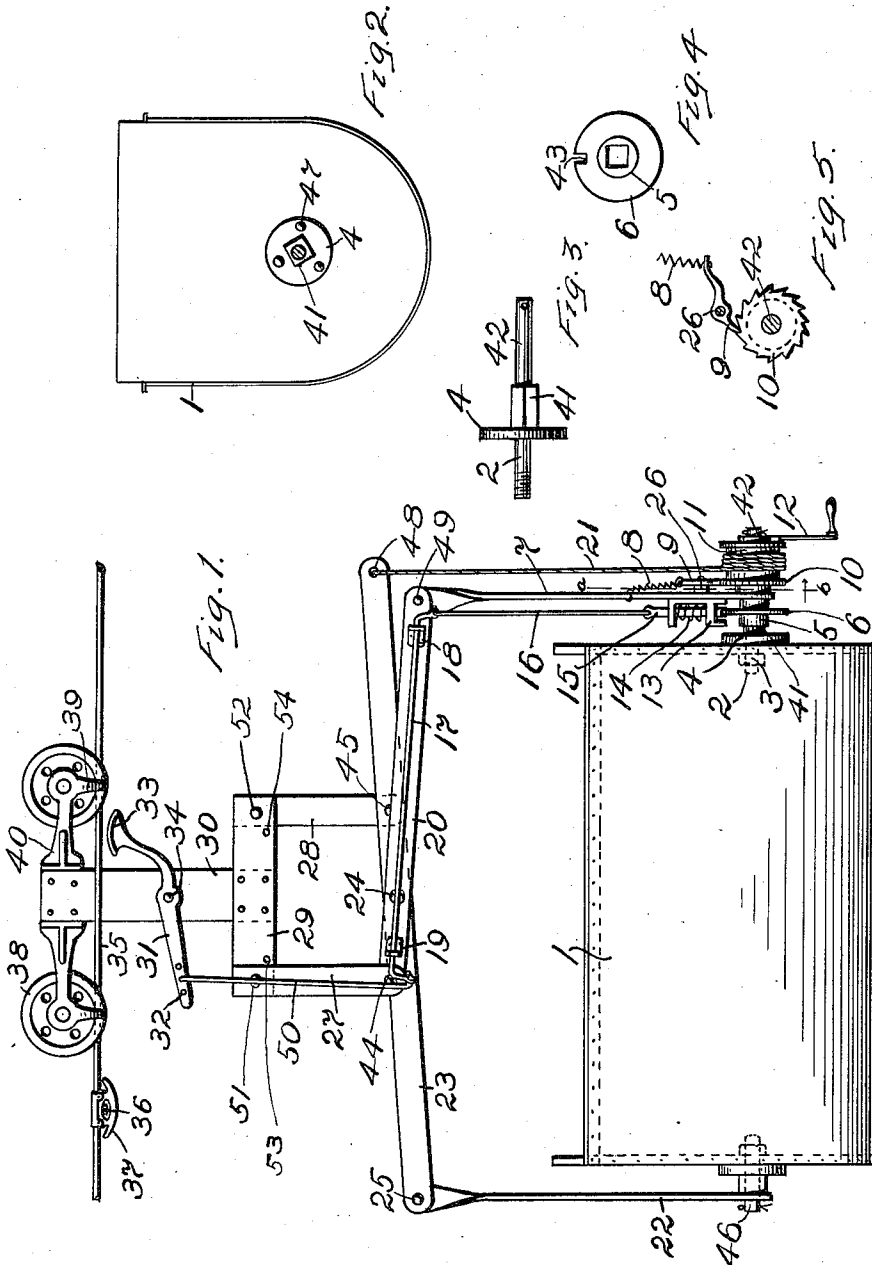


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CARRIER.  
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1,022,687.

Patented Apr. 9, 1912.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## CARRIER.

1,022,687.

Specification of Letters Patent.

Patented Apr. 9, 1912.

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*To all whom it may concern:*

Be it known that I, GUNDER G. MANDT, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Carriers, of which the following is a specification.

My invention relates to improvements in carriers, and the object of my improvements is to provide a practical and convenient overhead rolling carrier for litter or other materials, adapted to be dumped automatically at a desired location, and whose dumping-bucket may be elevated or lowered in use. This object I have accomplished by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of the complete apparatus. Fig. 2 is an end elevation of the dumping-bucket. Fig. 3 is an enlarged detail elevation of the spindle which carries the ratchet-wheel and winding-drum. Fig. 4 is an end elevation of the indented disk secured on the squared portion of said spindle. Fig. 5 is an end elevation of the ratchet-wheel and resiliently controlled pawl, taken on a section of said spindle shown on the line *a-b* in Fig. 1.

Similar reference numerals designate corresponding parts throughout the several views.

The dumping-bucket 1 is suspended from a carriage comprising brackets 40 on an upright 30 containing the grooved wheels 38 adapted to ride upon a suspended overhead wire or cable 35. The brackets 40 are provided with projections 39 extending obliquely downwardly and outwardly and which are designed to prevent a wheel 38 from dropping away from the wire or cable 35 in case it should accidentally run off therefrom. The upright, or rather depending-body 30 sustains a fixed longitudinal bar 29 by the middle, and the hangers 27 and 28 depend from the opposite ends of the latter, being pivoted thereto on pintles 51 and 52, with studs 53 and 54 on the bar 29 near the inner sides of said hangers to serve as stops therefor.

The rocking-beams 23 and 20 are pivoted together on a bolt 24 at a location intermediate between the lower ends of the said hangers. The left-hand end of the rocking-body 20 is pivoted to the lower end of the hanger 27

by means of a pintle 44, while the rocking-body 23 is pivoted at a point intermediate between its ends to the lower end of the hanger 28 on a pintle 45. A bearing pintle 46 is secured to the middle of the left-hand end of the bucket 1, and a hanger 22 connects said pintle with the pintle 25 in the left-hand end of the rocking-body 23. On the opposite or right-hand end of said bucket in the same relative location a bearing-pintle 42 is secured in a bearing-opening in that end by a nut 3 on its threaded end 2 and by bolts or rivets 47 as shown in Fig. 2, passed through an integral disk 4. The intermediate portion of said pintle is squared at 41 to receive fixedly the hub 5 of a disk 6, the latter having an indentation or groove 43 on its circumferential edge. Adjacent to said hub, just outside, the lower end of the hanger 7 is pivotally mounted, the upper end of said hanger being pivotally connected with the right-hand end of the rocking-body 20 by a pintle 49. A winding-drum 11 and a ratchet-wheel 10 integral therewith on one side are rotatably mounted on the outer end of said spindle or pintle 42, the drum being provided with a crank 12, and the ratchet-wheel with a coacting pawl 9 controlled by a spring 8 to keep it engaged with the teeth of the wheel. The pawl is pivoted on a stud 26 projecting from the right-hand side of the hanger 7, and the upper end of said spring is secured to said hanger. A cable 21 is secured to and wound about said winding-drum 11, with its other end secured in the eye 48 in the right-hand end of the rocking-body 23.

A trip-lever 31 is medially pivoted to the hanger 30 on a stud 34, and its upwardly-directed right-hand end 33 has its upper edge of convex form and located so as to engage and be pushed down by a downwardly-directed convex stop 37 adjustably secured to the overhead wire or cable 35 by means of a thumb-screw or clamp-nut 36. The left-hand end of the lever 31 is provided with a plurality of longitudinally alined bearing-openings 32 adapted to adjustably singly receive pivotally the upper end of a depending link 50, the lower bent end of the latter being pivotally connected to the end of a short crank on the left-hand end of a rock-shaft 17 which is set to rock in bearing-brackets 18 and 19 projecting from the rocking-body 20. A link 16 is pivotally connect-

ed between a short crank on the right-hand end of the rock-shaft 17 and the upper end of a slidable detent 15, the latter movable vertically in alined bearing-orifices in brackets on a body 13 secured to the hanger 7. A  
 5 coiled spring 14 secured to said detent and bearing against one of said brackets aids in retaining the point of the detent in the groove or indentation 43 in the edge of the  
 16 disk 6, as well as to keep the above described parts shifted to retain the upper arm of the trip-lever 31 in its upper position ready to contact with the stop 37.

When it is desired to fill the bucket with  
 15 litter or other materials it may be lowered sufficiently for the purpose by means of the winding-drum 11, whose rotation causes the cable 21 to unreeve aided by the weight of the bucket, and the swinging of the rocking-  
 20 bodies 23 and 20. The bucket is elevated by rotating the drum in a reverse direction. When the carriage 40 has been propelled along the overhead cable 35, the contact-end 33 of the trip-lever 31 contacts with the  
 25 lower edge of the stop 37 and is forced down sufficiently to cause the connections to move to lift the detent 15, removing the point of the latter from the groove 43 in the disk 6. The bucket 1 then automatically turns and  
 30 dumps itself in the receptacle placed thereunder.

It will be seen that the process of raising or lowering the bucket as well as dumping it at a desired location is efficient, that the  
 35 clearance of the movable parts from the bucket opening is large and ample, and that the parts are of simple construction and easily accessible for use or repairs.

Having described my invention, what I  
 40 claim as new, and desire to secure by Letters Patent, is:

1. In combination, means of transportation having depending pivoted hangers, rock-arms pivoted to each other between  
 45 said hangers, one of said rock-arms being pivoted to one hanger and the other rock-arm to the other hanger, a tiltable bucket, a linking-connection between one of said rock-arms and said bucket, a stud projecting from  
 50 the opposite side of said bucket, an indented body fixed to said stud, a detent detachably engaging the indentation therein, means for yieldingly retaining said detent in said indentation, a linking-connection between said  
 55 stud and the other rock-arm, and means adapted to move the first-mentioned rock-arm to likewise shift the other rock-arm and raise or lower said bucket as desired.

2. In combination, a carriage, said carriage having a trip-lever pivoted thereto,  
 60 rock-arms pivoted together and each separately pivotally connected to said carriage, a tiltable bucket suspended from said rock-arms by linking-connections on opposite  
 65 sides thereof, engaging-means on said

bucket, detachable connections between said trip-lever and said engaging-means adapted to release said bucket when the trip-lever is tripped, and means for shifting said rock-arms to raise or lower said bucket.

3. In combination, a carriage, said carriage having a trip-lever pivoted thereto, rock-arms pivoted together and each separately pivotally connected to said carriage, a tiltable bucket suspended from said rock-arms by linking-connections, an indented  
 75 disk secured to said bucket at the pivotal connection of one of said linking-connections therewith, bearings on the last-mentioned linking-connection, a slidable detent in said bearings adapted to engage detachably the indentation in said disk, means for yieldingly retaining said detent in engagement with said indentation, operative  
 80 connections between the said trip-lever and said detent adapted to detach the latter from said disk when said lever is tripped, and means for shifting said rock-arms to raise or lower said bucket as desired.

4. In combination, a carriage, said carriage having a trip-lever pivoted thereto, rock-arms pivoted together and each separately pivotally connected to said carriage, a tiltable bucket suspended from said rock-arms by linking-connections, an indented  
 95 disk secured to said bucket at the pivotal connection of one of said linking-connections therewith, bearings on the last-mentioned linking-connection, a slidable detent in said bearings adapted to detachably engage the indentation in said disk, means  
 100 for yieldingly retaining said detent in engagement with its seat in said disk, a rock-shaft mounted on one of said rock-arms and having cranks at its opposite ends, and linking-connections between said trip-lever and one of said cranks and between said detent and the other of said cranks adapted to detach said detent from its seat in said disk  
 105 when said trip-lever has been tripped.

5. In combination, a carriage, said carriage having a trip-lever pivoted thereto, rock-arms pivoted together and each separately pivotally connected to said carriage, a tiltable bucket having outwardly-projecting  
 115 studs on its opposite sides, linking-connections pivotally connected between said studs and the adjacent-rock-arms, engaging-means on one of said studs, detachable connections between said engaging-means and said trip-lever adapted to become detached from the engaging-means when said lever is tripped, a winding-drum with an integral  
 120 ratchet-wheel on one side both rotatably mounted on the stud carrying said engaging means, a cable secured to and wound about said drum and connected with one of said rock-arms, and a guard-pawl movably engaging the teeth of said ratchet-wheel.

6. In combination, a carriage, said car- 130

riage having a trip-lever pivoted thereto, rock-arms pivoted together and each separately pivotally connected to said carriage, a tiltable bucket having outwardly-projecting studs on its opposite sides, linking-connections pivotally connected between said studs and the adjacent rock-arms, an indented disk fixed concentrically to one of said studs, bearings on the adjacent linking-connection, a slidable detent in said bearings adapted to detachably engage the indented seat in said disk, means for yieldingly retaining said detent in engagement with its seat in said disk, a rock-shaft mounted longitudinally along one of said rock-arms and having cranks at its opposite ends, linking-connections between said trip-lever and one of said cranks and between said detent and the other of said cranks adapted to detach said detent from its said seat in said disk when said trip-lever has been tripped, a winding-drum with a ratchet-wheel integral with one side thereof and both rotatably mounted on the same stud as the said disk is secured on, a cable secured to and wound about said drum and also connected with one of said rock-arms and adapted when rotated in either direction to move said rock-arm appropriately to shift both rock-arms and raise or lower said bucket, and a guard-pawl movably engaging the teeth of said ratchet-wheel and pivotally connected to the adjacent linking-connection between the said drum stud-shaft and said rock-arm connected therewith.

Signed at Waterloo, Iowa, this 20th day of Feb. 1911.

GUNDER G. MANDT.

Witnesses:  
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O. D. YOUNG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."