

(No Model.)

J. P. WARD.

ATTACHMENT TO FLOUR PACKERS.

No. 251,392.

Patented Dec. 27, 1881.

FIG. 1

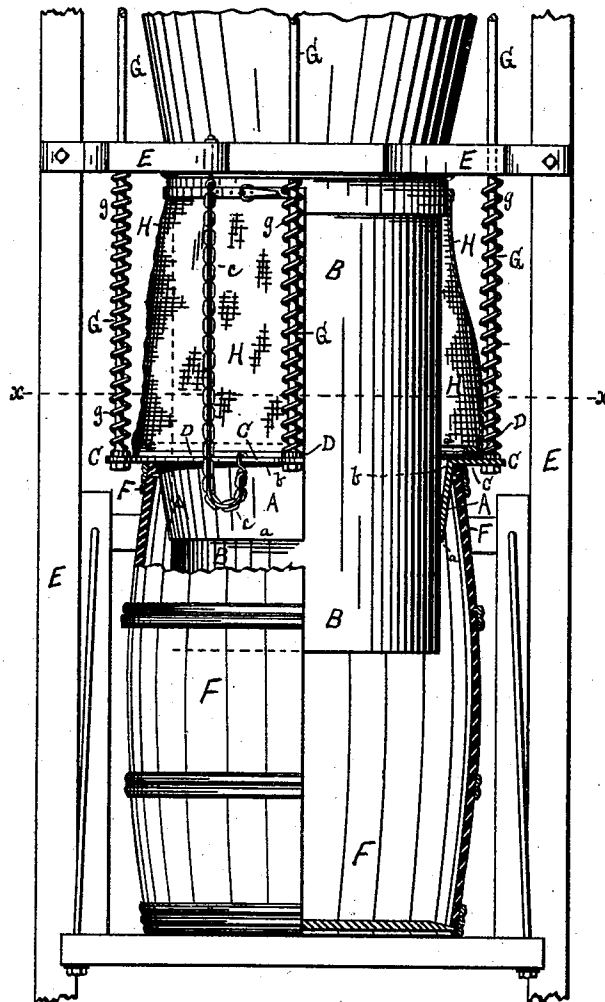
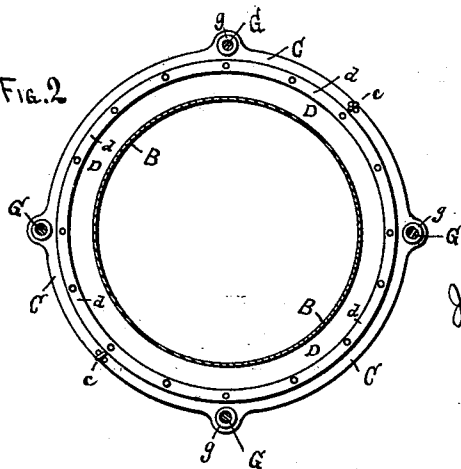


FIG. 2



WITNESSES.
H. M. Rutherford
Louis Feiser Jr.

John Patrick Ward,
INVENTOR, BY
Louis Feiser & Co.
Attys.

UNITED STATES PATENT OFFICE.

JOHN P. WARD, OF MINNEAPOLIS, MINNESOTA.

ATTACHMENT TO FLOUR-PACKERS.

SPECIFICATION forming part of Letters Patent No. 251,392, dated December 27, 1881.

Application filed November 9, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN PATRICK WARD, a subject of the Queen of Great Britain and Ireland, and a resident of Minneapolis, in the county of Hennepin and State of Minnesota, have made certain new and useful Improvements in Attachments to Flour-Packers, of which the following is a specification.

This invention relates to machines used in packing flour in barrels and other receptacles; and it consists in a movable ring or plate encircling the lower end of the packer-tube, and adapted to rest upon the upper edge of the barrel to fill the space between the barrel and packer-tube and rise and fall therewith, whereby the flour is prevented from escaping while being packed, as hereinafter set forth.

The invention further consists in a cloth bag or hood connecting the above-mentioned packing-ring and the upper part of the outside of the packer-tube, whereby the fine dust is prevented from escaping, as hereinafter set forth. I attain these objects by the use of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a semi-sectional side view. Fig. 2 is a plan view on the line *xx* of Fig. 1.

In the ordinary flour-packer, in which the empty barrel is raised upward outside the packer-tube and then caused to run downward as fast as filled, a large amount of the flour is blown out by the motion of the screw within the packer-tube; and to avoid this waste is the object of my invention, which consists in a ring, A, formed with its lower edge, *a*, fitting closely the outer face of the packer-tube B, but free to slide up and down thereon, while its upper edge, *b*, is a short distance away from it, the outer face of the ring thus being at a slight angle to the tube B, so that it will fit all sizes of barrels into which it is adapted to fit, as hereinafter explained.

The upper edge of the ring A is provided with a flat flange, C, connected to the frame E of the packer by two or more chains, *c*, which regulate the distance downward of the rings A C, but offer no obstruction to their upward movement around the tube B.

Secured to the flange C by a metal hoop or

ring, *d*, is a rubber ring, D, with its inner edge in contact with the outer surface of the tube B, thus forming a packing between them.

The flange C is adapted to rest upon the upper edge of the barrel F, while the ring A passes down into the barrel, as shown, when the largest-sized barrels are used; but when a smaller size is used the inclined form of the ring A permits it to fit its interior upper edge. By this means, on any sized barrel that the tube B will enter, the rings A C may be used, and form a packing between the tube and barrel and prevent flour being blown out at this point. The rings A C, by this arrangement, will remain in contact with the barrel at all parts of its movement up and down, the chains preventing them dropping off from the end of the tube B when the barrel is removed.

If found necessary, rods G, attached to the outer edges of the flange C and running up loosely through the frame E, and provided with coiled springs *g*, may be used to hold the rings A C down upon the barrel or force them downward when the barrel is moving downward; but ordinarily the weight of the rings themselves will be sufficient.

Some fine dust will work up between the rubber D and tube B, and to prevent this escaping to annoy the operator I attach a cloth casing or hood, H, around the tube B and flange C, to catch and retain all such dust.

The rings A C may be made in two or more pieces attached to the lower edge of the tube B, and adapted to expand and contract against the inner surface of the barrel as the latter rises and falls; but the manner shown is preferable.

What I claim as new is—

1. In a machine for packing flour in barrels and other receptacles, a packing-ring constructed substantially as described and adapted to fill the space between the packing-tube and barrel or other receptacle being filled, to prevent the escape of the flour at that point.

2. The combination of the tube B, ring A, flange C, and rubber packing-ring D and the barrel or other receptacle, F, substantially as set forth.

3. The combination of the tube B, rings A

C D, chains *c*, and frame E, substantially as set forth.

4. The combination of the tube B, rings A C D, frame E, rods G, springs *g*, and chains
5 *c*, substantially as set forth.

5. The combination of the tube B, ring A C, and cloth hood H, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN PATRICK WARD.

Witnesses:

C. N. WOODWARD,
LOUIS FEESER, Sr.