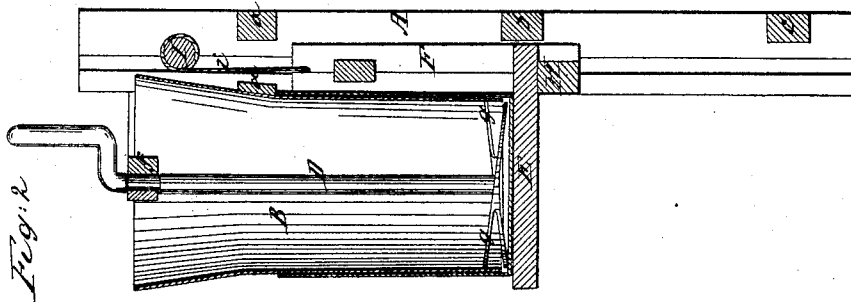
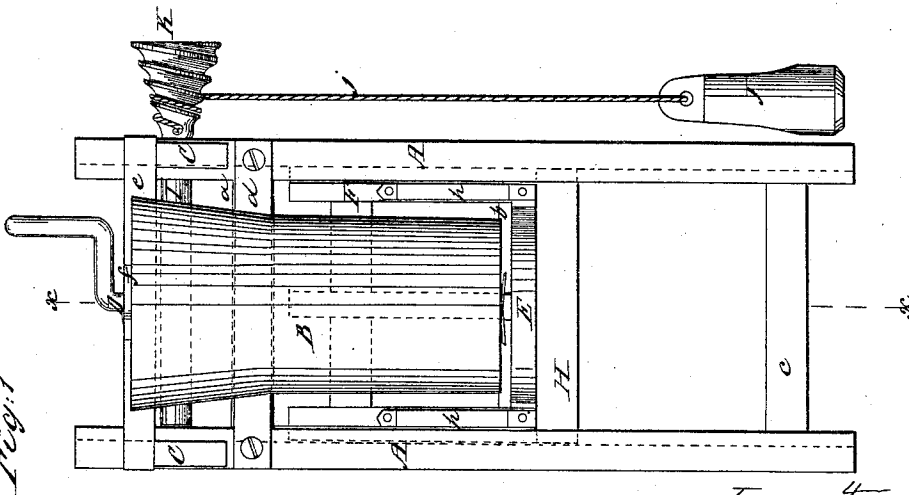


J. Beall,

Flour Packer.

N^o 38,546.

Patented May 19, 1863.



witnesses
J. W. Coombs
J. W. Reed

Inventor
J. Beall
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UNITED STATES PATENT OFFICE.

JOHN BEALL, OF BERLIN, ILLINOIS.

IMPROVEMENT IN FLOUR-PACKERS.

Specification forming part of Letters Patent No. **38,546**, dated May 19, 1863; antedated August 15, 1862.

To all whom it may concern:

Be it known that I, JOHN BEALL, of Berlin, in the county of Sangamon and State of Illinois, have invented a new and Improved Machine for Packing Flour and Meal in Sacks and Barrels; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of my improved machine. Fig. 2 is a transverse section of the same, taken at the line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention is particularly designed for packing flour and meal in sacks and barrels direct from the mill, the object being to obtain a machine which will automatically adjust itself, so as to pack with uniform closeness and thus put equal quantities in all receptacles of the same kind.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A A represent two vertical guides, which are connected together by cross pieces *a b c*, and with them constituting the frame-work to support the working parts of the machine.

B is a cylinder, attached near its upper end to and depending from the cross-bar *d*, which is attached to the front of the vertical guides.

C C are brackets, also attached to the front of the vertical guides above the cross-bar *d*, and supporting a transverse bar, *e*, which is let into notches cut in the sides of the cylinder so as to bring its top surface nearly flush therewith.

D is a vertical shaft journaled centrally in the cylinder in the box *f*, attached to the transverse bar *e*, and is furnished at its lower end with two wings, *g g*, of semicircular form, which wings are attached on opposite sides of the shaft and incline in opposite directions, forming a portion of a double-threaded screw, which, as it is revolved within the cylinder, works the flour under and packs it in the receptacle beneath it.

E is a platform or table attached to the frame F, by resting at its back end on the lower sill, H, and supported at its front end by braces *h h*. The frame F is fitted so as to move freely

up and down in and between the vertical guides, and when in its elevated position rests against the bottom of the cylinder.

I is a horizontal shaft, fitted transversely in the frame in bearings in the upper part of the vertical guides and at one end projects through its guide and has secured thereon a cone, the smaller end first. This cone has a groove extending spirally around its periphery to receive a cord or chain, *j*, which is wound upon it and has a weight, J, attached to its lower end.

The frame F, which moves up and down in between the vertical guides, is attached to the horizontal shaft I by a cord or chain, *i*, which cord or chain winds upon the shaft in a contrary direction to the weighted cord which winds upon the cone on the end of the shaft, so that while the table is descending the weight is ascending, and vice versa.

The vertical shaft, which revolves within the cylinder and does the packing with its screws, may be geared from above in any suitable manner, and it is intended to be connected by a suitable clutch-motion, so that the movement of the table up and down can be made to stop and start the packing device. The cylinder being placed so as to allow the flour or meal to be packed to fall into its upper end, and the vertical screw-shaft geared in any suitable manner, the sack or barrel to be filled and packed is placed upon the table when in its lowest position and the table run up so as to allow the sack or barrel to encompass the cylinder. The sack being stretched tightly over the cylinder is thereby held without other fastening and allowed to gradually slip off the cylinder as the sack descends in filling.

The pressure required to pack the flour is produced by means of the weight J forcing the table and receptacle placed thereon against the under side of the packing-screw. As the sack or barrel fills it consequently becomes heavier, and if the weighted cord J *j*, which is the resisting medium, was wound upon a cylindrical shaft it would not offer the same resistance to the table when the sack or barrel was half filled that it would at the commencement of the operation, because the weight of the sack or barrel in filling would counteract the effect of the weight J. To obviate this and to cause the material to be

packed to offer the same resistance to the screw when the operation is half finished as at the commencement, I provide the end of the horizontal shaft with a cone, K, and wind the weighted cord *j* upon this. By this means, as the bag or barrel fills, and consequently grows heavier, the resistance increases in exact ratio by the weighted cord winding upon the cone.

I do not claim, broadly, the employment of a screw to pack the flour, nor, broadly, the use of an adjustable platform; but

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

The arrangement of the compensating cone K with the shaft I, platform E, cylinder B, and packer D, as and for the purpose herein shown and described.

JOHN BEALL.

Witnesses:

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H. YATES, Jr.