A litter carrier provided with a pivoted bucket and a cooperating lock lever yieldingly held in an intermediate locking position.

5. The combination with a track and a cooperative tripping abutment, of a truck frame having wheels arranged to run on said track, a bucket pivotally connected to said frame, and a bucket latching mechanism comprising a lever having a pivoted end for engagement with said tripping abutment when turned upward said pivoted end being capable of pivotal movement in one direction only from its operative position, substantially as described.

6. The combination with a track and cooperating tripping abutment, of a truck frame having wheels arranged to run on said track, a bucket pivotally connected to said frame and provided with lock heads at its

ends, a pair of lock levers pivotally connected to said frame and coöperating one with each of said lock heads, and means connecting said levers for common movements
5 and yieldingly holding the same in intermediate positions engaged with said lock heads, the said levers having abutment engaging end sections that are movable to and

from operative positions, substantially as described.

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

GUSTAV A. OLSON.

Witnesses:

T. G. SKINNER,

R. B. SKINNER.