(No Model.)

3 Sheets—Sheet 1.

E. W. SCOTT.

MACHINERY FOR DUMPING BAGS.

No. 274,664. Patented Mar. 27, 1883.

Fig. 2.

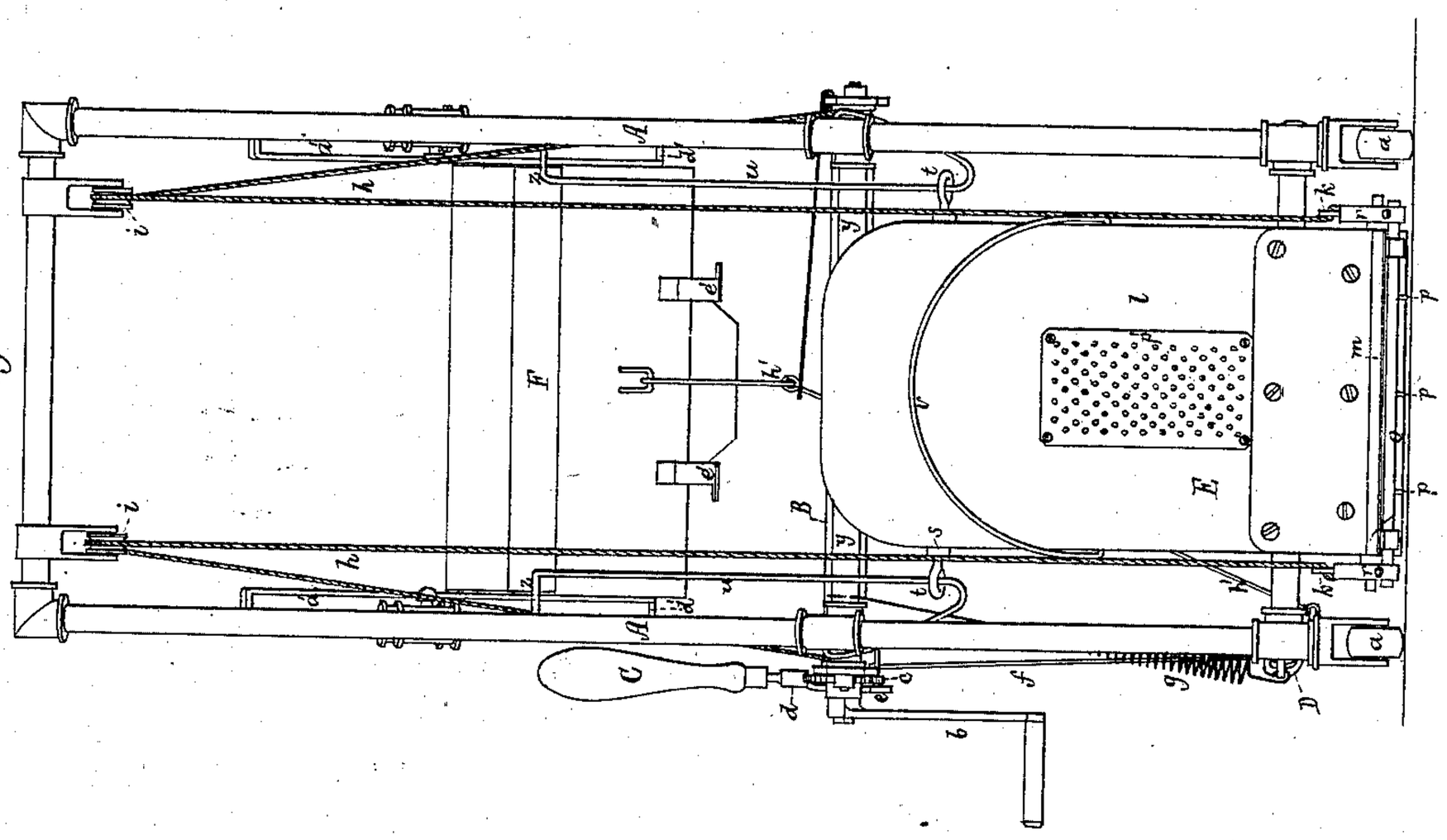
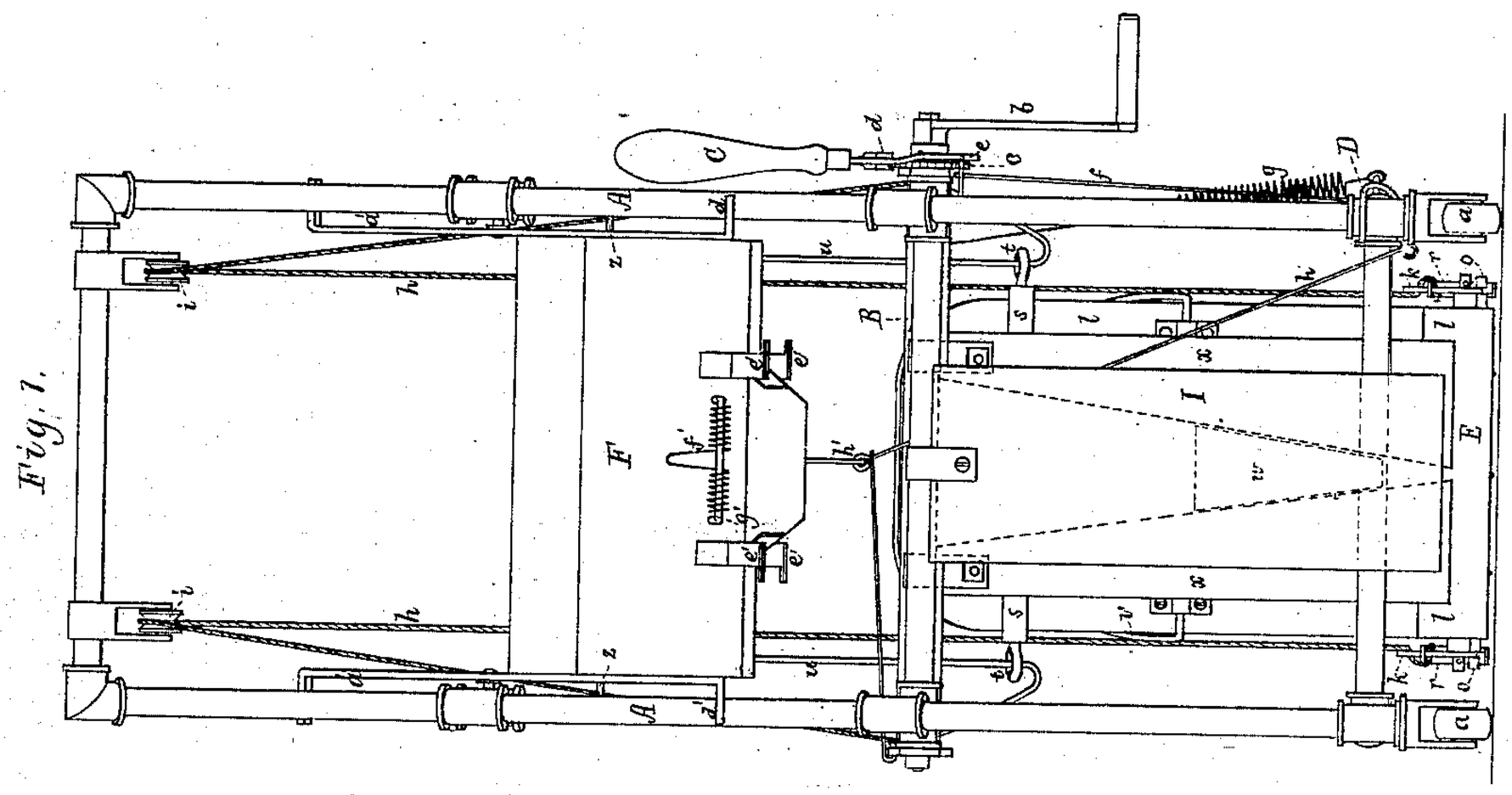


Fig. 5.

Fig. 1.



Witnesses.
S. N. Piper
E. B. Prall.

Inventor,
Erastus Willer Scott.
by R. H. Eddy atty.

(No Model.) 3 Sheets—Sheet 2.

E. W. SCOTT.

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Fig. 4.

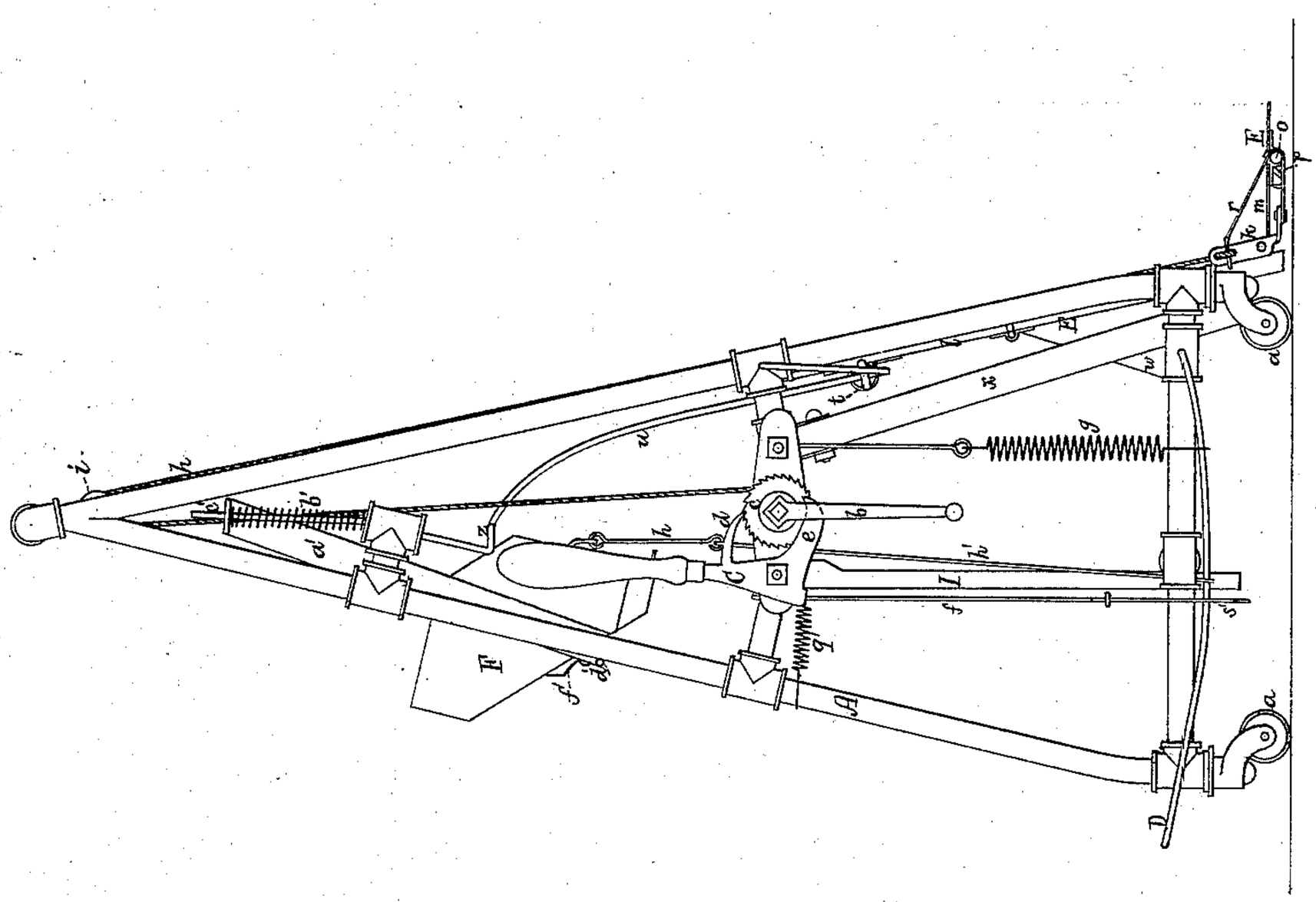
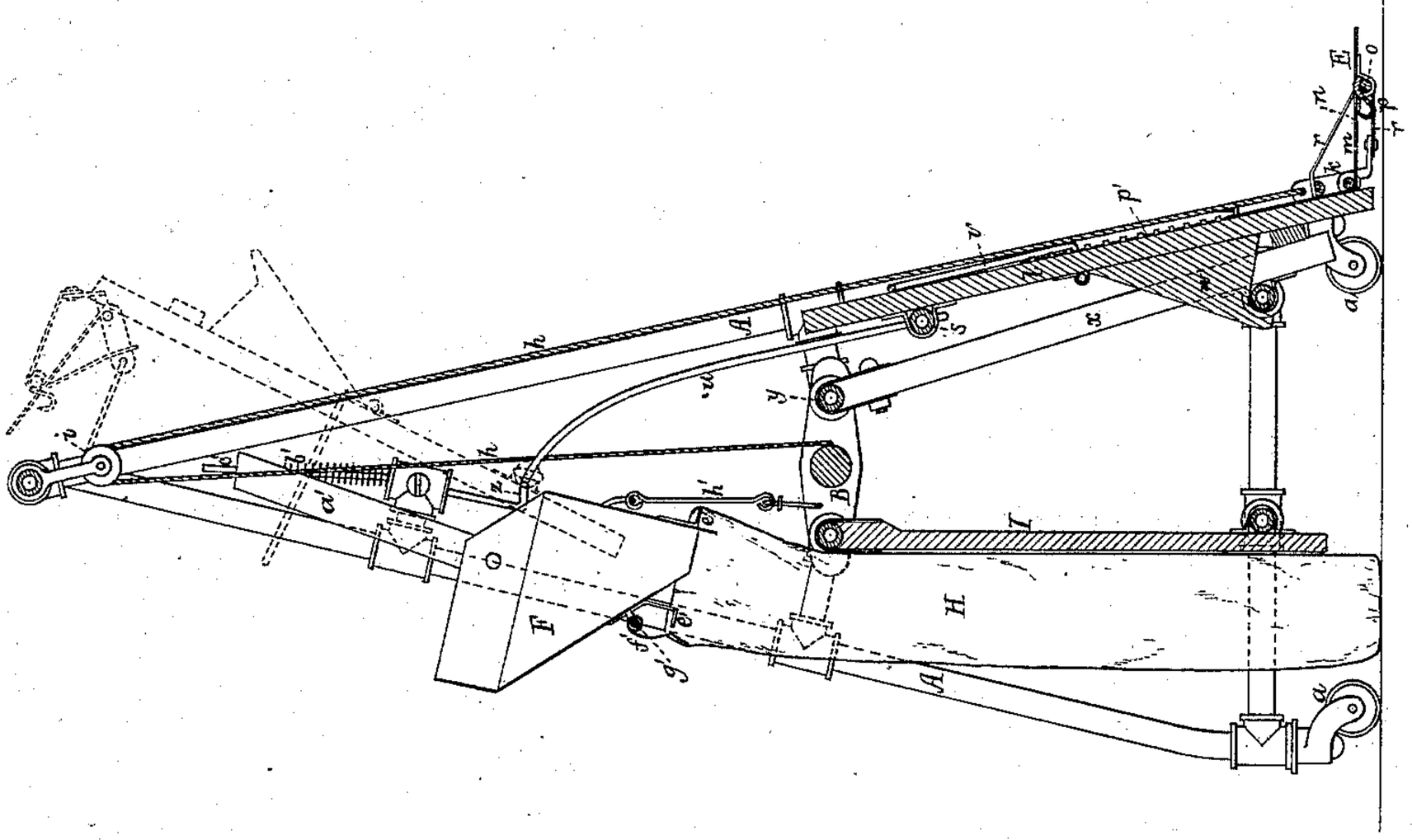


Fig. 3.



Witnesses.
S. N. Piper
E. B. Pratt.

Inventor.
Erastus Willer Scott.
by R. H. Eddy atty.

(No Model.)

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E. W. SCOTT.

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Fig. 7.

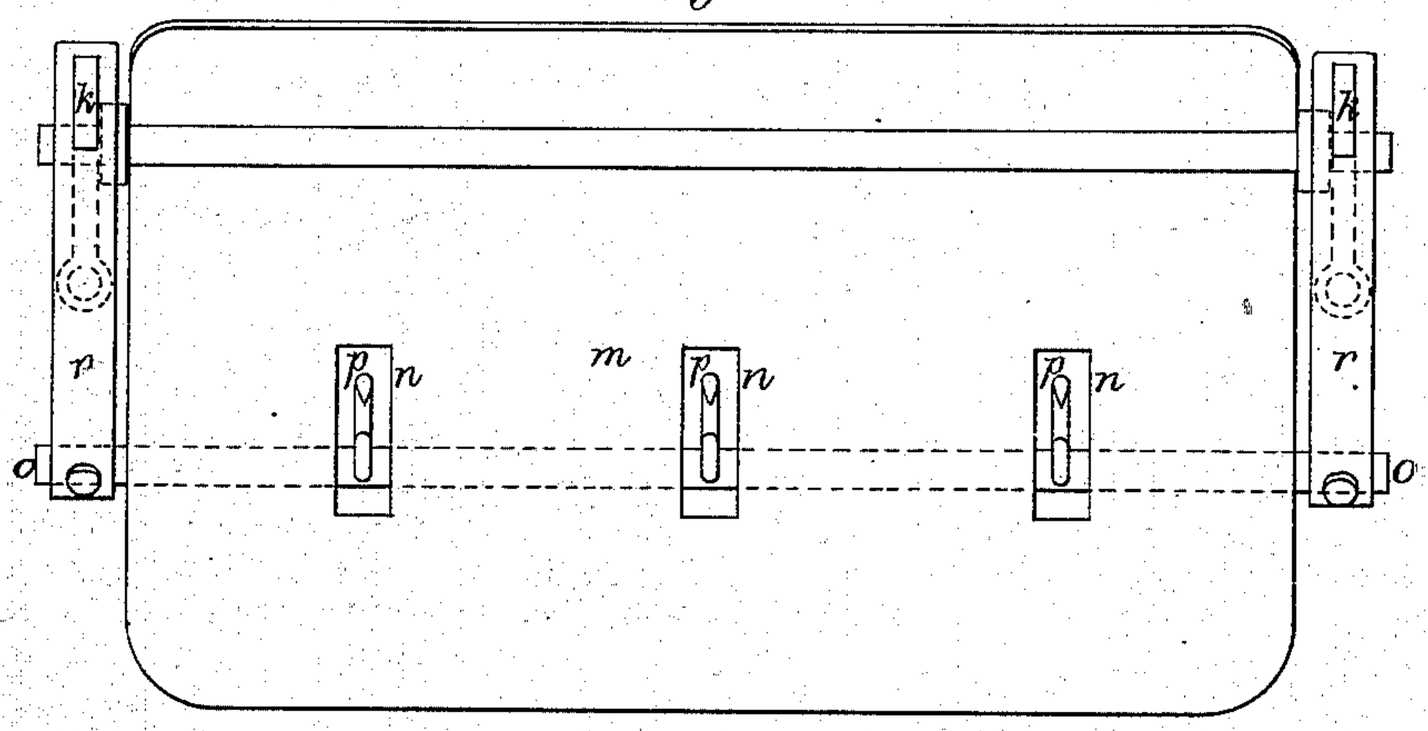


Fig. 9.

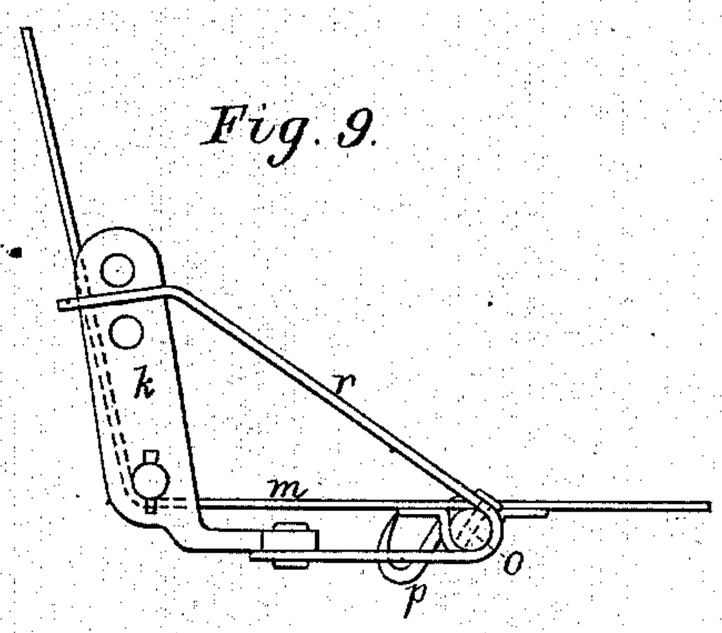


Fig. 8.

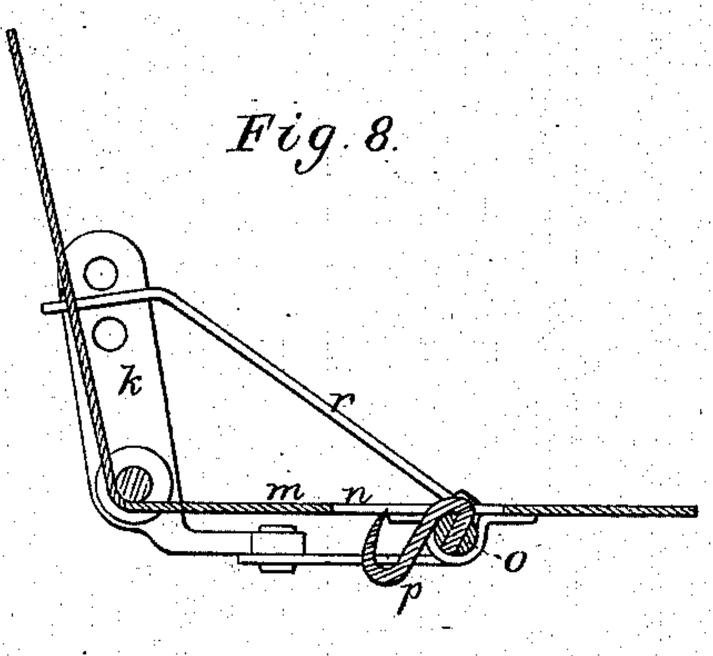
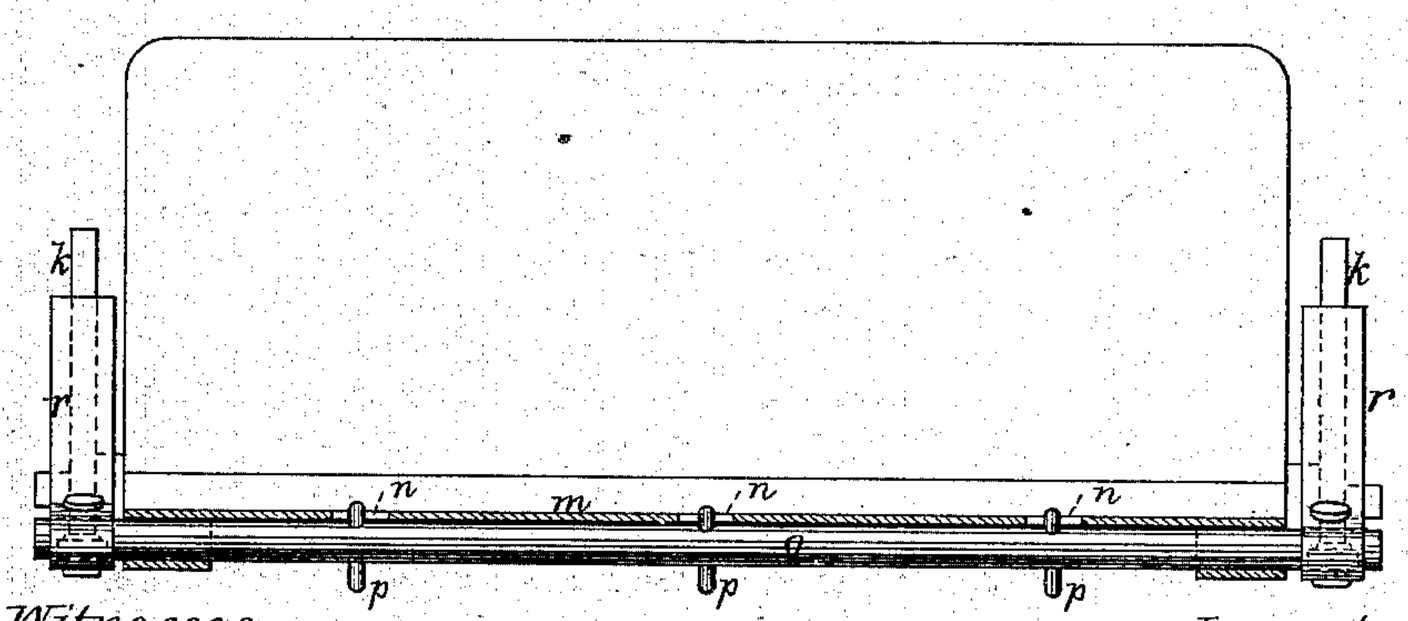


Fig. 10.



Witnesses

S. N. Piper.

E. B. Pratt.

Inventor

Erastus Willer Scott.

by R. H. Eddy atty.

UNITED STATES PATENT OFFICE.

ERASTUS W. SCOTT, OF WAUREGAN, CONNECTICUT.

MACHINERY FOR DUMPING BAGS.

SPECIFICATION forming part of Letters Patent No. 274,664, dated March 27, 1883.

Application filed December 11, 1882. (No model.)

To all whom it may concern:

Be it known that I, ERASTUS W. SCOTT, of Wauregan, in the county of Windham, of the State of Connecticut, have invented a new and useful improvement in machinery for dumping bags or transferring the contents of each into another bag or article for reception of such; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a rear elevation, Fig. 2 a front view, Fig. 3 a vertical and longitudinal section, and Fig. 4 an end elevation, of a machine embodying my invention, the nature of which is defined in the claims hereinafter presented. Fig. 7 is a top view, Fig. 8 a transverse section, Fig. 9 an end view, and Fig. 10 another transverse section, of the lower part or shoe of the bag-carrier with its hooks and mechanism for operating them, such figures being on an enlarged scale.

In such drawings, A denotes the stand or frame for supporting the main operative parts of the machine, such stand being made and provided with casters *a*, substantially as represented. Within such stand, at its middle part, is a windlass, B, provided with a crank, *b*, and a ratchet-wheel, *c*. A hand-lever, C, fulcrumed to the stand, and provided with a pawl, *d*, to engage with the ratchet-wheel, and with a brake, *e*, to act against the windlass as occasion may require, is connected by a rod, *f*, and stirrup *s'* with a pedal, D, arranged as represented, and provided with a lifting-spring, *g*, the pedal being extended through the stirrup. On pressing the pedal downward sufficiently in the stirrup, the pawl will be thrown out of engagement with the ratchet-wheel and the brake be borne up against the windlass. Attached to the said windlass are two ropes, *h h*, which pass therefrom upward and through pulleys *i i*, suspended from the top bar of the stand. Thence these ropes descend, and are connected to the longer arms of two knee-levers, *k k*, fulcrumed to the bag-carrier E. The said bag-carrier consists of a board, *l*, and a shoe or plate, *m*, extending from it at its lower end, and standing at an obtuse angle to it. The said shoe has a series of slots, *n*, arranged in it transversely of a shaft, *o*, journaled to the shoe on its under side, and provided with a series of hooks, *p*, there being one of such hooks in each of the said slots. Fastened at or near their middles to the shaft *o* at its ends are two straps, *r r*, which near their ends are secured to the arms of the knee-levers *k k*—that is, the strap at one end is fastened to one and at the other end to the other of such arms. The manner in which the shaft *o* is moved to cause the hooks to enter and seize the bag while the carrier may be rising and turning over is hereinafter explained. Near its upper end the bag-carrier E is provided with a cross-shaft, *s*, adapted to turn in suitable bearings fixed to the carrier, such shaft terminating at each of its ends in an eye, *t*, to receive and slide on one of two guide-rods, *u u*, formed and arranged in the standards in manner as represented. The bag-carrier is provided with a bail, *v*, to extend around the bag and aid in supporting it on the carrier. Furthermore, there extends from the carrier, in manner as shown, an angular projection, *w*, which, during a descent of the carrier, passes between two stationary guides, *x x*, arranged and formed as shown. These guides, with the projection, serve to steady the carrier when at its lowest position, and, besides, the projection, by being carried into contact with and moved against a cross-piece, *y*, of the standard during a rise of the carrier, aids in moving outward the said carrier at its lowest part, in order to facilitate the tipping of the carrier to effect a discharge of the load of the bag.

In raising the carrier by means of the windlass and its ropes the shaft *s* will advance with the carrier until the eyes *t t* of such shaft may bring up against shoulders or lateral bends *z z* of the guide-rods *u u*, which taking place, the carrier at its upper part will rise no higher; but its lower part will continue to rise until the carrier may be tipped into the position shown by dotted lines in Fig. 3, in order to discharge the load of the bag into a hopper, F, sustained by arms *a' a'*, resting upon spiral springs *b'*, encompassing stationary posts *c'*. Ears *d' d'*, extending from the lower part of the hopper, rest against the anterior posts of the standard and aid in guiding the hopper in its upward or downward movements. The

hopper is provided at its educt with hooks *e'*, projecting from it in opposite directions, such hooks being to hold to the hopper a bag to be filled, which, when its mouth is open, is there caught on the hooks, it being held open and upon such hooks by means of a spring, *f'*, applied to the front side of the hopper and projected within the bag. This spring is shown in front view in Fig. 5, it being secured to a rod, *g'*, which near its ends is bent and fastened to the hopper. A bag so applied to the hopper is shown at H in Fig. 3 as resting against a vertical board, I, arranged within the standard.

The hopper, by means of one or more rods, *h'*, or suitable devices, is or may be connected with the pedal, in order to enable the hopper to be depressed by the foot of a person applied to such pedal. When a bag is first fixed to the hopper and empty it usually reaches to the ground or floor on which the machine may rest; but as the bag becomes charged from the hopper the latter will be drawn downward, the bag still resting on the ground or floor. Were the hopper not supported by springs, as described, so as to be capable of being drawn down by the bag, as it may shorten in being filled, the bag would be liable to become accidentally detached from the hopper. This downward movement of the hopper may be facilitated by an attendant by means of the pedal.

A bag to be emptied is to be placed on the shoe or plate *m* of the carrier; or the machine may be moved up to the bag, so as to cause the shoe to pass underneath the bag while it may be in an upright or slightly inclined position, the bail being raised upward. Next the bail is to be turned down, so as to extend around the rear part of the bag. Next the windlass is to be turned so as to cause the carrier to rise and turn upward, so as to carry its shoe against the upper cross-bar of the standard. While the carrier may be rising and turning over the knee-levers *k k* will be moved so as to cause the straps *r r* to turn the shaft *o* and cause its hooks *p* to advance into the bag at its bottom, in order to hold it to the carrier, when the bag may be in a position to discharge its load into the hopper. As each rope *h* is fastened to an arm of one of the levers *k*, such lever, by the draft of the rope on it and the turning of the carrier, will be moved on its fulcrum relatively to the carrier, and in so moving will move its strap *r* in a direction lengthwise thereof. The strap near its middle, going partly around and being fastened to the periphery of the shaft *o*, will, when moved by its lever *k*, partially revolve the shaft in a direction to cause the hooks *p* to enter the bottom of the bag.

If desirable, the carrier may be provided with a plate, *p'*, fixed to it and arranged upon it as shown, such plate being perforated like a grater such as is used for grating or rasping fruit or vegetables, such plate being to aid in preventing the loaded bag from slipping on the carrier.

A spiral spring, *q'*, suitably adapted to the standard and the hand-lever C, serves to move the latter so as to force its pawl into engagement with the ratchet-wheel of the windlass. By means of this hand-lever and its pawl and brake the descent of the bag-carrier may be wholly or gradually arrested, as occasion may require. The bag, being elevated and turned bottom upward by the carrier, will discharge its load into the hopper, from whence it will flow into a bag when suspended from the hopper, and resting on the floor, or in a cart when extending under the hopper. Instead of the hopper discharging into a bag, it may deliver into any other suitable receptacle arranged under it.

I claim in the above-described bag-dumping machine—

1. The stand, its windlass, and its ropes, and the sustaining-pulleys, the bag-carrier guides, and the bag-carrier and hopper, combined, arranged, adapted, and to operate essentially in manner as set forth.

2. The bag-carrier having its shoe slotted and provided with the hooks, and mechanism for operating them, substantially as set forth.

3. The bag-carrier provided with the perforated or friction plate, and with the bail, to operate with a bag in manner as explained.

4. The combination of the supporting-springs and the pedal with the hopper, all being adapted and to operate substantially as set forth.

5. The brake-lever provided with brake and pawl and operative spring, in combination with the windlass and its ratchet, all arranged as set forth.

6. The pedal provided with the lifting-spring and combined with the brake-lever by means of a rod and stirrup, as set forth.

7. The bag-carrier having the angular projection extending from it, as explained, in combination with the stand, provided with the cross-bar, and the inclined guides extending downward therefrom, such being not only to aid in tipping the carrier while it may be in the act of rising, but when it is at its lowest position to support it from moving laterally or forward while receiving or being pressed underneath a bag.

ERASTUS WILLER SCOTT.

Witnesses:
R. H. EDDY,
E. B. PRATT.