

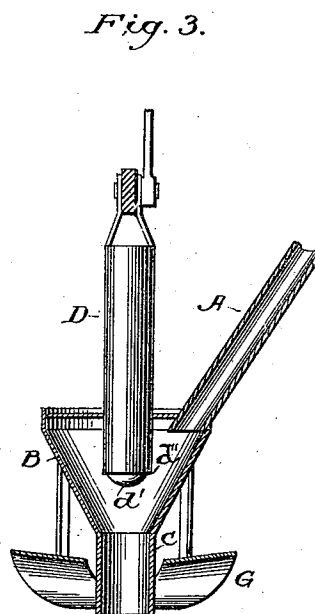
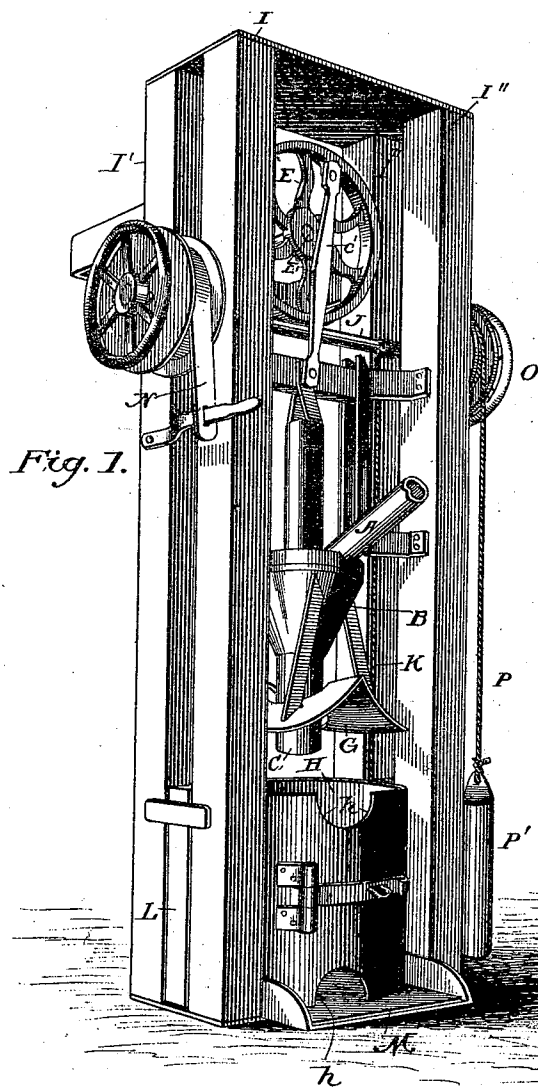
(No Model.)

2 Sheets—Sheet 1.

J. S. CAMERON.
BRAN PACKER.

No. 501,326.

Patented July 11, 1893.



Witnesses:
C. M. Tobin
A. M. Ogleheart

Inventor
John S. Cameron

(No Model.)

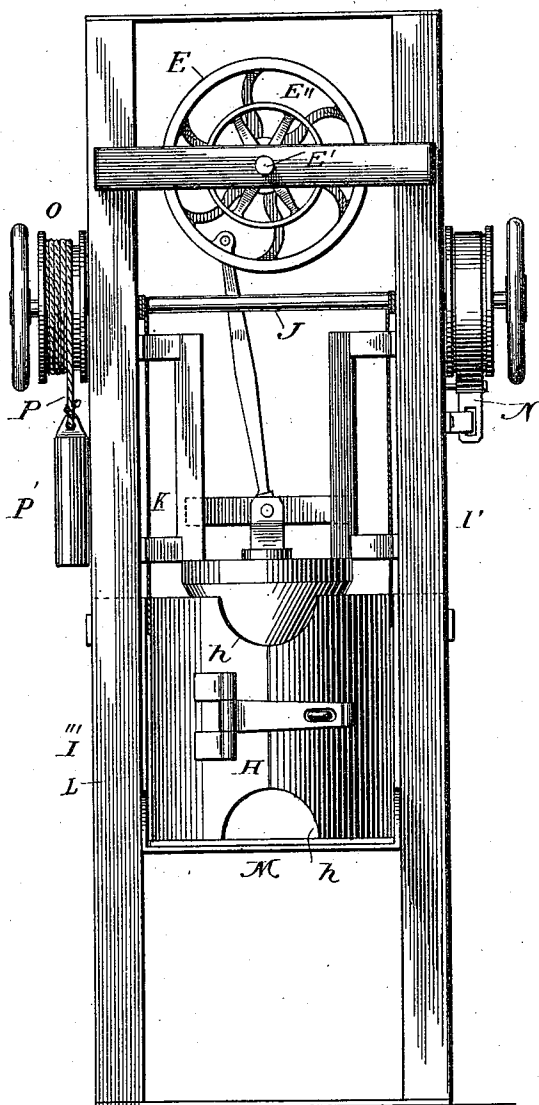
2 Sheets—Sheet 2.

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Fig. 2.



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Inventor:
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UNITED STATES PATENT OFFICE.

JOHN S. CAMERON, OF EVANSVILLE, INDIANA, ASSIGNOR OF ONE-HALF TO
WILBUR ERSKINE, OF SAME PLACE.

BRAN-PACKER.

SPECIFICATION forming part of Letters Patent No. 501,326, dated July 11, 1893.

Application filed January 2, 1889. Serial No. 295,178. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. CAMERON, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Bran-Packers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in bran packers, and has for its object to so pack the bran that the package will be of uniform density throughout, and, at the same time, increase the rapidity of the operation.

The nature of the invention consists, essentially, in providing a suitable hopper to receive a continuous supply of bran, through a tube entering its cover, the bottom of the hopper terminating in a vertical tube, open at top as well as at its lower end, and adapted to receive a vertical reciprocating plunger or rammer of peculiar shape at its lower end (the object of which will be hereinafter described) a bag holder, which permits the bag to, gradually, descend as it becomes filled.

In the drawings forming a part of this specification, and in which the same letters indicate corresponding parts of the machine Figure 1, Sheet 1, is a view in perspective of a bran packer in accordance with my invention; Fig. 2 Sheet 2 a central vertical rear view; Fig. 3 Sheet 1 a detail in cross section showing sectional view of the hopper B, supply tube A, vertical tube C, one-half of bag holder G, and the lower end of the rammer *d*, the pitman being broken off. In this view the rammer is raised to allow the bran to rush into tube C, thence followed by rammer D, and forced into the bag.

The letter A, indicates the supply tube.

B is the hopper.

C is the vertical tube extending down into the bag.

D, is the rammer.

d' is the rounded bottom of the rammer D, and when crank pin is on its lower center

shoulder *d*'', extends just to the lower end of tube C, the rounded bottom *d*, only projecting.

E is a fly-wheel mounted on a shaft, E', having bearings securely fastened to frame, I, I', I'', I'''. The other end of shaft E', shown in Fig. 2, Sheet 2, carries a pulley E'', and is driven by a belt which may derive its motion from any source of power. The wheel E, is provided with a wrist pin and is connected to rammer D, by a pitman, by means of which reciprocating motion is imparted to rammer D, which is adapted to move vertically in suitable guides securely fastened to frame I, I', I'', I''', as shown in Figs. 1, and 2, Sheets 1, and 2.

G is the bag-holder and consists of castings securely fastened to hopper B, which are located about half-way on tube C. The front and rear of the bag-holder are six inches higher than the sides as shown in Fig. 1, Sheet 1, and are in shape something like a riding saddle, the object of this being, to allow the projecting corners of the bag to free themselves from the holder G, in advance of the center so that the out-lying corners of the bag will be solidly packed before the center of the bag is released from holder G. The bag to be filled is drawn up through and between the wings of holder G, and on both sides of tube C.

H is the bag-case, which is hinged on both sides and opens in front. It has also suitable openings *h, h*, top and bottom, front and back, to allow the corners of the bag to project and fill up. The bag-case may be made as shown in the drawings, or of corrugated sheet metal, or of wooden slats secured to metal bands, after the manner of a cider press.

I, I', I'', I''', indicate the frame of the machine.

J, is a shaft having bearings in the frame I, I', and carries chains or cords, K, attached to a vertical piece of wood L, attached at the bottom to a platform M, which supports the bag-case H. One end of shaft J, carries a brake N, and the other end a pulley O, having a belt or cord P, to the lower end of which is attached a weight P', which acts as a counter-balance to turn the shaft J, so that the chain K, may be wound upon it after the man-

ner of a windlass and thereby lift the platform M, together with the bag-case H, and hold it up while the bag is being filled with bran. The other end of shaft carries a brake
5 N, by means of which the motion of the shaft may be regulated. This counter-balance and winding drum together with platform are old and I make no claim for same, only as a necessary requirement to the whole. It will be
10 observed that the vertical tube C, is straight, and that it is open at both ends, as shown in Fig. 3, Sheet 1, thus permitting the lower end to enter the narrow opening in the bag, and allow the rammer D, to run right through the
15 tube into the bag. The lower or working end of the rammer is shaped as shown in Fig. 3 Sheet 1, the purpose of which is to give it a wedging action, so that it will work the bran from directly under the rammer, and toward
20 the sides of the bag, thus making the package of uniform density all through. The small shoulder *d''*, just above the point of rammer, is intended to bring the bran all out of the tube at each stroke, and to prevent any wedging
25 action in the tube.
In putting a bag into the machine to be filled, I pull the bag up through and between the wings of bag-holder G, until the bottom of bag almost touches the lower end of tube
30 C; then I run the platform M, up to the bag and commence filling same. As the bag is filled it is drawn down through the bag holder G, as the platform descends and no faster. The bran is never allowed to spring back or
35 rebound after it is once through the tube C, but is pressed into every nook and corner of the bag to the same density and at the same time utilizing every inch of goods in the bag. I prefer to make the tube C, about three inches
40 diameter and six inches long and give the rammer about twelve inches stroke. When the crank is on the top center, the bran gets into tube C, and under rammer D, which is

intended to be run at a speed of about two hundred and fifty revolutions per minute. 45 The rammer may be worked by a cam, or other suitable mechanism instead of a crank and pitman.

Having described my invention, what I desire to secure by Letters Patent, and to claim, 50 is—

1. In a bran packer, the combination with a closed hopper having an inlet for the bran, and an opening for the rammer, a vertical tube at the base of the hopper in line with
55 opening for the rammer, of the rammer having at its lower end a projecting portion *d'* and an annular shoulder *d''*, and adapted to reciprocate within the hopper and tube, and means for actuating said rammer, substantially as set forth.

2. In a bran packer, the combination of the closed hopper having an inlet tube for the bran, and an outlet tube having an unob-
65 structed passage, the rammer adapted to reciprocate within the hopper and tube and project into the bag, the bag holder, the bag case, and means for counterbalancing the case, substantially as set forth.

3. In a bran packer, the combination of the
70 closed hopper having an inlet tube for the bran and an outlet tube having an unobstructed passage, the rammer adapted to reciprocate in said hopper and tube and project below the latter into the bag and pro-
75 vided with the projecting portion *d'* and the shoulder *d''*, the bag holder, and the bag case having the openings as described and for the purpose set forth.

In testimony whereof I affix my signature 80 in presence of two witnesses.

JOHN S. CAMERON.

Witnesses:

W. P. LEONARD,
LEVI IGLEHEART.