C. F. BROSTROM & F. LANG.

LITTER CARRIER.

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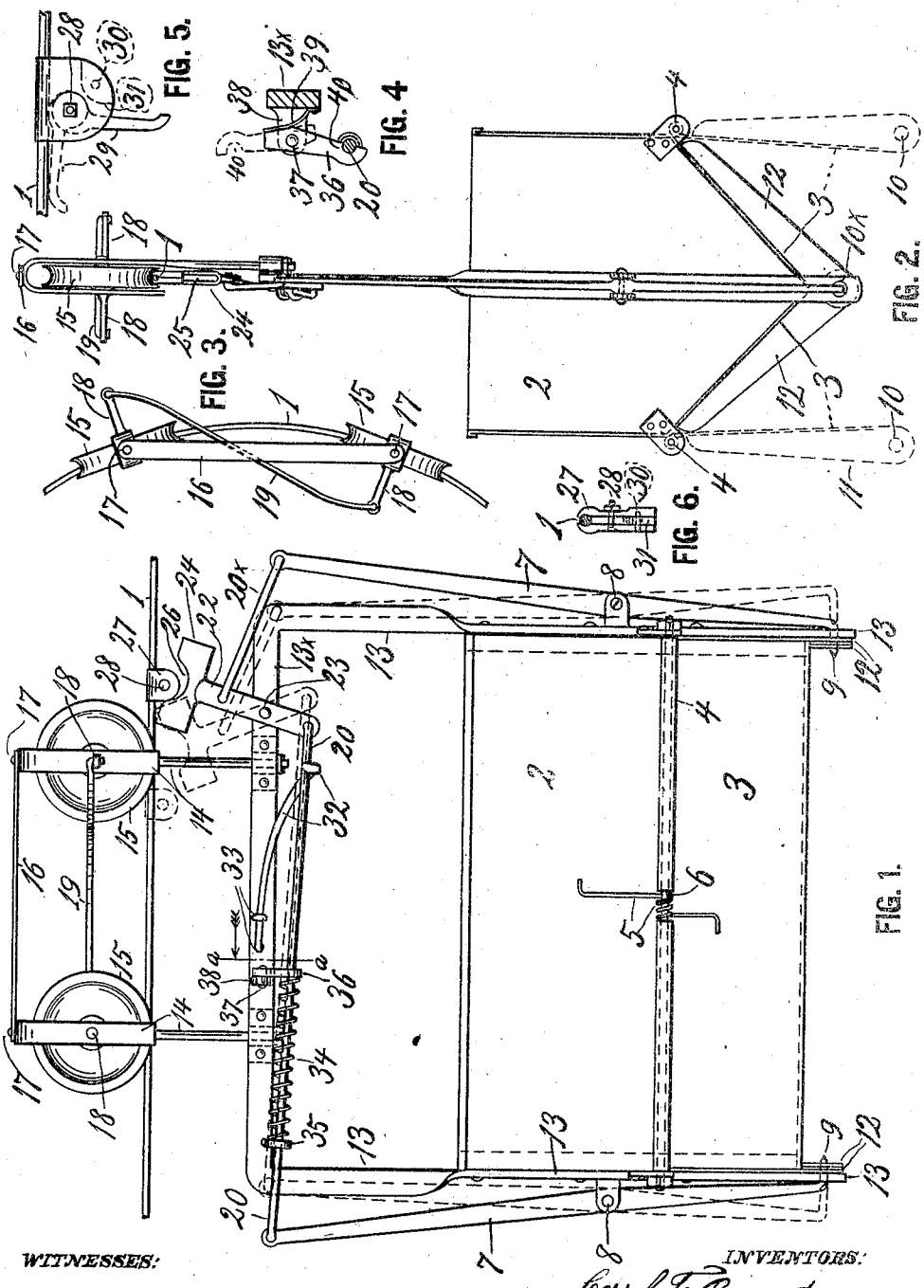
961,712.

Patented June 14, 1910.



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LITTER-CARRIER.

961,712. Specification of Letters Patent. Patented June 14, 1910.

Application filed March 23, 1909. Serial No. 485,155.

To all whom it may concern:

Be it known that we, CARL F. BROSTROM and FRANK LANG, citizens of the United States, residing at Eagle Bend, in the county of Todd and State of Minnesota, have invented a new and useful Litter-Carrier, of which the following is a specification.

Our invention relates to litter carriers but may also be applied to carriers in general, for ore, coal, earth, sand etc., and the object is to improve such carriers as hereinafter set forth and pointed out in the appended claims.

In the accompanying drawing, Figure 1 is a side elevation of our litter-carrier shown as suspended from a track wire or cable. Fig. 2 is an end view of Fig. 1. Fig. 3 is a top view of the track wire and the portion of the device above it in Fig. 1. Fig. 4 is a section on line *a*—*a* in Fig. 1. Fig. 5 is an enlarged and modified side view of the abutment on the track wire or cable that trips the device. Fig. 6 is a left end view of Fig. 5 with the locking cam removed.

Referring to the drawing by reference numerals, 1 designates a track made of wire-rope or of a single wire for the device to travel on and carry litter or other stuff from one place to another.

The device proper comprises a receptacle 2, which is open at the top and has its bottom closed by two inclined wings 3, hinged at 4 to the lower edges of the opposite sides of the receptacle so that they may swing to the open positions shown in dotted lines in Fig. 2 for emptying the receptacle by dumping or dropping its contents out. Each of said wings or bottom sections is normally held closed by a spring 5 placed on the hinge pintle 6 and engaging with one end the wing and with the other end the side of the receptacle. To prevent premature opening of the bottom sections when the receptacle is filled, the latter is at each end provided with a vertical lever 7, pivoted at 8 and having a finger 9 adapted to enter apertures 10 in the end cleats 12 of the bottom sections after passing through apertures $10^{\times}$ in vertical end portions 13 of a bail 13—$13^{\times}$, which is fixed to the ends of the receptacle and has its horizontal bar $13^{\times}$ extending longitudinally and centrally above the receptacle. To said bar $13^{\times}$ are journaled two vertical hangers 14, each with a grooved pulley 15 adapted to ride on the cable 1. The top of the hangers are connected by a horizontal brace 16 having its ends pivoted at 17. The ends of pulley shafts 18 are extended in opposite directions beyond the hangers, and each such end is pivotally secured to the ends of a rod 19 passed diagonally between the two hangers, so that when the track 1 is curved laterally the two pulleys will more readily follow the curve, as shown in Fig. 3.

The hook levers 7 have their upper ends connected by rods 20 and $20^{\times}$ to a trip lever 22, which is pivoted at 23 to the bail and has its upper end provided with a head 24 having a gap 25 for the track wire and transversely thereto a notch 26 for engagement with an abutment 27, which is made in two halves secured on the track wire, partly by a clamping bolt 28 and partly by a cam lever 29 mounted on the bolt between the halves of the abutment. The latter are held in non-rotatable position on the bolt by a pin 30 passed through them at the point where a support 31 holds them apart so as to create a space for the cam between them.

The rod 20 is at all times impelled upwardly by a spring arm 32 fixed at 33 to the bail, whereby the trip-lever 22 is normally held at an incline either as in the full line or in the dotted line position shown in Fig. 1 and thereby holds the hooks 9 either engaged or in disengaged position. There is also provided on the rod 20 a coil spring 34, which is normally partly compressed between a collar 35 on the rod and a supporting arm 36, pivoted at 37 (see Fig. 4) to a lug 38 on the bail, said support has a notch 40 for the rod 20, and is held by a spring 39 in contact with the rod 20, and also, when so desired, in the disengaged position shown in dotted line in Fig. 4.

In operation, the track wire 1 may be horizontal or inclined, may extend from a certain place to another, or it may be endless, returning to its starting point. In using the device for the removal of litter from a stable out to a certain point on the

field the track wire is fixed with one end to or near the stable, and the other end a little higher up to a post or tree beyond the dumping place, the receptacle is filled and given a good push as from left to right in Fig. 1, away from the stable, it then runs along until the notch 26 is engaged by the abutment 27, which tilts the trip lever to the dotted position and thereby disengages the hooks 9 and lets the load drop through the bottom which is opened by the weight of the litter. As soon as the load is out the springs 5 close the bottom again and as the gravity commences to move the device back again toward the barn, the trip lever is operated in the opposite direction by the same abutment and thereby the hooks 9 are again engaged with the bottom sections to lock them in the closed position, and the receptacle is thus ready to receive the next load. This operation of the trip lever and the hooks 9 is the same if the receptacle is hauled back and forth by an endless cable and power. But if the track or track wire is of the endless type, the spring arm 32 is disengaged from rod 20 and the support or arm 36 is swung down into meeting contact with the end of the spring 34, and the latter tends to hold the trip lever always in the same one inclined position and throws it back to that position and locks the bottom sections after the load has been emptied by the action of the abutment on the lever in one direction.

To make the device dump at different places it is only necessary to move the abutment to the desired place on the track wire.

Having thus described our invention what we claim is:

1. The combination with an elevated track and a tripping abutment secured thereon and projecting from the lower side thereof, of a frame having wheels adapted to move on the track, a receptacle fixed in the frame and having spring-closed hinged bottom sections, a locking lever fulcrumed on the frame at each end of the receptacle and adapted to engage the bottom sections to hold them closed, a trip lever fulcrumed to the upper part of the frame and having two opposite arms extending one above and the other below its fulcrum, a rod extending from each locking lever and connected with the trip lever, one above and the other below its fulcrum, said trip lever having in its upper end a notch for engagement with the abutment to operate the lever and let it pass in either direction, and a spring arranged to hold the trip-lever inclined with its notch in position to engage the abutment.

2. The combination with an elevated track and a tripping abutment secured thereon and projecting from the lower side thereof, of a frame having wheels adapted to move on the track, a receptacle fixed in the frame and having spring-closed hinged bottom sections, a locking lever fulcrumed on the frame at each end of the receptacle and adapted to engage the bottom sections to hold them closed, a trip lever fulcrumed to the upper part of the frame and having two opposite arms extending one above and the other below its fulcrum, a rod extending from each locking lever and connected with the trip lever, one above and the other below its fulcrum, said trip lever having in its upper end a notch for engagement with the abutment to operate the lever and let it pass in either direction, and a spring arranged to hold the trip lever inclined with its notch in position to engage the abutment when the frame moves in either direction.

3. The combination with an elevated track and a tripping abutment secured thereon and projecting from the lower side thereof, of a frame having wheels adapted to move on the track, a receptacle fixed in the frame and having spring-closed hinged bottom sections, a locking lever fulcrumed on the frame at each end of the receptacle and adapted to engage the bottom sections to hold them closed, a trip lever fulcrumed to the upper part of the frame and having two opposite arms extending one above and the other below its fulcrum, a rod extending from each locking lever and connected with the trip lever one above and the other below its fulcrum, said trip lever having in its upper end a notch for engagement with the abutment to operate the lever and let it pass in either direction, and a spring arranged to hold the trip-lever inclined with its notch in position to engage the abutment when the frame moves in either direction, a second spring arranged to hold the tripping lever inclined only in one direction, and means for throwing the second spring out of action when so desired.

4. The combination with an elevated track and a tripping abutment secured thereon, and projecting from the lower side thereof, of a frame having wheels adapted to move on the track, a receptacle fixed in the frame and having spring-closed hinged bottom sections, a locking lever fulcrumed on the frame at each end of the receptacle and adapted to engage the bottom sections to hold them closed, a trip lever fulcrumed to the upper part of the frame and having two opposite arms extending one above and the other below its fulcrum, a rod extending from each locking lever and connected with the trip lever, one above and the other below its fulcrum, said trip lever having in its upper end a notch for engagement with the abutment to operate the lever and let it pass in

either direction and a spring arranged to hold the trip-lever inclined with its notch in position to engage the abutment when the frame moves in either direction, another spring holding the trip-lever inclined only in one direction, said two springs being each alternately readily thrown out of action while the other is in use.

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

CARL F. BROSTROM.
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Witnesses:
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