A. H. Nordyke,

Flour Packer.

No 110,155. Patented Dec. 13. 1870.

Fig. 1

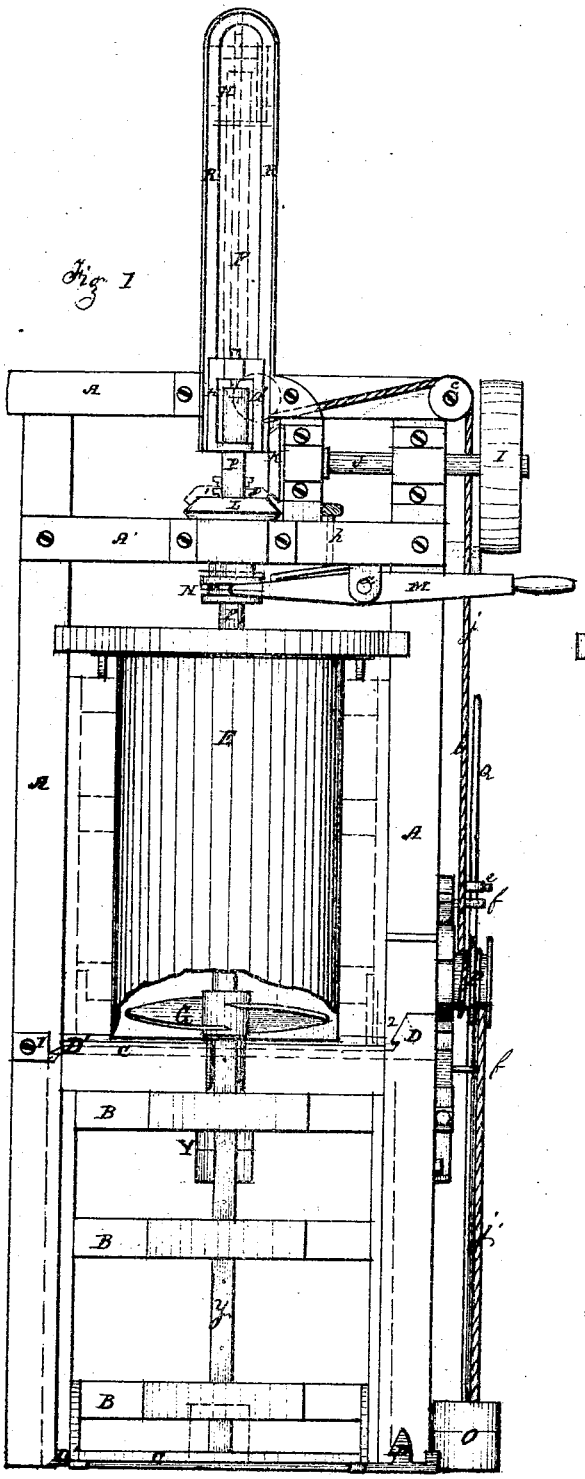
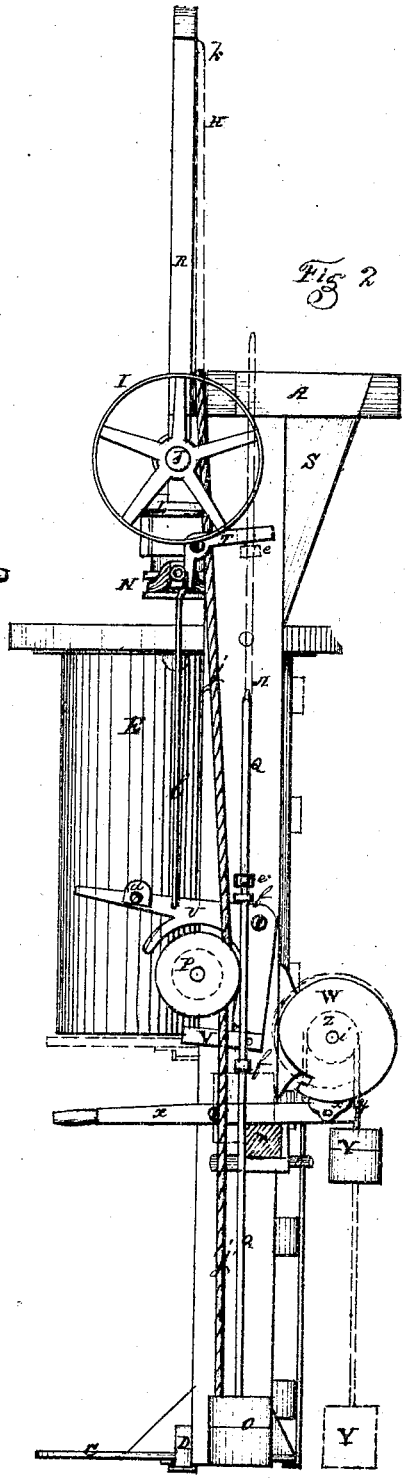


Fig. 2



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ADDISON H. NORDYKE, OF RICHMOND, INDIANA.

Letters Patent No. 110,155, dated December 13, 1870.

IMPROVEMENT IN FLOUR-PACKERS.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, ADDISON H. NORDYKE, of the city of Richmond, Wayne county, Indiana, have invented certain new and useful Improvements in Flour-Packers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the drawings which accompany this specification, forming a part of the same, and to the letters of reference thereon, in which—

Figure 1 represents a front elevation of my improved machine, and

Figure 2 represents a side elevation of the same.

Like letters refer to like parts.

The nature of my invention consists in the employment of a supplemental tube or case, in which the flour is packed or compressed previous to being deposited or discharged into the barrel or sack used to contain the same.

To enable those skilled in the art to construct and operate my improved flour-packer, I will proceed to describe the same.

In Figure 1, A A A represent an upright frame, having a cross-piece, A′, secured across the top.

Within the upright side pieces of said frame, and occupying the upper portion thereof, is a cylinder or hollow case, E, secured to the framing at the upper end rigidly in any suitable manner.

A perpendicular shaft, F, is placed in the center of the cylinder E, the lower end of which is furnished with spiral flanges, permanently affixed, while to the upper portion of the same, and above the top of the case E, a bevel-pinion, L, is attached by keys *o o*, which are constructed to slide in grooves or splines which traverse the opposite sides of that portion of the shaft F vertically, and which communicate motion to said shaft by means of the bevel pinion K on the shaft J operated by the driving-pulley I.

The lower end of the bevel-pinion L, which has its bearing in the cross-piece A′, is provided with an annular recess, N, into which are fitted the forked jaws of the lever M, pivoted at *a* to the cross-piece A′, and which is used to elevate or depress the bevel-pinion L into or out of gear with the corresponding bevel-pinion K, by which it is operated, the motion of which is shown in red dotted lines.

Secured to the top of the frame, in a proper manner, is a yoke-frame, R R, the inner surface of which is in the form of a guide, upon which a cross-head, H, has a vertical motion, being raised by the upward motion of the shaft F, and lowered by the operation of the weight O, by means of the cord or chain *j*, which passes over the pulleys P, *c*, and *d*, and is attached to the cross-head H at *k*, fig. 2.

The inner surfaces of the upright posts A A are grooved to receive a sliding frame, having a platform, C, and, on one side, curved guards B B B, intended as rests or supports for the barrel or sack, which may be placed upon the platform C to be filled.

Traversing the bottom of the platform C, and attached thereto, is a catch-bar, provided with catches D D′, which rest in keepers 1 and 2, when the platform is raised.

This catch-bar is so arranged as to slide in its bearings, and may be released by the operation of the jointed arm V of the rocking-lever U, and is restored to its place by the operation of a spring or other suitable device.

Attached to the platform C is a belt or strap, *y*, provided with holes, said belt passing over the pulley Z, and attached to which is a weight or counterpoise, for the purpose of raising the platform C when ready for use.

The rocking-lever U, fig. 2, is pivoted to the upright A, and is provided with a sliding weight, *u*, and the lower portion is curved to correspond with the periphery of the pulley P, upon which it acts as a brake, and, as the brake is applied, the downward motion of the handle of the lever operates the jointed arm V, which serves to disengage the catch-bar and its catches D D′ from the keepers 1 and 2, when the weight of the package upon the platform C causes it to descend.

In its descent the strap or belt *y* raises the weight Y over the pulley Z, which is secured upon the central portion of the shaft *i*.

Upon the end of the shaft *i* is a scroll-pulley, W, which is intended to make a little less than a revolution in the entire traverse of the platform C.

The lever X, pivoted to the framing, is provided with a rubber block, *x*, at the end opposite its handle, which rubber block has more or less pressure or friction given to it by means of a spring, *m*, graduated by a wedge, *n*.

At the beginning of the descent of the platform the rubber block *x* is opposite the smallest diameter of the scroll-pulley W, and traverses the circumference to the point of its greatest diameter, thus increasing the friction automatically, until it reaches its destination, as shown in the drawings, Figure 2.

The connecting-rod *l* is secured, at its lower end, to the rocking-lever U, and at the upper end to the lever M, and produces the simultaneous motion of these two levers.

The perpendicular rod Q passes through ears *f f*, fixed to the framing, and is provided with one or more weights at its lower end, together with a cord or chain, *j′*, which cord or chain passes over the pulley P in a contrary direction to that of the cord or chain *j*.

The motion of the pulley P winds up the cord *j′*, and, at the same time, raises the rod Q until the adjustable collar *e* with which said rod is provided comes

in contact with the trigger T, which releases the lever *m*, and allows the bevel-pinion L to drop out of gear, and stops the motion of the shaft F.

This movement elevates the end of the lever M, to which the handle is attached, which, in turn, elevates the handle of the rocking-lever U, relieving the friction upon the pulley P, and, by the same motion, operates the jointed arm V, which in turn releases the catch-bar of the platform C, allowing that to descend in the manner already described.

S, fig. 2, is a hopper, through which the flour passes into the supplemental packing-cylinder, suitably secured to the top of the framing.

The operation of the packer is briefly as follows:

The barrel, sack, or other article to be filled is placed upon the platform C, and raised up outside of and inclosing the supplemental packing-cylinder E, when the catch-bar drops into the keepers at each end, where it remains during the process of packing each parcel. The operator throws the bevel-pinions in gear by means of the lever M, which puts the shaft F and the packing-flanges G in operation. As the packing-cylinder becomes filled the shaft F rises through the center of the bevel-pinion, carrying the cross-head H with its cord or chain *j* and the weight O, which creates a pressure upon the shaft F, which is modified or increased by the pressure given upon the periphery of the pulley P by the weighted arm of the rocking-lever U, as well as by increasing or diminishing the number or size of the weights attached to the lower end of the rod Q, thus giving more or less density to the flour in process of packing in the packing-tube E.

The adjustable collar *e* on the rod Q is set at such a point as will stop operations when the desired amount is received into the packing case as the said rod is elevated in the manner just described. When the trigger T is operated by the collision with the collar *e* the bevel-pinion L recedes from gear operating the lever M, the connecting-rod *l*, the rocking-lever U, the jointed arm V, releasing the catch-bar of the platform C, when the said platform instantly begins its descent, which is governed and controlled by the lever *x* and its connections operating upon the scroll-pulley, as herein fully described.

It will be seen that, in the process of packing, the the supplemental packing-cylinder E receives all the pressure, and that no strain or pressure is exerted upon the barrel, bag, or sack to be packed, and that the flour is substantially delivered into its appropriate receptacle after having been packed or compressed to the required degree.

It will also be seen that, as the platform C descends from the point at which the packing is completed, the shaft F, with its spiral packing flanges G, follows simultaneously, forcing the contents of the cylinder E into the barrel, sack, or bag.

Having thus fully described my said invention,

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The method herein described of packing flour by holding the platform which sustains the package stationary while the flour is packed in a supplemental cylinder within the package, substantially as set forth.

2. The combination of the stationary cylinder E with the platform C, sustained during the packing operation by the catch-bar D D′ and keepers 1 and 2, arranged to operate substantially as set forth.

3. The platform C, constructed and arranged as described, in combination with the strap *y* and weight Y, used in connection with the flanges G G and supplemental packing-cylinder E, operating in the manner and for the purposes herein set forth and described.

4. The herein-described mechanism for releasing the platform C from its keepers simultaneously with throwing the wheel L out of gear to stop the packing operation, consisting of the cross-head H, cord *j*, pulley P, weighted cord *j′* O, tappet-rod Q *e*, trigger T, lever M, connecting-rod *l*, brake U, wedge V, and catch-bar D D′, all arranged relatively to one another as set forth.

5. The combination of the packing-shaft F G, cross-head H, cord *j*, pulley P, weighted brake U *u*, and weighted cord *j′* O, substantially as and for the purpose set forth.

6. The shaft *i*, the drum Z, and the scroll-pulley W, in combination with the lever X, and its spring *m* and wedge *n*, when used as and for the purposes set forth.

A. H. NORDYKE.

Witnesses:
WM. T. DENNIS,
JOHN F. STUBBS.