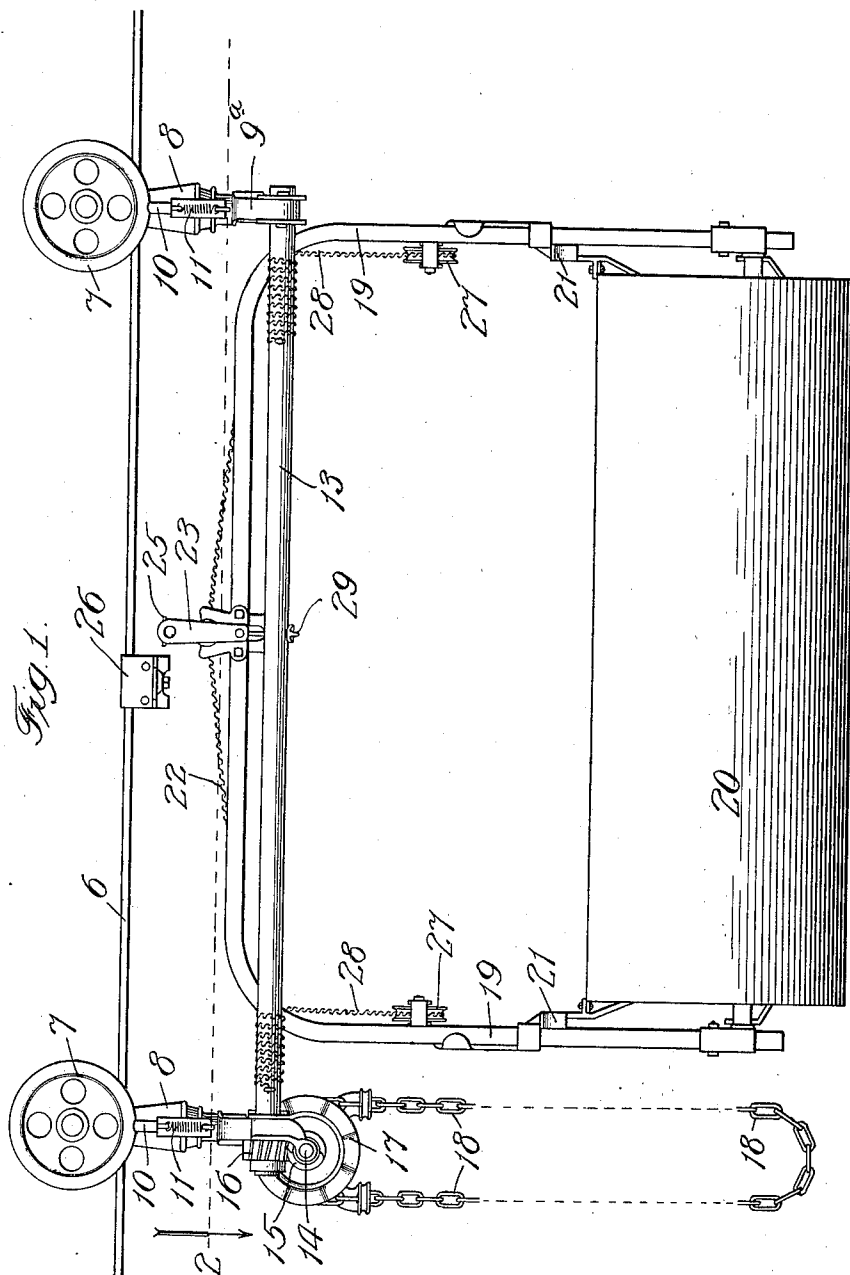


H. L. FERRIS.
FEED AND LITTER CARRIER.
APPLICATION FILED DEC. 10, 1910.

1,029,984.

Patented June 18, 1912.

2 SHEETS-SHEET 1.



Witnesses:
Edw. C. Gaylord,
Chas. H. Buell.

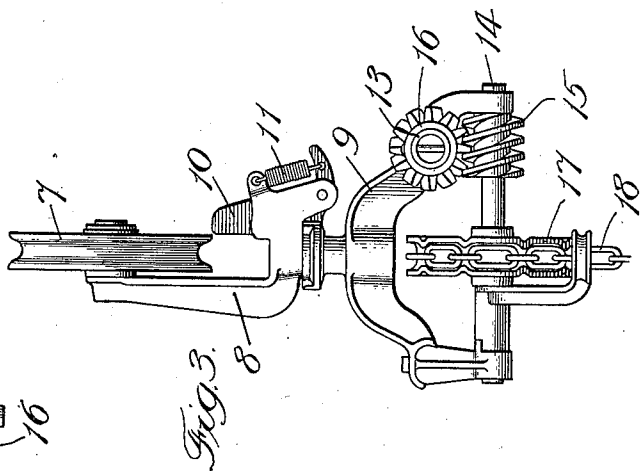
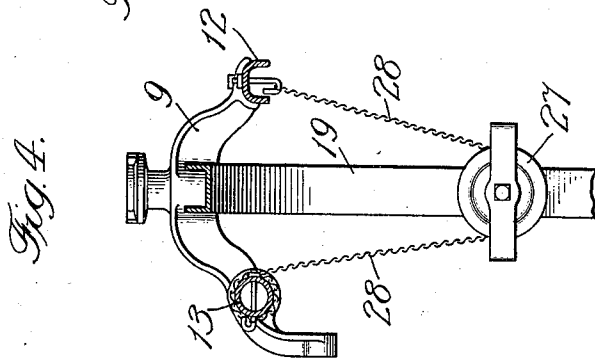
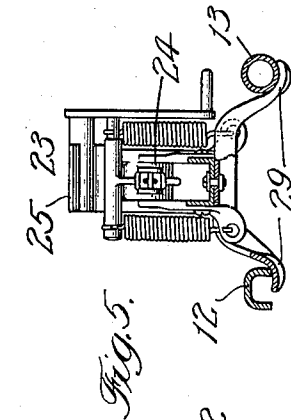
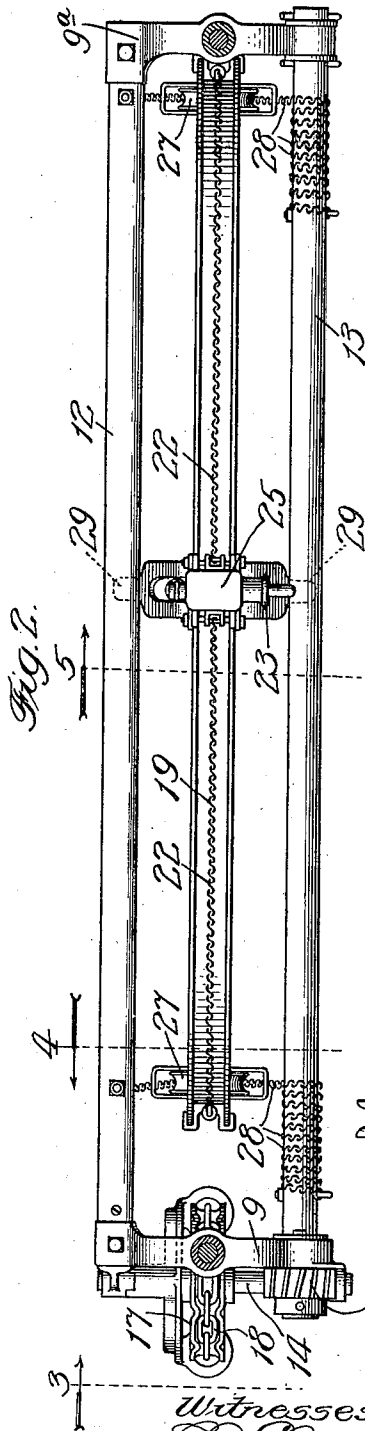
Inventor:
Henry L. Ferris,
By Depuefort, Lee, Chittor & Miller
Attys. #

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2 SHEETS-SHEET 2.



Witnesses:
Edw. D. Hayford.
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Inventor:
Henry L. Ferris,
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UNITED STATES PATENT OFFICE.

HENRY L. FERRIS, OF HARVARD, ILLINOIS, ASSIGNOR TO HUNT, HELM, FERRIS & COMPANY, A CORPORATION OF ILLINOIS.

FEED AND LITTER CARRIER.

1,029,984.

Specification of Letters Patent.

Patented June 18, 1912.

Application filed December 10, 1910. Serial No. 596,614.

To all whom it may concern:

Be it known that I, HENRY L. FERRIS, a citizen of the United States, residing at Harvard, in the county of McHenry and State of Illinois, have invented a new and useful Improvement in Feed and Litter Carriers, of which the following is a specification.

Figure 1 is a side elevation of my improved device; Fig. 2 is a horizontal section on the line 2 of Fig. 1; Fig. 3 is a detailed end view on the line 3 of Fig. 2; Fig. 4 is a vertical section on the line 4 of Fig. 2 and Fig. 5 is a vertical section on the line 5 of Fig. 2.

Referring to the drawings, 6 is a track upon which run wheels 7 journaled in hangers 8, which are pivotally secured in brackets 9, pawls 10 actuated by springs 11 serving to hold the hangers in their normal position with respect to the brackets and being movable to disengage the hangers from the brackets to permit their rotation in rounding curves in accordance with what is now common practice. The brackets 9 and 9^a are bifurcated, each having a forwardly extending and a rearwardly extending leg. The rearwardly extending legs of the two brackets are connected by a bar 12. The forwardly extending legs of the two brackets form pivotal supports for a rotatable longitudinally extending shaft 13. The legs of the bracket 9 are extended downward below the level of the legs of the bracket 9^a and the downwardly extending portions of the legs carry a transverse shaft 14 having a worm 15 in mesh with the gear 16 and a shaft 13. The transversely extending shaft 14 has rigidly attached to it a sheave 17 over which runs an endless chain 18 through the medium of which the shaft 13 can be rotated.

19 is a U-shaped supporting frame with depending legs between which is pivoted upon trunnions below its center of gravity a tub 20 which is normally held in upright position by latches 21 connected together by chains 22 the upper ends of which are attached to a latch-operating device 23 pivoted at 24 and having an upward extension 25 adapted to engage with a tripping block 26 upon the track 6. The arrangement is such that when the carrier runs along the track, the latch-operating device 23 will strike the tripping block 26 and be swung from the

vertical position so as to tighten the two chains 22 raising the respective latches and releasing the tub.

The U-shaped frame 19 has on each of its legs a sheave 27, over which sheaves run bights 28 of chain or other flexible material, one end of each bight being attached to the rear bar 12, the other end of each bight being attached to the shaft 13.

From the foregoing description of construction it is believed that the method of operation of the device can readily be made apparent. Before filling, the tub is usually lowered by pulling the chain 18 in the requisite direction, thus rotating the shaft 13 so as to elongate the bights 28 which support the tub and thus permit the tub to descend. When the tub has been filled, it is raised by pulling the chain 18 in a contrary direction and the tub rises in an obvious manner, its upward movement being limited by means of a transversely extending stop 29 supported centrally of the U-shaped frame 19 and having projecting ends which engage the underside of the rear bar 12 and shaft 13, respectively. This stop is so positioned that when the tub and its frame reach the upper limit of movement, the latch-operating device is in exactly the proper plane to engage the tripping block on the track.

By this means a carrier having the capacity for easy vertical movement is provided, which can be elevated into a very close proximity to the track and in which the tripping device is of a simple character with no necessary adjustment in accordance with the varying heights of the carrier. It is to be observed that the frame 19 rises between the bars of the frame so as to obtain the full height which it would normally occupy in a carrier without the capacity for vertical movement. In this way great capacity for movement is obtained without any sacrifice of the necessary and desirable compactness of the construction.

I realize that considerable variation is possible in the details of the construction, without departing from the spirit of my invention; therefore I do not intend to limit myself to the specific form herein shown and described.

What I claim as new and desire to secure by Letters Patent, is—

1. The combination with a track and wheels thereon, of a pair of brackets carried

by the wheels, a fixed bar and a rotating shaft carried by the brackets beneath and to the two sides of the track, means for rotating the shaft, a tub-supporting frame and
5 a tub pivoted therein, and means operated by the shaft for elevating the tub-frame between the shaft and bar.

2. In combination a track and a tripping device thereon, a pair of brackets, wheels
10 supporting the brackets and running upon the track, a fixed bar and a rotating shaft parallel therewith connecting the brackets and lying below the level of the track and to the front and rear thereof, a tub-frame, a
15 tub pivoted therein, a latch-operating device secured to the tub-frame and means operated by the rotating shaft for elevating the tub-frame to bring the latch-operating device into engaging relation with the trip-
20 ping device on the track.

3. In combination a pair of brackets, rollers supporting the brackets and a track upon
25 which the rollers run, a bar and a shaft in parallel relation to each other and beneath the track to the front and rear thereof, bights of flexible material adapted to be shortened as the shaft is rotated, a tub-frame, sheaves on the tub-frame below its
30 upper ends, a tub pivoted in the tub-frame whereby as the shaft is rotated the tub-frame will be raised, its upper part passing between the shaft and bar into proximity with the track.

4. In combination a pair of brackets, rollers supporting the brackets and a track upon

which the rollers run, a bar and shaft in parallel relation to each other and beneath the track to the front and rear thereof, bights of flexible material adapted to be
40 shortened as the shaft is rotated, a tub-frame, sheaves on the tub-frame below its upper ends, a tub pivoted in the tub-frame whereby as the shaft is rotated the tub-frame will be raised, its upper part passing
45 between the shaft and bar into proximity with the track, and means for limiting the upward movement of the tub-frame.

5. In combination a tub-frame, a tub pivoted therein, latches for the tub and a latch-operating device carried by the tub-frame,
50 all said parts being movable as a whole, a track, wheels running upon the track, brackets carried by wheels, a bar and a shaft connected by brackets extending longitudinally of and beneath the track, one to each side of
55 the track, bights one end of each of which is attached to the shaft, sheaves on the tub-frame below its upper portion supported by said bights and means for rotating the shaft whereby, by rotating the shaft, the tub-
60 frame and its associated parts can be elevated, the upper part of the tub-frame with the tripping device passing between the shaft and bar into close proximity with the track.

HENRY L. FERRIS.

In presence of—

R. A. HEMENWAY,
R. N. JACOBS.

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