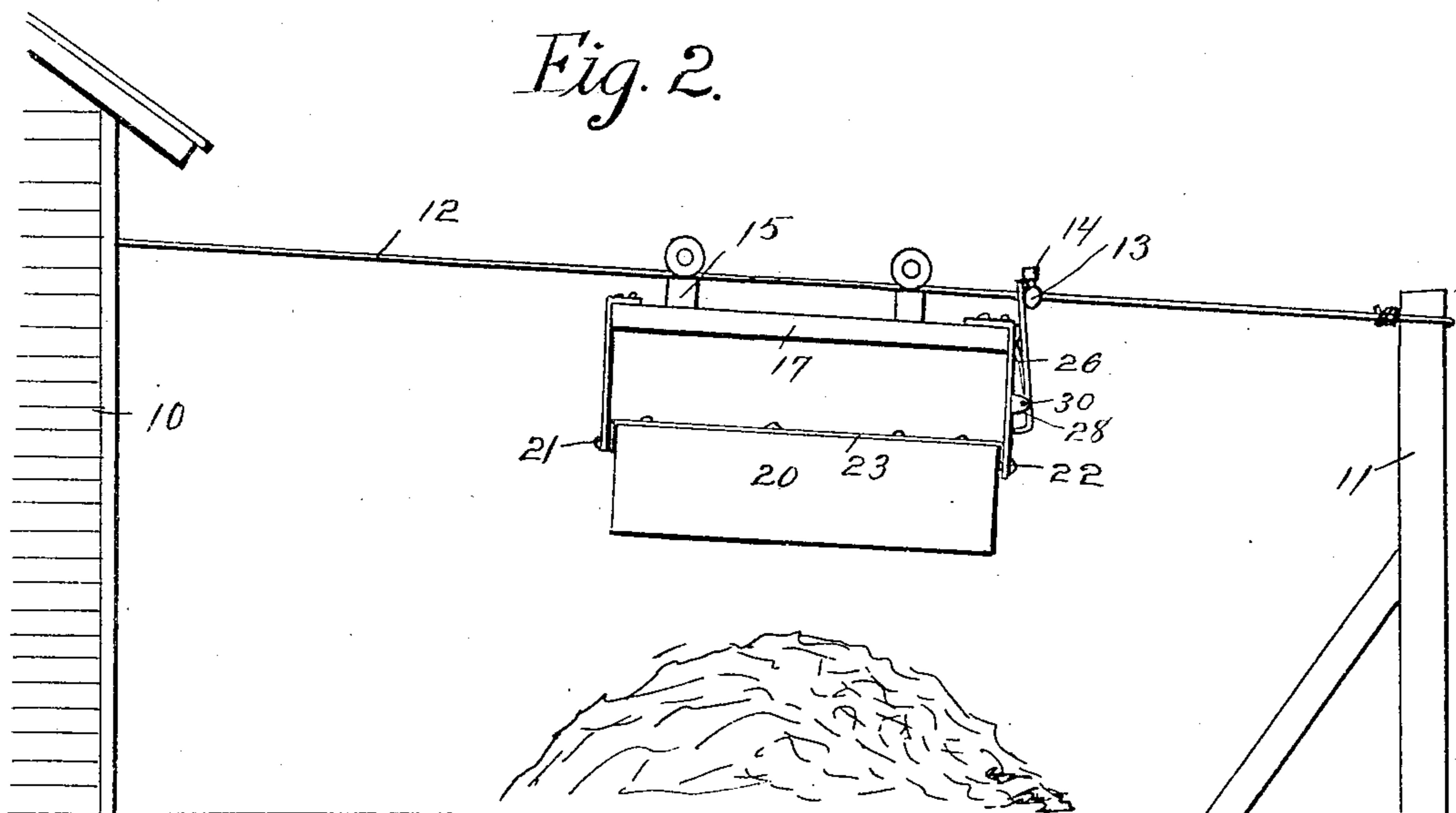
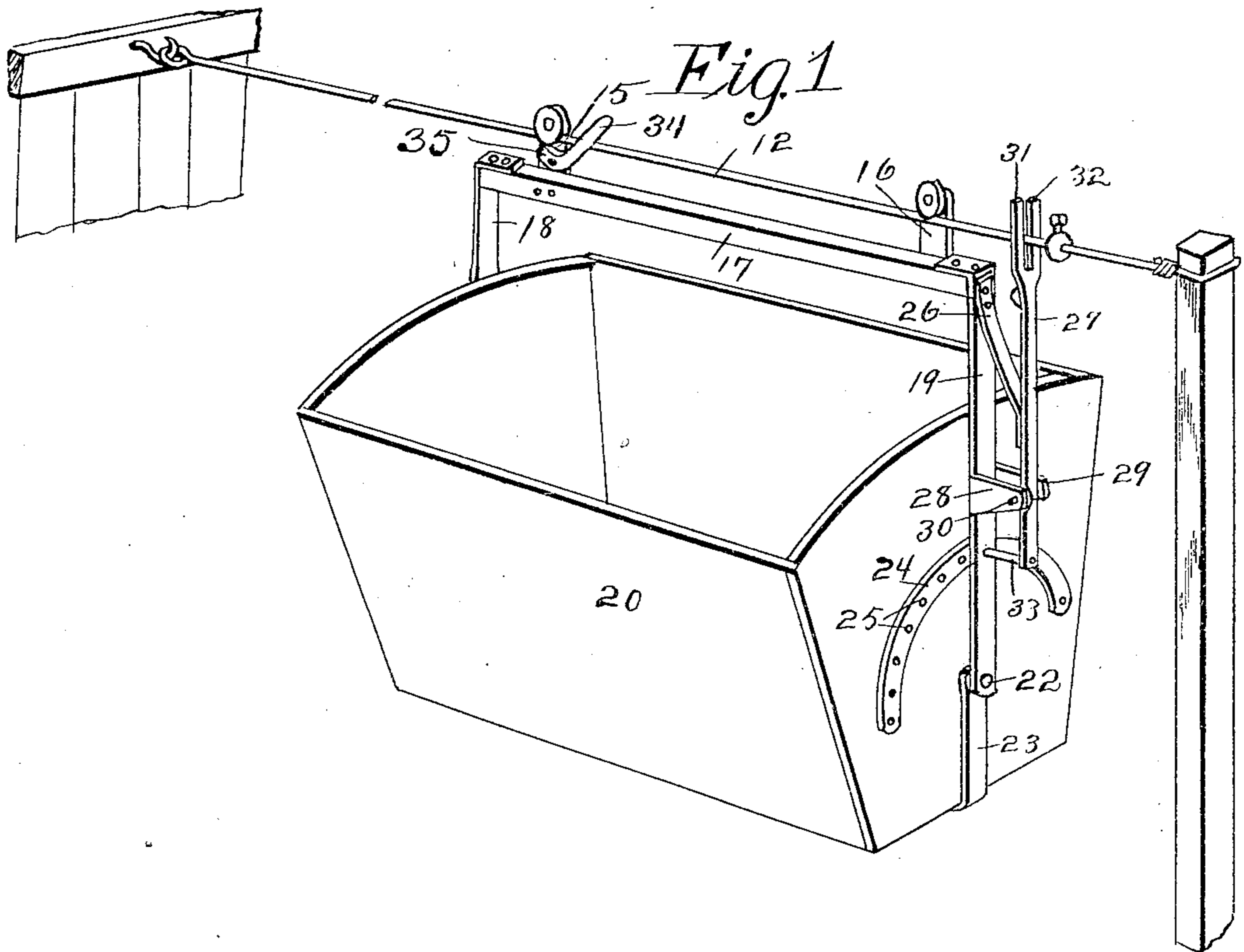


No. 810,586.

PATENTED JAN. 23, 1906.

M. J. SYLSTAD & C. G. RUDE.  
AUTOMATIC CARRIER AND SELF DUMPING DEVICE.

APPLICATION FILED MAR. 27, 1905.



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# UNITED STATES PATENT OFFICE.

MARTIN J. SYLSTAD AND CARL G. RUDE, OF SACRED HEART, MINNESOTA.

## AUTOMATIC CARRIER AND SELF-DUMPING DEVICE.

No. 810,586.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed March 27, 1905. Serial No. 252,110.

*To all whom it may concern:*

Be it known that we, MARTIN J. SYLSTAD and CARL G. RUDE, citizens of the United States, residing at Sacred Heart, in the county of Renville and State of Minnesota, have invented a certain new and useful Automatic Carrier and Self-Dumping Device, of which the following is a specification.

The objects of our invention are to provide a carrier for transporting refuse from stables or houses to a point outside of the stable or house where it is to be accumulated, and the carrier will automatically dump itself to allow the refuse in it to fall upon the ground or rubbish heap.

A further object is to provide a mechanism which will return the carrier to its point of starting inside of the stable or house, so that it can be refilled with refuse.

A further object is to provide a mechanism which can be adjusted to change the point where the dumping operation takes place, and, further, to provide a mechanism designed to coact with the adjustable device for determining the point of dumping and which releases the carrier-box and allows it to swing on its pivots and dump and at the same time causes the carrier to be forced rearwardly to its point of starting on account of the momentum which the carrier acquires in moving from the interior of the stable or house to the rubbish heap or point of dumping.

Our invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in our claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows in perspective our carrier and a portion of the wire or cable upon which it is mounted; and Fig. 2 is a side elevation of the device in its dumping position.

Referring to the accompanying drawings, we have used the reference-numeral 10 to indicate the side of the stable or house, the numeral 11 to indicate a post which is placed some distance from the house and beyond the point where a rubbish pile is to be accumulated. Connecting the interior of the stable 10 with the upper portion of the post 11 is a wire or cable 12, which is slightly inclined from its point of attachment in the stable to its point of attachment to the post 11. Adjustably mounted on the cable 12 is a stop 13, which is capable of longitudinal movement

of the cable 12 and which has a set-screw 14 extending through the upper portion of it, so that the stop can be fixed in position relative to the wire 12.

Mounted on the cable 12 is a carrier which comprises the pulleys 15 and 16, which are connected with each other by means of a supporting-bar 17. Firmly attached to the ends of the supporting-bar 17 we have provided the hangers 18 and 19, to which the lower end of the carrier-box 20 is pivotally attached by means of the pivots 21 and 22. Extending from the pivot 21 downwardly and then longitudinally of the carrier-box 20, then upwardly to the pivot 22, is a brace 23, which serves to more firmly support the bottom of the carrier-box. The pivots 21 and 22 are attached to the box at points considerably below a point midway between the top and bottom of the ends of the box, so that when the box is filled and simply maintained by its pivots it will easily dump and will normally hang in an inverted position unless it is maintained in the position shown in Fig. 1 by a mechanism provided for the purpose. The sides of the box also flare outwardly from their points of attachment to the bottom, so that the distance between the upper edges of the sides is considerably greater than the distance between the lower edges of the sides.

Attached to that end of the box which is nearest the hanger 19 and immediately inside of the hanger 19 and above the pivot 22 is a substantially semicircular plate 24, having a series of perforations 25 therein, which are designed to receive a pin, to be hereinafter described, which maintains the box in an upright position, as shown in Fig. 1. Attached to the upper portion of the hanger 19 and extending downwardly therefrom is a spring 26, which is designed to normally engage the inner surface of a forked lever 27, which lever is pivotally supported by the two lugs 28 and 29 and the pivot 30, these lugs 28 and 29 being secured to the hanger 19 midway between the ends of it, as shown clearly by Fig. 1.

The tines 31 and 32 are on opposite sides of the cable 12, and these tines are designed to engage the stop 13 for releasing the pin 33, which is attached to the lower end of the forked lever 27 and which passes through an opening in the hanger 19 and into one of the series of openings 25 in the substantially semicircular plate 24, so that when the pin is

drawn from one of the series of openings in the semicircular plate 24 the carrier-box 20 will swing on its pivot from the position shown in Fig. 1 to that shown in Fig. 2—that is, from an upright to a dumping position. The spring 26 serves the double function of normally holding the pin 33 at its inner limit of movement by forcing the upper portion of the forked lever 27 outwardly and of causing the entire carrier to be forced toward its point of starting from its point of discharge adjacent to the stop 13, and thus cause a return of the carrier from its point of discharge to its point of starting.

We have provided the clamp 34 for retaining the carrier at its inner limit of movement, where it is usually filled. The clamp 34 is pivoted to the support of the pulley 15 and has a roughened end 35, which is designed to engage the cable 12 when the device is at its inner limit of movement. When the operator draws the other end of the clamp downwardly, the roughened end 35 of the clamp engages the wire in such a way that the gravity of the carrier will normally hold it in engagement with the wire, and thus maintain the carrier at its inner limit of movement. When the operator desires to release the carrier from its inner limit of movement, he simply throws the roughened end 35 out of engagement with the wire. The clamp is secured to the support of the pulley 15 in such a way that it will not freely move, so that there will be no danger of its being thrown into contact with the wire except when forced to this position by the operator.

In practical operation and assuming that the parts are assembled as above described the person using the carrier has this carrier placed in an upright position and set at the desired angle to easily throw the refuse into its interior by adjusting the pin 33 to the proper opening 25 in the semicircular plate 24. He then fills the carrier-box 20 and releases the mechanism which maintains the carrier in position inside of the stable or house and allows this carrier to move to its outer limit of movement or point of discharge, where the forked lever 27 engages the stop 13, and this releases the pin 33, allows the box 20 to dump, and on account of the spring 26 engaging the lever 27 and, further, on account of the momentum which has been acquired in the transit from the interior of the stable to the point of discharge, the carrier will be forced from its point of discharge to its point of starting, where it will remain until the operation is repeated.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States therefor, is—

1. In a device of the class described, a track, a stop on the track, a carrier capable of longitudinal movement of the track, a pivotally-mounted carrier-box forming a por-

tion of the carrier, a mechanism for locking the carrier-box in an upright position, and means designed to be engaged by the stop for releasing the mechanism which holds the carrier-box in an upright position and for returning the box to its point of starting away from the stop.

2. In a device of the class described, an inclined track, a carrier capable of longitudinal movement of the track, a carrier-box forming a part of the carrier, a stop on the track, a mechanism for securing the carrier-box in an upright position relative to the carrier, means designed to engage the stop on the track for releasing the mechanism for holding the carrier in an upright position and allowing it to dump and to force the carrier back to its point of starting.

3. In a device of the class described, an inclined track, a carrier capable of longitudinal movement of the track, a carrier-box forming a part of the carrier, an adjustable stop on the track, a mechanism for securing the carrier-box in an upright position relative to the carrier, and means designed to engage the stop on the track for releasing the mechanism for holding the carrier in an upright position and allowing it to dump and to force the carrier back to its point of starting.

4. In a device of the class described, an inclined track, a carrier capable of longitudinal movement of the track, a carrier-box forming a part of the carrier, a stop on the track, a mechanism for securing the carrier-box in an upright position relative to the carrier, and spring-actuated means designed to engage the stop on the track for releasing the mechanism for holding the carrier in an upright position and allowing it to dump and to force the carrier back to its point of starting.

5. In a device of the class described, an inclined track, a carrier capable of longitudinal movement of the track, a carrier-box forming a part of the carrier, an adjustable stop on the track, a mechanism for securing the carrier-box in an upright position relative to the carrier, and spring-actuated means designed to engage the stop on the track for releasing the mechanism for holding the carrier in an upright position and allowing it to dump and to force the carrier back to its point of starting.

6. In a device of the class described, a track, a stop on the track, a carrier capable of longitudinal movement of the track, a pivotally-mounted carrier-box forming a portion of the carrier, a mechanism for locking the carrier-box in an upright position, means designed to be engaged by the stop for holding the carrier-box in an upright position and for returning the box to its point of starting away from the stop, and means for retaining the carrier at its inner limit of movement.

7. In a device of the class described, an inclined track, a stop near one end of the track,

5 pulleys mounted on the track, a carrier-support connecting the pulleys, hanger-bars connected with the carrier-support, a carrier-box pivoted between the hangers and nearer  
10 its bottom portion than its top portion, a substantially semicircular plate having a series of openings therein, a pin designed to pass through an opening in one of the hangers and into one of the openings in the semicircular  
15 plate, a spring-actuated lever for maintaining the pin at its inner limit of movement, said lever designed to be engaged by the stop for taking advantage of the momentum of the carrier sliding from its inner limit to its  
20 outer limit of movement and return the same to its inner limit of movement.

8. In a device of the class described, a

track, a stop on the track, a carrier capable of longitudinal movement of the track, a pivotally-mounted carrier-box forming a portion of the carrier, a mechanism for locking the carrier-box in an upright position, means for holding the box in an upright position, a pivotally-mounted forked lever connected with the said means, the forked portion thereof extending on each side of the track, and a spring for normally holding the lever away from the support to which it is pivoted, for the purposes stated.

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