No. 873,380. PATENTED DEC. 10, 1907.

K. LEIDAL & M. ULRING.

CARRIER.

APPLICATION FILED JUNE 28, 1907.

Fig. 1

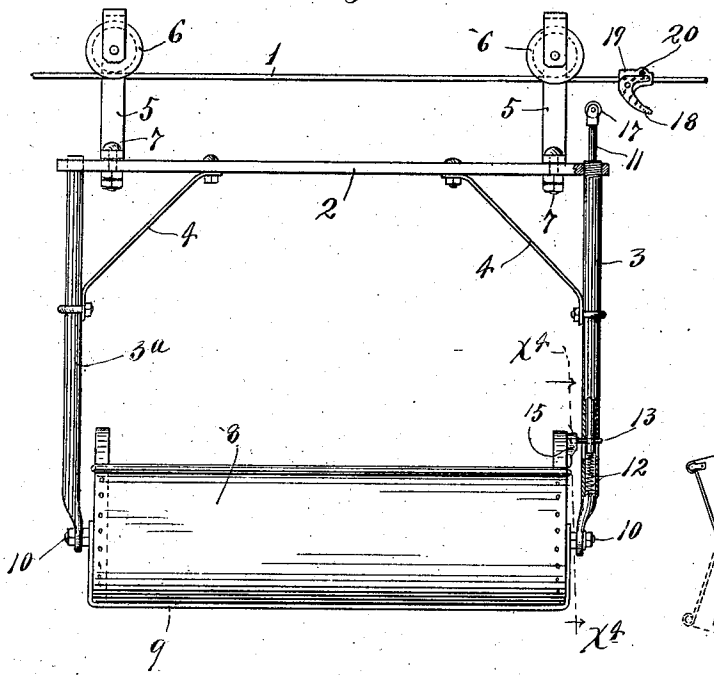


Fig. 2

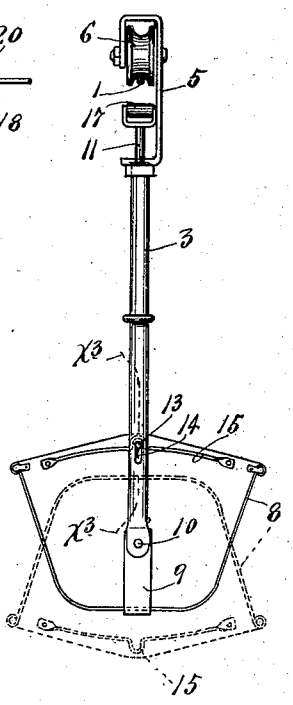


Fig. 3

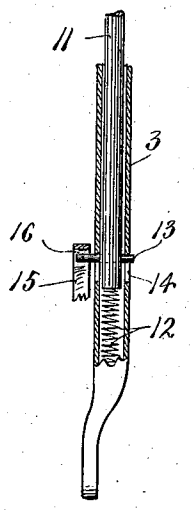
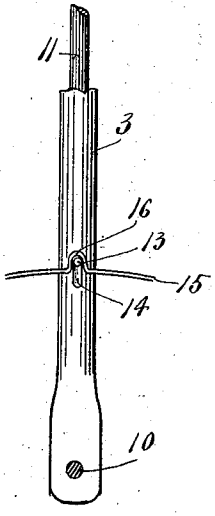


Fig. 4



Witnesses.
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UNITED STATES PATENT OFFICE.

KNUTE LEIDAL AND MARTIN ULRING, OF WEBSTER, MINNESOTA.

CARRIER.

No. 873,380. Specification of Letters Patent. Patented Dec. 10, 1907.

Application filed June 28, 1907. Serial No. 381,369.

To all whom it may concern:

Be it known that we, KNUTE LEIDAL and MARTIN ULRING, citizens of the United States, residing at Webster, in the county of Rice and State of Minnesota, have invented certain new and useful Improvements in Carriers; and we 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.

Our invention relates to litter carriers, particularly to those adapted for use in connection with stables or barns for carrying the litter therefrom, and dumping the same at suitable distant points outside of the stable or barn.

The invention relates particularly to the improvement of the lock mechanism for holding the so-called bucket or carrier receptacle in an operative position with respect to the carrier frame on which it is pivotally mounted.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Referring to the drawings; Figure 1 is a view in side elevation showing the improved carrier mounted on a supporting wire or cable, with some parts broken away. Fig. 2 is a view in end elevation of the parts shown in Fig. 1, but with some parts shown in dotted positions, and other parts removed. Fig. 3 is a detail view, principally in vertical section, taken on the line x^3 x^3 of Fig. 2; and Fig. 4 is a detail view on an enlarged scale, taken on the line x^4 x^4 of Fig. 1.

The numeral 1 indicates a heavy wire or cable which constitutes the carrier track, and which may be supported in the customary or in any suitable way, not shown.

The carrier frame is approximately U-shaped in form, comprising a horizontal bar 2, and a pair of depending tubular legs 3 and 3^a having screw-threaded engagement with the ends of said bar 2. The bar 2 and legs 3 and 3^a are also connected together by braces 4. To the upper side of the bar 2 is secured a pair of upwardly extending angular wheel brackets 5 in which are journaled grooved track wheels 6 that run upon the overhead wire or cable 1. The brackets 5 are pivotally connected to the upper side of said bar 2 by short nutted bolts 7, which permit said brackets 5 and wheels 6 to oscillate slightly, as required when the device is running around curved portions of the track.

The bucket or carrier receptacle 8 is pivotally supported by the depending tubular legs 3 and 3^a of the carrier frame, and to this end, the bucket 8 is, as shown, provided with a reinforcing strap 9. The intermediate portion of said strap 9 underlies the bottom of the bucket 8, the ends of which are turned up at right angles and secured to the sides of said bucket 8. Secured near the ends of said strap 9 are trunnions 10 that are journaled in the flattened lower ends of said tubular legs 3 and 3^a of the carrier frame. The trunnions 10 are located below the center of gravity of the bucket 8 so that the latter, when not locked to the carrier frame, will turn upside down into a dumping position, as shown by dotted lines in Fig. 2. Mounted to work telescopically within the said tubular leg 3 is a trip rod 11. A coiled spring 12, compressed between the lower end of said trip rod 11 and the bottom of the tubular leg 3, normally presses said trip rod 11 upward. The lower end of said trip rod 11 is provided near its bottom end with a transversely projecting pin 13, the ends of said pin working through a pair of alined slots 14 cut in the tubular leg 3. Secured to the side of the bucket 8, adjacent to the tubular leg 3, is a cam acting lock bar 15 provided at its intermediate portion with a notch 16 for engagement with the inwardly projecting end of the pin 13, to lock the bucket in its operative position. The upper projecting end of the trip rod 11 is provided with a roller 17 which constitutes an anti-friction head for engagement with a tripping abutment, which is supported from the track 1.

The tripping abutment may be of any suitable construction. The construction shown is in the form of a cam arm 18 that is pivoted to the side of a block 19 secured to the track 1. The pin 13 working in the slots 14, not only limits the upward movement of the trip rod 11, but prevents the trip rod 11 from turning, so that the roller 17 will always be in position to be engaged by the cam arm 18.

When the litter carrier is traveling toward the right, with reference to Fig. 1, the roller 17 of the trip rod 11 will strike the cam arm 18 of the tripping abutment. On account of the stop pin 20 on the block 19, the cam arm 18 will force the trip rod 11 down against the tension of the spring 12, thereby releasing the pin 13 from the notch 16, at which time the

bucket 8 will be unlocked from the carrier frame, and the bucket will automatically turn upside down into the position indicated by dotted lines in Fig. 2. In turning the bucket 8 again into its operative position, the pin 13 will strike the cam bar 15, and on account of the ends of said bar 15 being further from the pivot point of the bucket 8 than the notch 16, the said cam bar 15 will cam the trip rod 11 into its lowermost position against the tension of the spring 12, to permit the pin 13 to enter the notch 16. As is evident, when the carrier frame is moving toward the left, with respect to Fig. 1, the cam arm 18 will swing out of the way to permit the roller 17 of the trip rod 11 to pass, without unlocking the bucket 8 from the cam frame.

What I claim is:—

1. The combination with an overhead track, of a carrier frame having wheels arranged to travel on said track, a bucket pivotally mounted on said frame, an upwardly spring-pressed vertically movable trip rod mounted on said frame for locking said bucket to said frame in its operative position, and a tripping abutment on said track directly engageable with the head of said trip rod, substantially as described.

2. The combination with an overhead track, of a carrier frame having wheels arranged to travel on said track and provided with a vertically extended tubular leg, an upwardly spring pressed trip rod mounted to be guided by and to work telscopically within said tubular leg for locking said bucket to said frame in its operative position, and a tripping abutment on said track directly engageable with the head of said trip rod, substantially as described.

3. The combination with an overhead track, of a carrier frame comprising a horizontal bar and a pair of depending legs secured thereto, one of said legs being tubular in form, wheels secured to said horizontal bar and arranged to travel on said track, a bucket pivotally mounted on the lower ends of said depending legs, a notched latch bar carried by said bucket, a trip rod mounted to be guided by and to work telescopically within said tubular leg, a spring mounted in the lower end of said leg and compressed between said lower end and the lower end of said trip rod, a lateral projection on said trip rod working through a slot formed in said tubular leg for engagement with said notched bar to lock said bucket in its operative position, and a tripping abutment on said track directly engageable with the head of said trip rod, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

KNUTE LEIDAL.
MARTIN ULRING.

Witnesses:
A. T. WRIGHT,
P. J. WAGNER.