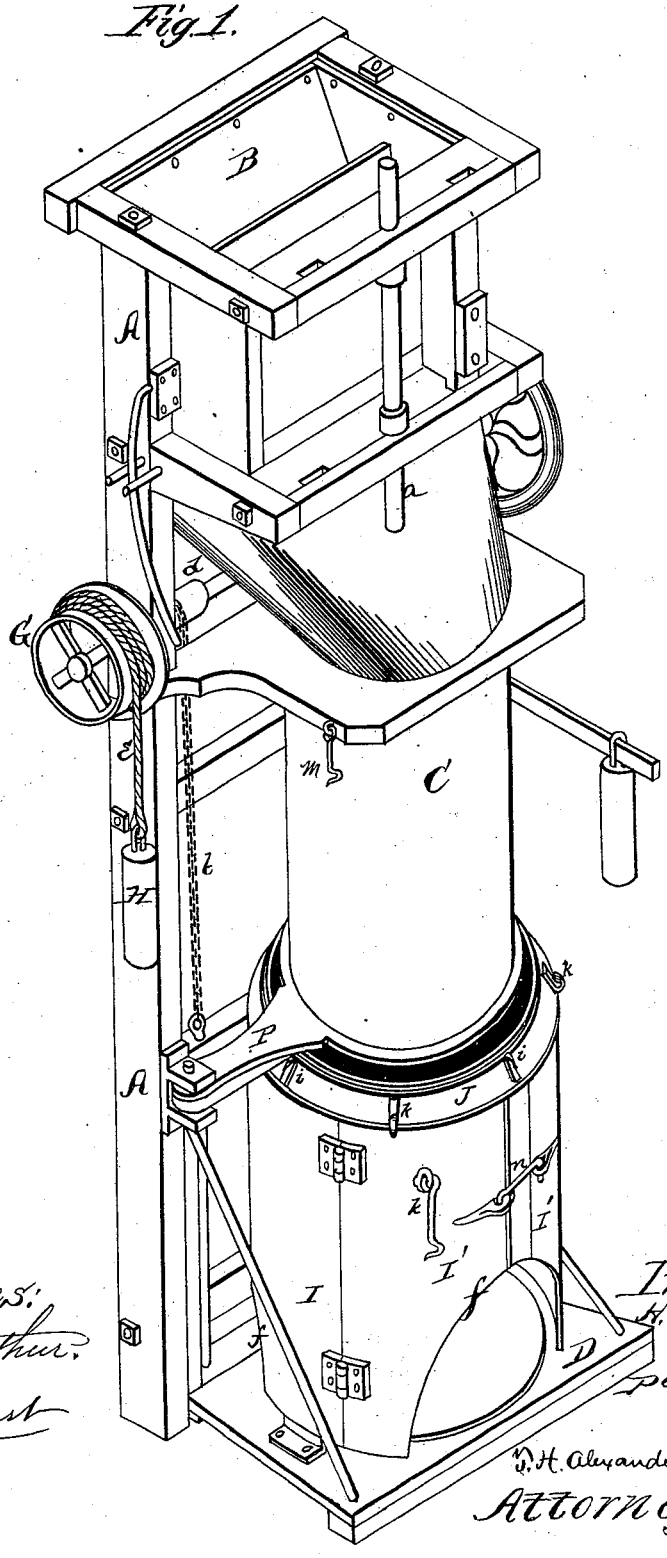
2 Sheets—Sheet 1.

H. A. BARNARD.

Sack-Packer.

No. 197,590. Patented Nov. 27, 1877.

Fig. 1.



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2 Sheets—Sheet 2.

H. A. BARNARD.

Sack-Packer.

No. 197,590. **Patented Nov. 27, 1877.**

Fig. 2.

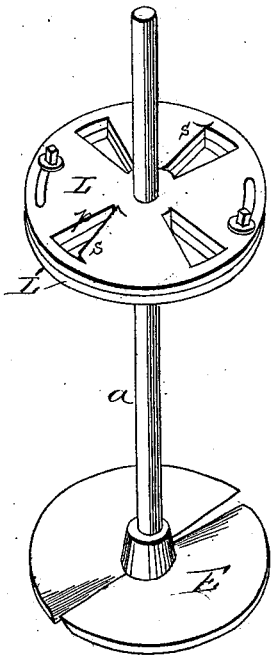


Fig. 3

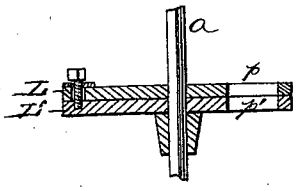


Fig. 5.

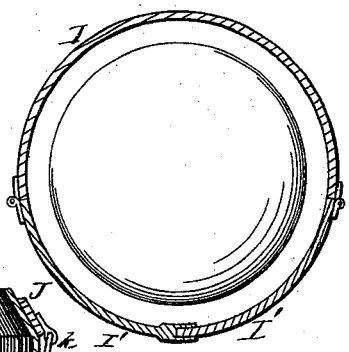
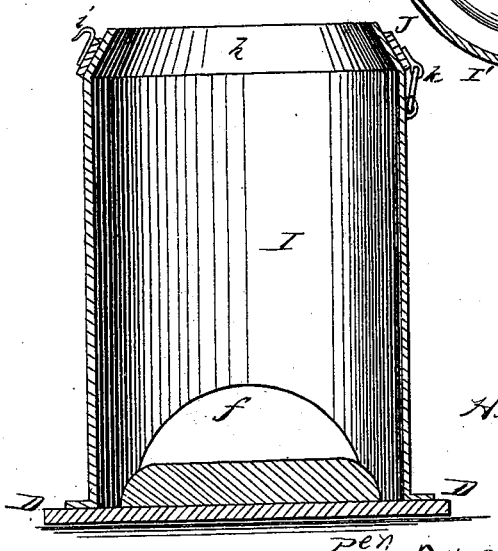


Fig. 4.



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UNITED STATES PATENT OFFICE.

HEMAN A. BARNARD, OF MOLINE, ILLINOIS, ASSIGNOR TO THE BARNARD & LEAS MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN SACK-PACKERS.

Specification forming part of Letters Patent No. **197,590**, dated November 27, 1877; application filed October 29, 1877.

To all whom it may concern:

Be it known that I, HEMAN A. BARNARD, of Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Sack-Packers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in certain improvements upon machines for packing bran or other similar articles into sacks, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view of my improved sack-packer; Fig. 2, a perspective view of the packing auger and feeder; Fig. 3, a longitudinal section of the feeder; Fig. 4, a vertical section of an upright tube for holding the sack, and Fig. 5 a horizontal section of the same.

A represents the frame-work of a Mattison packer, with hopper B, stationary cylinder C, movable platform D, packing-auger E, and auger-shaft *a*.

The movable platform D is connected with a sash suspended by chains *b b* from a shaft, *d*, and said shaft provided at each end with a pulley, G, having a cord, *e*, wound around the same, and a weight, H, suspended from the end of said cord to balance the platform.

Fastened to the movable platform D is an upright cylinder, I, made of sheet-iron or other suitable material, and in which is placed the sack to be filled. This cylinder is a trifle smaller in diameter than the sack to be filled, so as to take all the strain off the sack. It has two openings, *f f*, at the lower end—one in the front and the other in the rear side—for the points or corners of the sack to extend through, thus enabling the bran or other material to be pressed into the points or corners of the sack. This cylinder I is made perpendicular or straight until within three inches of its upper end, and is then made to bevel inward, as shown at *h*. Around this beveled top is placed a flat ring, J, made of iron or sheet-iron about two inches wide, and beveled to fit the beveled top *h* of the cylinder. This ring J has small hooks *i* placed at intervals around its upper end, to which the upper end or mouth of the sack is to be fastened. The ring J is fastened to the cylinder I by hooks and staples *k k*.

After the sack is filled and the hooks unhooked from the staples, the ring, being about one inch narrower than the bended top of the cylinder, can slide up about one inch, which enables the operator to unhook the sack from the small hooks *i* in the ring, and the ring can be slipped up around the stationary cylinder *c* of the packer, and fastened up by a hook, *m*. This cylinder I has the front half of it made in two parts, and these two parts hinged to the other half of it, thus forming two doors, I′ I′, which can be opened to remove the sack after it is filled. These two doors are held closed by means of hooks and staples *n*, or their equivalents.

It is customary to construct a hoppered bin over the packer, to hold the bran manufactured during the night, and pack it out during the day-time, thus saving the wages of one man during the night. Now, the slower the bran is packed the greater the quantity can be put into each sack. In packing from a garner or hoppered bin the bran will feed through the packing-augers too fast. To overcome this defect, and to secure the greatest amount in each sack, I have constructed a feeder, consisting of two circular plates, L L′, of iron, to regulate the amount of bran to be packed each hour. These plates are provided with suitable openings *p p′*, respectively, the lower plate, L′, being secured to the auger-shaft *a*, and the upper plate, L, movable thereon, and held to the lower plate by set-screws or other convenient means. By adjusting the upper plate, L, the feed-openings may be regulated in size, so as to cause more or less bran to pass through in a given time. The upper plate, L, has at each of its openings *p* a projecting lip, *s*, to facilitate the flow of the bran through the feeder. This feeder can be set to feed no faster than is necessary to empty the bin during the day-

time, and thus secure the greatest amount in each sack that the amount to be packed will admit of. It is attached to the revolving packing-shaft, above the packing-auger, and revolves with said shaft.

To one side of the main frame A is hinged a swinging cut-off, P, which shuts up the lower end of the tube or cylinder C, and thus prevents the bran from flowing through the packer during the time occupied in taking out the full sack and putting in an empty one to be filled. This swinging cut-off may be arranged in any suitable manner to accomplish the purpose.

In a full-sized packer the operating mechanism is so arranged as to be automatic and throw itself out of gear when the sack is filled by means of a lever.

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

1. In a sack-packer, the combination of a stationary cylinder through which the material passes, a stationary revolving packing-auger working therein, and a descending cylinder or casing for inclosing the sack while being packed, as set forth.

2. The cylinder I, having beveled top *h*, in combination with the beveled ring J, provided with hooks *i*, substantially as and for the purposes herein set forth.

3. In a sack-packer, the cylinder I, constructed, as described, with doors I′, bottom openings *f*, and beveled top *h*, substantially as and for the purposes herein set forth.

4. The feeder L L′, constructed as described, and attached to the revolving auger-shaft *a*, for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature hereto in presence of two witnesses.

HEMAN A. BARNARD.

Witnesses:

J. SILAS LEAS,

ALEX. F. SWANDER.