

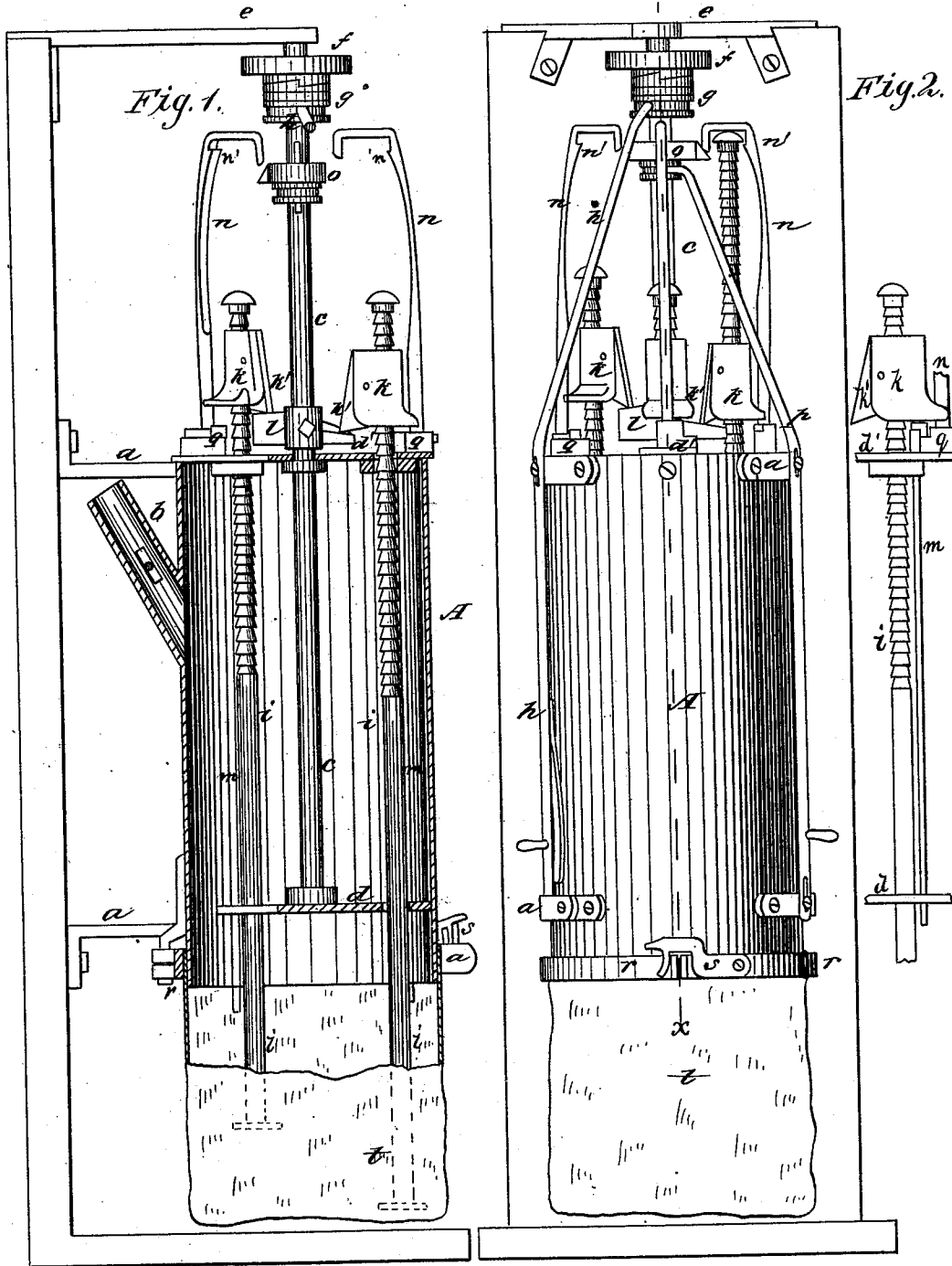
(No Model.)

W. L. WILLIAMS.

Machine for Packing Bran, &c.

No. 235,322.

Patented Dec. 7, 1880.



WITNESSES:

Henry N. Miller
C. Seagwick

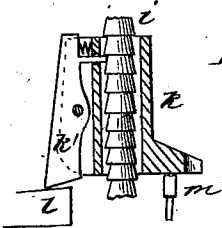


Fig. 3.

INVENTOR:

W. L. Williams

BY

Attorneys
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM L. WILLIAMS, OF SAN DIEGO, CALIFORNIA.

MACHINE FOR PACKING BRAN, &c.

SPECIFICATION forming part of Letters Patent No. 235,322, dated December 7, 1880.

Application filed June 15, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. WILLIAMS, of San Diego, in the county of San Diego and State of California, have invented a new and useful Improvement in Machines for Packing Bran and Similar Materials, of which the following is a specification.

My improved machine is intended for use in packing bran into bags, and may also be used for packing other materials.

The invention consists in a series of stamps fitted within a cylinder for vertical reciprocation in succession by a revolving shaft and cam to pack the material, which is fed through the cylinder into a bag attached at the lower end; also, in the devices to permit the upward movement of the stamps as the bag fills without interfering with their operation by the cams; also, in devices for arresting the movement of the stamps when the bag is full, and in certain other novel details of construction, all of which will be particularly described hereinafter with reference to the accompanying drawings, forming part of this specification.

In the drawings, Figure 1 is a vertical section of the machine. Fig. 2 is a front elevation of the same. Fig. 3 is a detail view.

Similar letters of reference indicate corresponding parts.

A is a cylinder, of sheet-iron, sustained by arms *a a*, that are attached to the frame of the mill or to a post or other convenient support, so that the cylinder is fixed vertically, and with its lower end the required distance above the floor.

b is the feed-spout, fitted at one side of cylinder A, and provided with a valve for cutting off the feed when desired.

c is a shaft, stepped at its lower end in a bridge-tree, *d*, that is fixed within and near the lower end of cylinder A, passing through a bridge-tree, *d'*, at the upper end of the cylinder, and having a bearing in a bracket, *e*, that is fixed above, so that the shaft passes centrally through the cylinder.

f is a loose pulley on the upper end of shaft *c*, for connection of a belt from suitable power, which pulley is formed on its under side with ratchet-teeth.

g is a collar on shaft *c*, which collar is formed

as a clutch to engage with pulley *f*, and is connected to the shaft by a groove and feather or similar device, which will permit its movement on the shaft.

h is a shipper-bar connected with collar *g*, and fitted to slide upon the outside of cylinder A, for use in throwing the clutch in and out of contact with the pulley.

i i i are the stamp-shafts, the same being fitted in apertures of the bridge-trees *d d'*, within the cylinder A, and provided at their lower ends with circular disks or shoes.

k k k are sleeves, fitted loosely one on each shaft *i*, above the bridge-tree *d'*. Each sleeve *k*, as shown most clearly in Fig. 3, is fitted with a pivoted latch or lever, *k'*, formed for engagement at its upper end with ratchet-teeth that are formed on the upper portion of the stamp-shafts *i*, while the lower end of the latch projects outward in the path of a cam, *l*, which is fixed on shaft *c*, for operation as hereinafter described. There is also a spiral spring fitted behind the latch *k*, tending to disengage the latch from the stamp-shaft.

m m m are rods, each of which is suspended by its enlarged upper end from the bridge-tree *d'*, beneath sleeve *k*, and extends loosely through the lower bridge-tree, *d*.

n n n are spring-arms rising from the bridge-tree *d'*, and having their upper ends bent inward and terminating in the path of a projection from a collar, *o*, that is fitted on shaft *c*. At the inner side of arms *n*, near the upper end, there are lugs *n'*, and the upper ends of the stamp-shafts *i* are flanged for engagement with the lugs *n'* to retain said shafts in a raised position. The collar *o* is fitted for endwise movement on shaft *c* by a groove and feather; and *p* is a shipper-bar, hung on cylinder A and connected with collar *o*, for use in raising and lowering the collar.

I have shown the sleeves *k* as engaging with the arms *n*, so that said arms form guides that prevent the sleeves from turning on the shafts *i*, and upon the bridge-tree *d'* there are fitted elastic plugs *q*, which arrest the downward movement of the sleeve and relieve the concussion.

r r are semicircular straps, hinged at the lower end of cylinder A, so that they may be closed around the cylinder to clamp the bag.

One strap, *r*, is fitted with a forked latch, *s*, that may be turned down over flanges on the ends of the straps to hold the ends firmly.

t represents the bag, which is thus held suspended from the cylinder and with the lower ends of the stamps extending to near its bottom. The bottom of the bag will preferably rest on the floor.

To operate the machine, the stamp-shafts *i* will first be raised and caught by the lugs *n'*, and a bag then attached to the cylinder by the clamping-straps *r*. The valve in the feed-pipe *b* will then be opened, and the shaft *c* set in motion by moving the shipper *h* to engage the clutch *g* with pulley *f*. The shipper *p* will then be moved to raise the collar *o*, and this by its revolution with shaft *c* will press the arms *n* outward and disengage the stamps in succession, so that they fall to place for operation by cam *l*. This cam *l*, as it revolves, first strikes the latch *k'* of each sleeve *k* and forces the upper end of the latch in contact with the shaft *i*, and then, by raising the sleeve, lifts the stamp-shaft bodily, which shaft drops again as soon as the cam has passed. The stamps are thus raised and dropped in succession, and the material packed in the bag as it runs in. As fast as the bag fills the stamps are forced up through the sleeves *k*, but their operation by the cam, as described, is not interfered with. When the bag is full the stamps will be raised sufficiently to engage with the spring-arms *n*, and at the same time the shoes of the stamps will have raised rods *m* by contact therewith, and rods *m* will raise the sleeves *k* above the cam *l*, so that the stamping operation is thereby suspended while

the shaft continues to revolve. The bag may then be removed, an empty bag put in place, and the operation be continued as before. 40

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

1. The bran-packing machine consisting of feed-cylinder *A*, provided with clamps for receiving a bag, the sliding stamps *i*, fitted within cylinder *A*, the sleeves *k*, fitted on stamps *i*, and provided with latches *k'*, for engagement with the stamp-shafts, and the revolving shaft-carrying cam *l*, all combined for operation substantially as described and shown. 45

2. In machines for packing bran or similar materials, the loose sleeve *k*, provided with pivoted latches *k'*, and the revolving cam *l*, fitted for raising the sleeves *k* by contact with the latches *k'*, combined with the ratchet-shafts of the sliding stamps, substantially as and for the purposes set forth. 50

3. In machines for packing bran or similar materials, the spring-arms *n*, provided with lugs *n'*, and the sliding collar *o*, having a projection, combined with the reciprocating stamp-shafts *i* and operating-shaft *c*, substantially as and for the purposes set forth. 55

4. The rods *m*, suspended loosely in cylinder *A*, beneath the sleeves *k*, in combination with the latched sleeve *k*, stamps *i*, and operating-cam *l*, substantially as and for the purposes set forth. 60

WILLIAM LORD WILLIAMS.

Witnesses:

AMOS SHELLENBERGER,
ARNOLD SCHNEIDER.