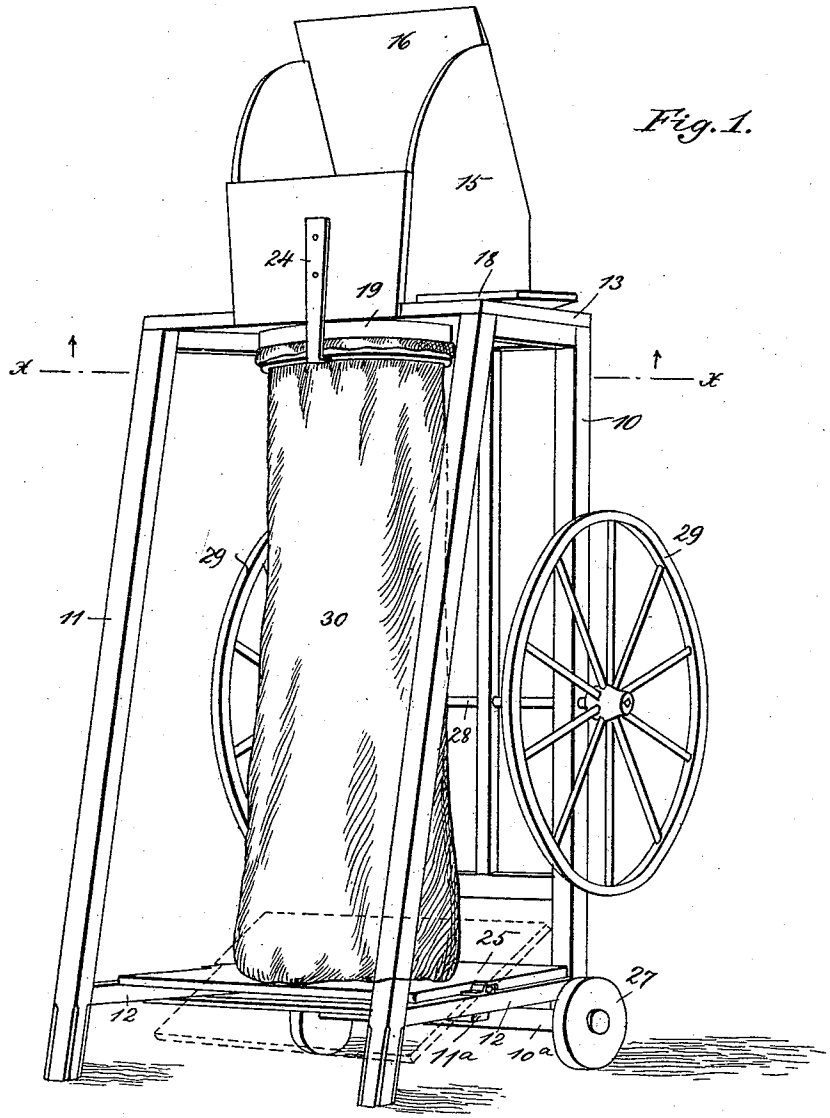
(No Model.) 2 Sheets—Sheet 1.

D. G. STONE.

BAG FILLER AND HOLDER.

No. 430,355. Patented June 17, 1890.

Fig. 1.



WITNESSES:
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

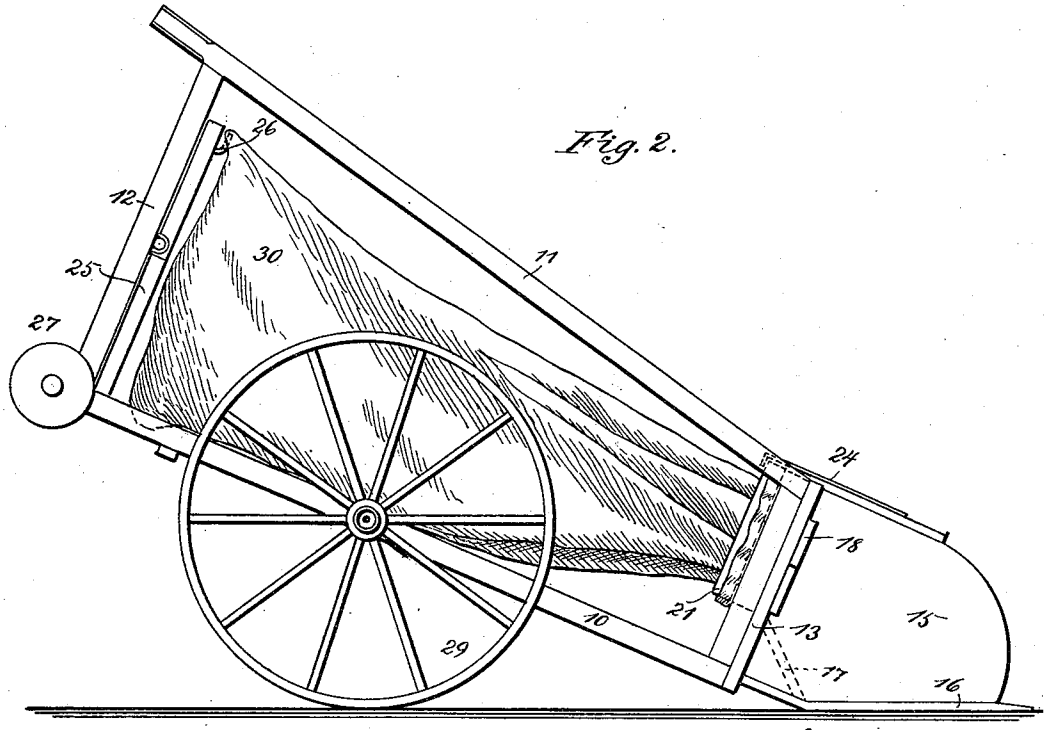


Fig. 3.

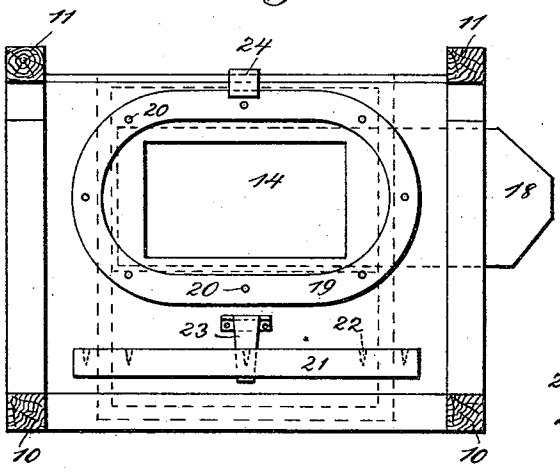
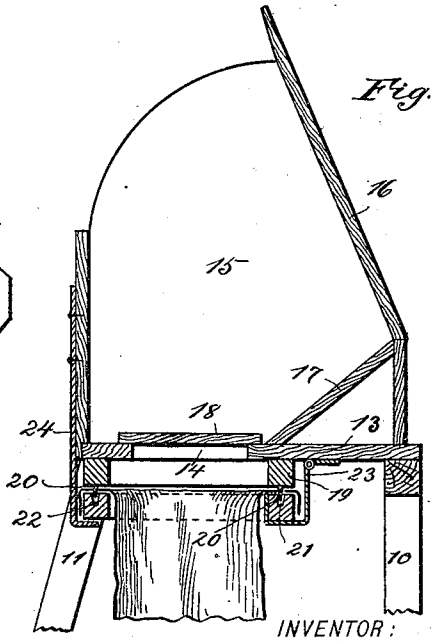


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DUDLEY G. STONE, OF NEGAUNEE, MICHIGAN.

BAG FILLER AND HOLDER.

SPECIFICATION forming part of Letters Patent No. 430,355, dated June 17, 1890.

Application filed October 9, 1889. Serial No. 326,387. (No model.)

To all whom it may concern:

Be it known that I, DUDLEY G. STONE, of Negaunee, in the county of Marquette and State of Michigan, have invented a new and useful Improvement in Bag Fillers and Holders, of which the following is a full, clear, and exact description.

My invention relates to an improvement in bag fillers and holders, and has for its object to provide a device of simple and durable construction capable of being transported upon wheels from place to place and utilized for filling bags with grain or other articles or material in a convenient and expeditious manner.

A further object of the invention is to provide a device with which the grain may be shoveled up and loaded in the bag as shoveled, thereby constituting an effective conveyer.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the device, the same being in the upright position. Fig. 2 is a side elevation of the device in the inclined position, whereby the grain may be shoveled up into the bag. Fig. 3 is a horizontal section on line *x x* of Fig. 1, the bag being removed; and Fig. 4 is a central vertical section through the upper portion of the device.

The body of the device consists, preferably, of a frame comprising two front standards 10 and two rear standards 11, which latter are given an inclination outward from the top, as best illustrated in Figs. 1 and 2. The standards 10 and 11 are connected near the bottom by cross-bars 12, those portions of the standards 11 below the cross-bars being adapted to constitute feet for the support of the frame in the upright position. The foot portion of said rear or inclined standards is also utilized as handles, as will be hereinafter set forth. Those portions of the standards 10 below the cross-bars are united by a cross-bar 10^a, upon the extending ends of which wheels 27 are journaled, forming the support for the forward part of the frame.

The standards 10 and 11 are secured at their upper ends to a table 13, which table is provided, preferably at one side of the center, with an opening 14, the said opening being surrounded by a hopper 15, as best shown in Figs. 1 and 4. The front and rear portions of the hopper are essentially flush with the front and rear sides of the table, the front of the said hopper being of greater length than the back and inclined from a point below the center in the direction of the back, as best illustrated at 16 in Fig. 4.

At that point in the front of the hopper where the rearward inclination commences a slideway 17 is constructed, consisting of a board extending from side to side of the hopper, having a bearing at one end upon the inner face of the front and at the other end upon the table 13, near the forward or front side of the opening 14 therein. The opening 14 may be closed, when desired, by means of a damper or slide 18, which rests upon the table, and is capable of lateral movement through an opening produced in the side of the hopper.

To the under side of the table 13, around the opening 14, an essentially-oval band 19 is secured, having teeth 20 projected downward from its under face, and beneath the said band 19 a second band 21 of like form is supported, the latter or lower band having cavities or recesses 22 produced therein to receive the teeth 20, as best illustrated in Fig. 4. The lower band 21 is attached to the under side of the table 13 by means of an angled strap-hinge 23, and is held essentially in contact with the upper fixed band through the medium of a latch 24, rigidly attached at one end to the rear face of the chute or hopper 15, the lower end of which latch is bent horizontally inward to contact with the under surface of the band.

Upon the cross-bars 12 of the frame a tilting platform 25 is pivoted, being reduced at the rear of its pivotal point to pass downward between the cross-bars 12, and of sufficient width forward of its pivotal point to rest upon said bars, as best illustrated in Fig. 1.

At or near the rear edge of the tilting platform 25 a hook 26, of any approved construction, is secured to the upper face, as best shown in Fig. 2. Upon an axle 28, passing through the front standards 10 at or near their center, large wheels 29 are mounted.

The bag 30 is passed up through the lower band 21, when said band is disconnected from its latch 24, and the top of the bag is carried over the said lower band, whereupon the band supporting the bag is carried upward to the horizontal position and clamped to the upper fixed ring or band 19 by the latch 24, thus causing the teeth 20 to penetrate the bag and hold it in a fixed position, the lower end of the bag being attached to the hook 26 upon the tilting platform.

When the implement is in its upright position, as shown in Fig. 1, it rests upon the wheels 27, and the handle or foot extremity of the inclined standards 11 and the bag having been secured to place, as above set forth, the grain may be filled into the bag by introducing the same into the hopper, and from thence through the opening 14 to the bag.

For an improved and automatic method of filling the bag, which is first put into the position described, the implement is thrown forward and downward, so that it will ride upon the wheels 29, as illustrated in Fig. 2, whereupon the front or angled face of the hopper will constitute a shovel to contact with the ground or with the floor upon which the grain is placed. The implement is now projected forward by means of the operator taking hold of the frame at the handle end of the standards 11 or the cross-bar 11^a, connecting the cross-bars 12, and pushing the implement forward into the grain or other material until by reason of the shovel-mouth of the hopper the latter is filled, whereupon, by pressing downward upon the handles until the wheels 27 strike the floor with a jar, the hopper is thrown upward and the contents caused to run backward and downward into the bag over the inclined floor or slide 17. This is repeated until sufficient grain has been taken up to fill the bag, when, by placing the foot upon the cross-bar 10^a, the implement may be brought back into an upright position. The slide 18 may now be pushed in, thus shutting off the surplus material, while the operator with one hand grasps the mouth of the bag and with the other lifts the spring-latch 24, whereupon the filled bag may be drawn backward to the floor, in which process the platform 25 tilts downward, thus allowing the bag to slide off and be released from the hook 26.

It will be observed that the bag is prevented from slipping forward during the process of filling by means of the hook 26, and that the grain is prevented from passing out of the bag to any material extent by reason of the tendency of the bag to sag or choke at the mouth; but, if in practice it is found desirable, a hinged valve of any approved construction may be inserted within the upper band 19, immediately beneath the opening 14. It is further obvious that the construction of the machine is such that the filled bag may be easily conveyed at will from place to place, and the scope of the device is such that it may be used, if desired, simply as a shovel and conveyer, and enlarged to any capacity practicable for the handling of various commodities.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the wheeled frame having a combined shovel and hopper at its upper or forward end, provided in its bottom or lower end with an opening, of a bag-holder at the said opening and a bag-supporting platform behind or below said holder, substantially as set forth.

2. The combination, with the frame having a bag-holder at its upper end, of a tilting bag-supporting platform below the holder, provided with a hook to engage the bottom of the bag, substantially as set forth.

3. The combination, with the frame having a bag-holder at its upper end, of a tilting platform, cross-bars on which the platform is pivoted below the holder, the pivoted ends of the platform at one side of the pivots projecting over said cross-pieces to stop the pivot from tilting downwardly from that side, the said ends at the opposite sides of the pivots being constructed to swing downwardly between said cross-pieces to dump the bag, substantially as set forth.

4. The combination, with the wheeled frame having a combined shovel and hopper at its upper or forward end, provided in its bottom with an opening, and a bag-holder at the said opening, of a platform below or behind said holder, provided with a hook to engage the bottom of the bag and prevent the displacement of the bag in the forward thrust of the frame, substantially as set forth.

5. The combination, with a frame, a table supported thereby provided with an opening, a hopper constructed upon the table around said opening, and a slide held to move in said hopper, of a band secured to the under face of the table around the opening and having teeth in its under face, a second band hinged to the table provided with cavities to receive said teeth, and a latch capable of securing the hinged band in a horizontal position, substantially as and for the purpose specified.

6. The combination, with a frame comprising two perpendicular front standards and downwardly-inclined rear standards, a tilting platform pivoted between the standards near their lower ends, a table supported by the said standards having an opening therein, and a hopper constructed upon said table having a rearwardly-inclined and angled forward face, and a slide capable of lateral movement in the hopper, of a band rigidly secured to the under face of the table around the opening provided with teeth, a second band

hinged to the table having cavities therein, and a latch capable of locking the hinged band in the horizontal position, substantially as shown and described.

7. The combination, with a frame comprising front perpendicular standards and rear downwardly-inclined standards, a tilting platform pivoted between said standards near their lower ends and provided with a hook, small wheels journaled upon the lower ends of the forward standards, and larger wheels journaled at or near the center of said standards, and a table resting upon the upper portion of the standards having an opening therein, of a hopper constructed upon the table around the opening provided with a rearwardly-inclined or angled forward face, a slide having lateral movement in the hopper, a band secured to the under face of the table around the opening therein, a second band hinged to the table adapted for contact with the fixed band, and a spring-latch capable of retaining the hinged band in engagement with the fixed band, as and for the purpose specified.

DUDLEY G. STONE.

Witnesses:
FRANK. D. STONE,
GRACE STONE.