

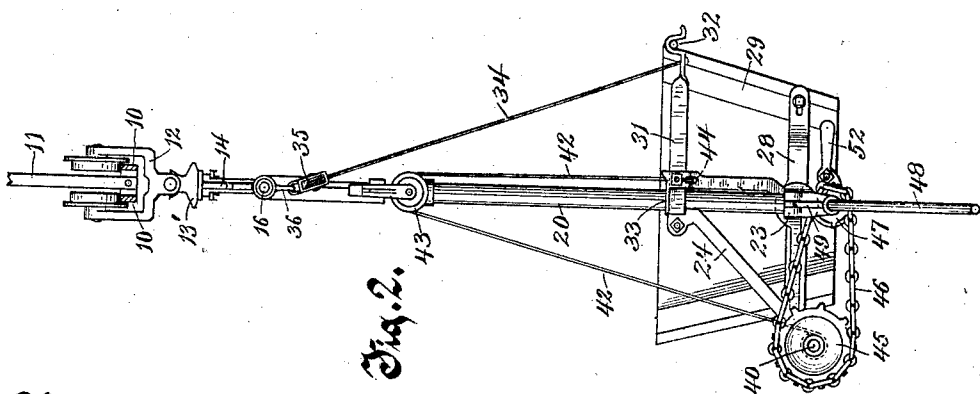
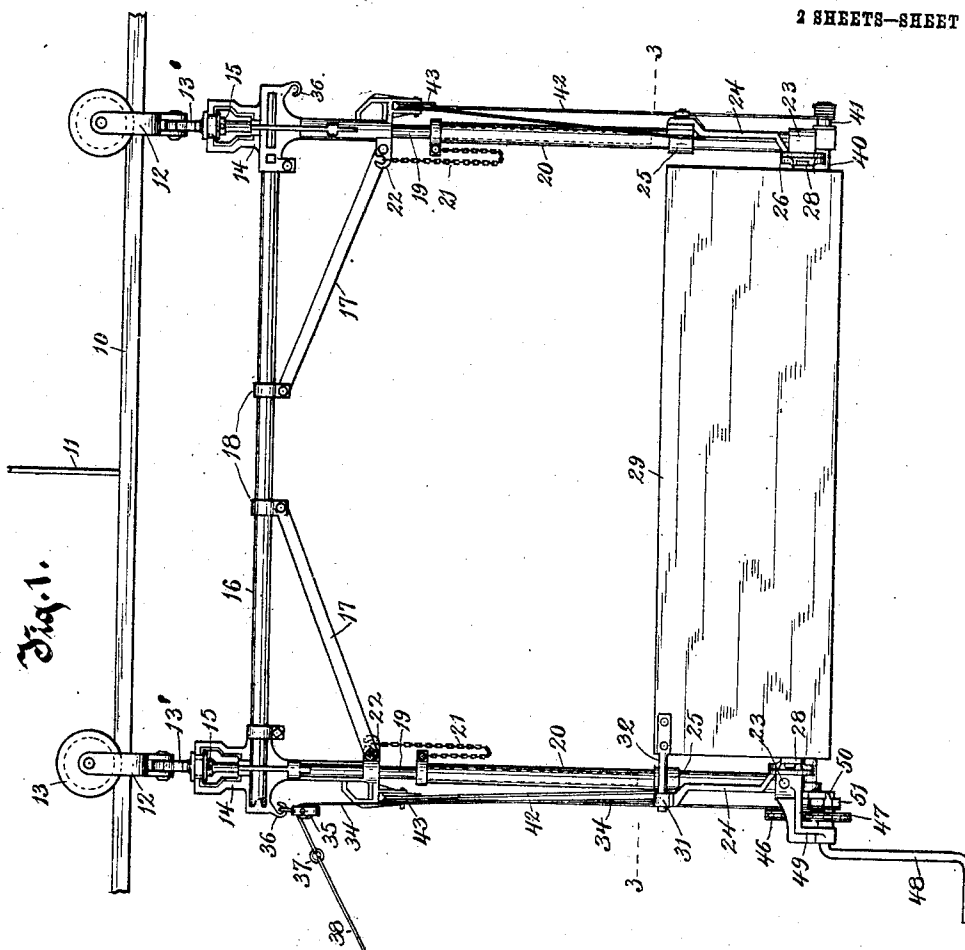
No. 837,944.

PATENTED DEC. 11, 1906.

W. MITCHELL.
CARRIER.

APPLICATION FILED FEB. 3, 1906.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

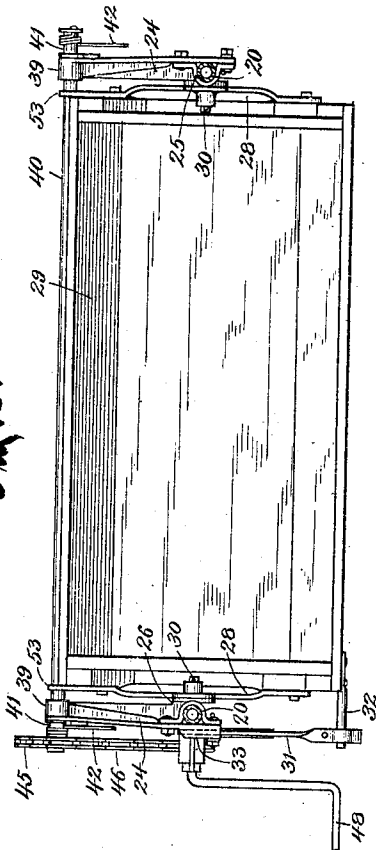


Fig. 5.

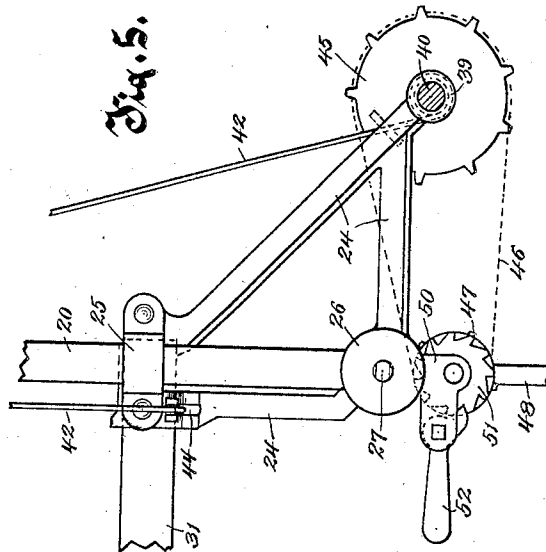


Fig. 6.

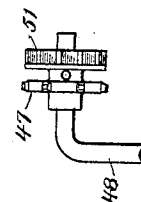
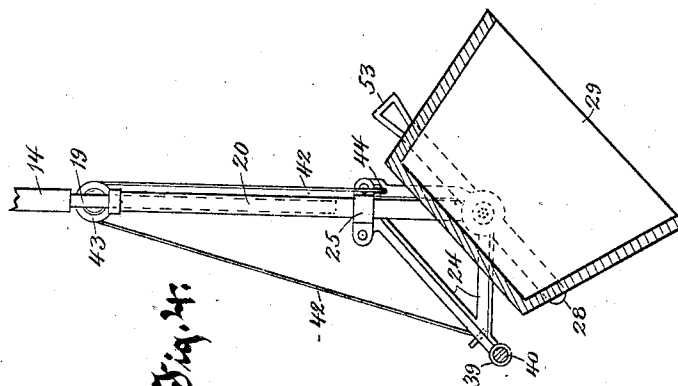


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CARRIER.

No. 837,944.

Specification of Letters Patent.

Patented Dec. 11, 1906.

Application filed February 3, 1906. Serial No. 299,301.

To all whom it may concern:

Be it known that I, WILLIAM MITCHELL, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Carriers, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to new and useful improvements in carriers, and has for its object to provide a carrier which will be capable of being easily raised or lowered for loading and which may be quickly discharged from a distance.

The invention also has as its object to improve upon details of construction of a carrier of this type.

With the above and other objects in view the invention consists in the carrier herein shown and claimed, its parts and combinations of parts, and all equivalents.

Referring to the accompanying drawings, in which like characters of reference indicate the same parts in the several views, Figure 1 is a front elevation of a carrier constructed in accordance with this invention. Fig. 2 is an end elevation thereof. Fig. 3 is a sectional plan view thereof, taken on the plane of line 3-3 of Fig. 1. Fig. 4 is a transverse sectional view thereof, showing the box in its dumped position. Fig. 5 is a sectional elevation of the box-bracket which carries the winding mechanism, the box and its pivot-bars being removed; and Fig. 6 is a detail plan view of the sprocket and ratchet wheel for the winding mechanism.

In the drawings, 10 represents a track of any suitable construction, preferably a pair of parallel rails, as here shown, suspended from above by track-hangers 11, and 12 represents a pair of carrier-hangers, which are of a yoke shape, with flanged rollers 13 journaled in their arms and riding on the rails of track 10. Each of the carrier-hangers 12 has a stem 13' pivoted thereto, so as to have a swing laterally of the direction of the track, and carrier-brackets 14 are swivelly hung upon the stems 13', having bearing-yokes embracing the stems between an upper shoulder thereof and a washer held in place by a pin 15, the lower end of the stems being mounted in sockets in the bottom of the bearing-yokes. The two carrier-brackets 14 are connected to the ends of a cross-bar 16, which is clamped between split portions of said brackets to constitute a rigid frame.

The lower tubular ends of said brackets are connected, by means of braces 17, with clips 18 on the cross-bar 16 to add to the rigidity of the frame. Vertical rods 19 are fastened in the downwardly-extending tubular portions of the carrier-brackets 14 and are clamped in place between split portions thereof and form guides for tubular sleeves 20, which fit thereon so as to slide up and down, the extent of downward movement being limited by chains 21, connected with the upper ends of the sleeves and with hooks 22 on the carrier-brackets 14.

At their lower ends the sleeves 20 are tightly clamped within sockets 23 at the lower ends of triangular-shaped box-brackets 24, and they are also tightly clamped by means of clips 25 at the upper ends of said box-brackets. Each of the box-brackets 24 has a circular bearing-plate 26 at the side of the socket 23, with a pivot-pin 27 projecting from the center thereof, and a pivot-bar 28 on each end of a trough-shaped box 29 near the lower part thereof has at its intermediate portion a corresponding disk-shaped bearing-surface to fit against the bearing-plate 26, said pivot-bar being pivotally mounted on the pivot-pin 27 and held against disengagement therefrom by means of a lock-pin 30. The box 29 is thus pivotally mounted to the box-brackets at each end, considerably below its center and slightly nearer to one side, so that its tendency is to swing to the dumping position, as shown in Fig. 4, to discharge its contents. However, a catch 31 is pivoted to one of the box-brackets 24 and has a hook-shaped end adapted to engage a projecting catch-pin 32 on that end of the box to hold the box in its upright position against its tendency to swing, the catch extending beyond its pivot and engaging a limiting-shoulder 33 on the box-bracket to keep it in its extended position, so as to engage the catch-pin when the box is returned to its upright position after having been dumped. In order that the catch 31 may be operated at a distance, a rope or cord 34 is connected thereto and passes over a pulley 35, which is hung from a hook 36 on the carrier-bracket, there being a ring 37 at the end of the rope 34, which may be engaged by any suitable means, such as another rope 38, for pulling up upon the catch and disengaging it for dumping the box.

The box-brackets 24 extend rearwardly from the tubes 20 to form bearings 39 be-

yond the box 29, in which bearings is journaled a shaft 40, carrying spools 41 at each end. Around the spools are wound ropes or cables 42, passing over pulleys 43 in bracket extensions on the lower ends of the carrier-brackets 14 and connecting with the box-brackets 24 by passing through openings 44 thereof and being bound to the bolt which constitutes the pivotal connection for the catch 31 on one box-bracket and to a corresponding bolt on the other box-bracket. The shaft 40 also has a sprocket-wheel 45 fixed thereon, which is connected, by means of a sprocket-chain 46, with a smaller sprocket-wheel 47 on the shaft of a hand-crank 48. The hand-crank is journaled between a pair of depending brackets 49 and 50, respectively, on the lower portion of one of the box-brackets 24 and also has mounted on it, preferably integral with the sprocket-wheel 47, a ratchet-wheel 51, engaged by a gravity-pawl 52, which is pivoted on the bracket 50. By turning the crank-handle 48 the sprocket-wheel 47 turns the shaft 40 by means of the sprocket-chain 46 and sprocket-wheel 45, and the spools 41 on said shaft wind up the ropes or cables 42, so as to pull the sleeves 20 upwardly on the rods 19, and thereby lift the box 29 uniformly at both ends. The gravity-pawl 52 dropping in the teeth of the ratchet-wheel 51 prevents the box from lowering again when the crank-handle is released, and in order that the box should be lowered it is first necessary to swing the gravity-pawl 52, by means of its projecting weighted handle, out of engagement with the ratchet-wheel, when the box may be lowered by allowing the ropes or cables 42 to unwind by the turning of the crank-handle in the opposite direction.

The pivot-bars 28 have extensions 53, which strike upon the shaft 40 when the box is in its upright position and prevent the box tilting rearwardly.

In operation the carrier is moved on the track to the place where it is desired to load it, and by releasing the gravity-pawl 52 and turning the crank-handle 48 the box is lowered to a convenient position for loading. When the box is loaded, the crank-handle 48 is turned to wind up the cables or cords 42, thus lifting the box, which is held in its elevated position by means of the gravity-pawl and is free to be moved along the track to the place of dumping. The dumping operation may be performed at a distance by pulling upon the rope 38 and causing the rope 34, with which it is connected, to lift the catch 31, and thus release the catch-pin 32 and permit the weight of the box and its contents to swing it forwardly and downwardly upon the pivotal connections to the position shown in Fig. 4, the contents being emptied therefrom. The carrier may be returned with the box in its dumped position and the box re-

stored to its upright position at the point of loading, or the box may be swung to its upright position immediately, the catch 32 being in position to again engage it when it is so returned.

What I claim as my invention is—

1. In a carrier, a suspended traveling carrier-frame, rods depending therefrom, sleeves slidably fitting on the rods, brackets carried by the sleeves, a box pivotally mounted between the brackets, a catch pivoted to one of the brackets, a shoulder on the bracket for engaging the catch and holding it in an extended position, and a catch-pin on the box to be engaged by the catch in its extended position.

2. In a carrier, a suspended traveling carrier-frame, rods depending therefrom, sleeves slidably mounted on the rods, brackets carried by the sleeves, a box mounted on the brackets, a shaft journaled in the brackets, cables wound upon the shaft and having connection with the carrier-frame, and means for turning the shaft whereby the cables may be wound or unwound from the shaft to raise or lower the box.

3. In a carrier, a suspended traveling carrier-frame, rods depending therefrom, sleeves slidably mounted on the rods, brackets carried by the sleeves, a box mounted on the brackets, a shaft journaled in the brackets, cables wound upon the shaft, pulleys on the carrier-frame around which the cables pass, said cables having connection with the brackets, a sprocket-wheel on the shaft, a crank-handle journaled in one of the brackets, a sprocket-wheel thereon, a chain connecting the sprocket-wheel of the crank-handle and the sprocket-wheel of the shaft, a ratchet-wheel on the crank-handle, and a pawl for engaging the ratchet-wheel.

4. In a carrier, a suspended traveling carrier-frame, rods depending therefrom, sleeves slidably mounted on the rods, brackets carried by the sleeves, pivot-bars pivotally mounted on the brackets, a box to which the pivot-bars are secured, a shaft journaled in the brackets, cables wound on the shaft, pulleys on the carrier-frame over which the cables pass, said cables connecting with the brackets, and projections on the pivot-bars adapted to engage the shaft in the upright position of the box.

5. In a carrier, a pair of hangers having rollers to travel on a track, stems pivotally mounted to the hangers, carrier-brackets having yokes swivelly mounted on the intermediate portions of the stems and forming sockets to receive the ends of the stems, means for connecting the carrier-brackets, and a box suspended from said carrier-brackets.

6. In a carrier, a pair of hangers having rollers to travel on a track, stems pivotally mounted on the hangers, carrier-brackets

swivelly connected to the stems, a cross-bar clamped by the carrier-brackets and forming a connection between them, depending rods clamped within tubular projections of the brackets, braces connecting said tubular projections of the brackets with the cross-bar, sleeves slidably mounted on the rods, and a box carried by the sleeves.

7. In a carrier, a pair of hangers having rollers to travel on a track, stems pivotally mounted on the hangers, carrier-brackets having swivel-yokes swivelly mounted on the intermediate portions of the stems and forming sockets to receive the ends of the stems, a cross-bar clamped by the carrier-brackets and forming a connection therebetween, depending rods clamped within tubular projections on the carrier-brackets, braces connecting the tubular projections of the carrier-brackets with the cross-bar, sleeves slidably mounted on the rods, chains connecting the sleeves with the tubular projections of the carrier-brackets, box-brackets clamped upon the lower ends of the sleeves, pivot-bars pivotally mounted on said brackets, a box connected to said pivot-bars near its lower portion and to one side of its center, a shaft journaled in the box-brackets, cables wound upon

the shaft, pulleys mounted in bracket extensions of the carrier-brackets and around which the cables pass, said cables being passed through openings in the box-brackets and secured to bolts thereof, a sprocket-wheel carried by the shaft, a crank-handle journaled in a pair of brackets depending from one of the box-brackets, a sprocket-wheel and ratchet-wheel carried by said handle, a chain connecting the two sprocket-wheels, a gravity-pawl for engaging the ratchet-wheel, a catch pivoted to one of the box-brackets, a shoulder on said box-bracket to be engaged by the catch, a hook on the catch, a catch-pin on the box to be engaged by the hook of the catch, a pulley suspended from one of the carrier-brackets, and a rope passing over said pulley and connected to the catch whereby the catch may be disengaged from the catch-pin to release the box and permit it to dump by its own weight.

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

WILLIAM MITCHELL.

Witnesses:

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ANNA F. SCHMIDTBAUER.