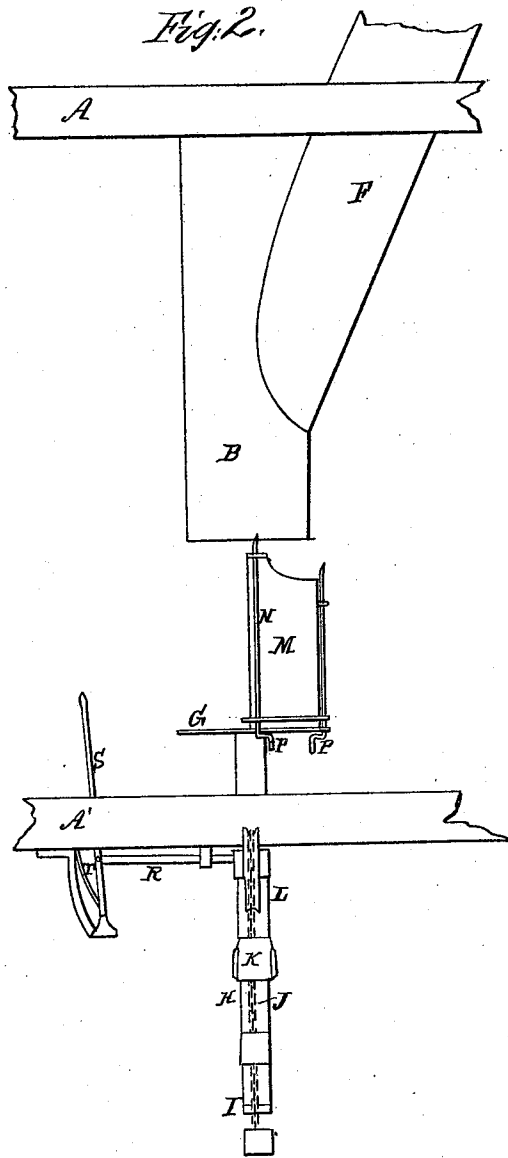
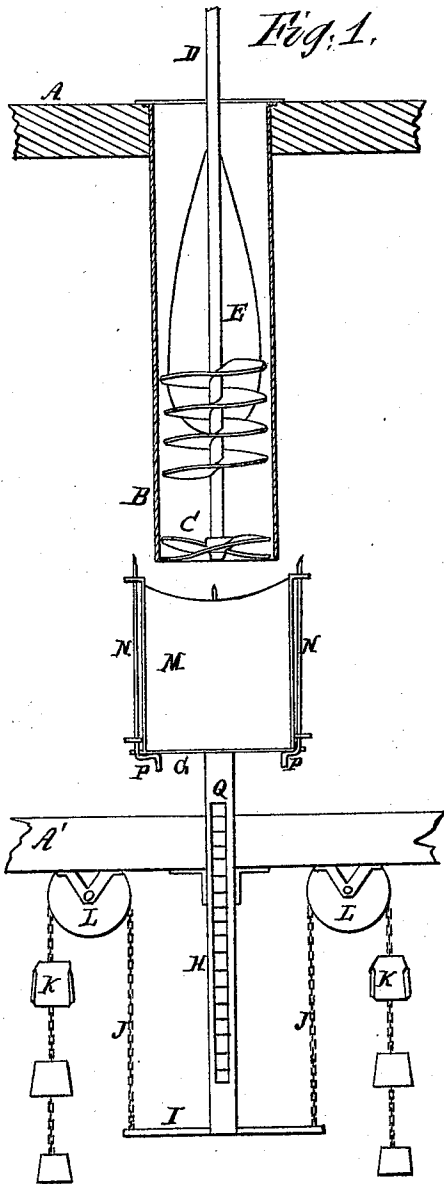


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Flour Packer.*

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UNITED STATES PATENT OFFICE.

JUDSON MATTISON, OF OSWEGO, NEW YORK.

IMPROVEMENT IN MACHINES FOR PACKING FLOUR.

Specification forming part of Letters Patent No. 19,572, dated March 9, 1858.

To all whom it may concern:

Be it known that I, JUDSON MATTISON, of the city and county of Oswego and State of New York, have invented a new and useful Machine for Packing Flour and other Substances in Sacks, Barrels, &c.; and I do hereby declare that the same is described and represented in the following specification and drawings.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, referring to the drawings, in which the same letters indicate like parts in each of the figures.

Figure 1 is an elevation of my machine with the front of the packing-tube removed to show the packer. Fig. 2 is an elevation of one side.

The nature of my invention consists in the use of a movable or stationary cylinder to protect the sack or barrel being packed, said cylinder containing a screw or some other packing apparatus arranged to work within it and force the flour or other substance to be packed out of said cylinder and pack it into the sack or barrel that surrounds it; also, in the arrangement of a traversing or yielding platform so constructed and arranged as to hold the sack or barrel up around the cylinder containing the packer and yield as the sack or barrel is filled with packed flour or other substance being packed, and in arranging a series of weights to counterbalance the weight of the material being packed on said platform, so as to pack the substance being packed uniformly from the bottom to the top.

Prior to my invention flour had been packed in barrels by the means of screw, roller, and some other kinds of packers, which were arranged to descend into the barrel to be packed after it had been raised up under the cone that supplies the flour by an adjustable platform and locked or fastened so as to hold it tight and firm against the lower end of an inverted cone which supplies the flour to be packed, and through which the packer descends nearly to the bottom of the barrel to be packed and rises gradually as the barrel is filled and packed. Now this apparatus is not adapted to packing flour in sacks, because if a sack were applied to the bottom of the cone and the packer dropped into it the packer would catch the bag and tear it or drag it from the bag-holder and wind it in a whisk around the

packer. Hence I have been induced to apply a cylinder to the lower end of the cone for the packer to work in, so as to protect the sack, which is raised around the cylinder, which cylinder protects the sack from the packer which works within it and forces the flour out into the sack to be filled and packed, forcing the sack off of the cylinder as it is filled, said sack being pressed up against the end of the cylinder and packer by a platform supported by weights or springs which allow the platform to yield gradually as the sack is filed and pushed down off of the cylinder by the packer as it fills the sack. This apparatus packs barrels as well as sacks in the same way and with equal facility.

In the accompanying drawings, A and A' may be considered as representing sections of two floors in a flour-mill surrounding my machine for packing flour in sacks or barrels. B is a cylinder, made of wood or sheet metal, (I prefer the latter for the lower portion,) containing a screw-packer C, as shown in the drawings, with a shaft D, the lower end of which shaft turns in a narrow bridge across the lower end of the cylinder, and the upper part turns in a bridge across the top of the cylinder, and is represented as broken off. This shaft may be extended to receive a gear or pulley to turn it, and its upper end should have a permanent bearing to prevent in from rising as it packs the flour. If the bearings of this shaft are properly arranged at the top of the cylinder and upper end of the shaft, the bridge at the lower end of the cylinder may be dispensed with.

E, Fig. 1, is an opening in the side of cylinder B, through which the flour is supplied to the packer from the branch cylinder or pipe F, which conducts the flour from the bolt, chest, or garner as it is wanted to be packed. There may be several of these branch pipes around the cylinder B with slides or gates in them, so that one may be stopped and another opened to change the kind of flour supplied to the packer with facility. The above-described cylinder is made stationary; but it may be made to traverse and carry the packer with it, if preferred that way.

G is a circular platform of a proper size for the sack or barrel to stand on, firmly fastened to the perpendicular traversing bar H, which bar extends down through the floor A', and

has the bar I fastened across its lower end, to which the chains or cords J J are fastened to force up the bar H and platform G by means of the weights K K, fastened to the chains J J, which chains pass over pulleys L L, fastened to the under side of the floor A', as shown in the drawings for that purpose.

In order to counteract the weight of the flour as it accumulates in the sack or barrel, other weights may be connected to the weights K K, and arranged to rest on the floor below until the sack or barrel is partially filled, so as to force the platform down and lift the weights from the floor below in succession as they are needed to balance the accumulated and accumulating quantity of flour in the sack or barrel on the platform. These additional weights, which act in succession, continue a nearly uniform pressure against the screw-packer, so as to pack the sack or barrel very uniformly from the bottom to the top.

When barrels are to be packed, they may be set on the platform G, which should be so small that it will pass up within the chine, so that the under or outside of the head of the barrel will rest upon it.

To pack sacks I take a piece of sheet metal and bend it into the form of a semicircle, so that it will extend about half-way around the platform G, so as to form a chair M on the platform for the sack which is to be filled with packed flour, and to hold it in its place I fasten two or more rods N N to the plate M and turn their ends in, as shown at P, so that they will catch under the platform and hold the bent plate of metal in its place, the plate being sprung open when it is put on, so as to let the rods enter scores in the edge of the platform to hold the plate in place. The tops of the rods N N extend above the plate of metal, and are pointed so as to catch and hold the top of the sack while it is being filled.

To hold the platform down while the full sack or barrel is removed and an empty one supplied, I make a series of ratchet-teeth in one side of the bar H, as shown at Q, Fig. 1, and arrange a sliding bolt or pawl R under the floor A', as shown in Fig. 2, and connect it to the lever S, which extends up through the floor, as shown in the drawings, and is pressed forward by the spring T, so as to let the pawl R yield as the teeth on the ratchet-bar pass down by it and press it forward between the teeth, so as to prevent the bar from rising or being pushed up by the weights and chains unless the attendant presses the lever back, so as to release the bar H and let it rise.

The machine having been constructed and completed as above described, the attendant pushes the platform down and hitches a sack

onto the tops of the rods N N, so that the bottom of the sack will rest on the platform G, and then presses back the lever S, so as to let the platform rise and carry the sack up around the cylinder B, when the screw packer C is set in motion and forces the flour out of the cylinder B and packs it into the sack, depressing the platform G and pushing the sack off of the cylinder. When a proper quantity has been packed into a bag, the attendant stops the screw-packer and depresses the platform, so as to release the bag from the cylinder, the screw-packer holding up the flour while the attendant removes the full sack and supplies an empty one and pushes the lever S back to let the platform rise and carry the sack up around the cylinder, as before described.

Barrels are packed by standing them on the platform and then let it rise, so as to carry them up around the cylinder B to be packed and pushed off the same as bags. I contemplate that a rolling packer, such as in common use or such other packer as will answer the purpose may be substituted for the screw-packer C, and that competent artisans may modify some parts of my machine so as to adapt it to the circumstances in which it is to be used, without departing from the principles or merits of my invention.

I believe I have described and represented my invention so as to enable any person skilled in the art to make and use it. I will now state what I desire to secure by Letters Patent:

1. As a protection to the sack or barrel to be packed, a stationary or movable cylinder containing a screw or some other packing apparatus arranged to work within said cylinder and force the flour or other substance to be packed out of said cylinder and pack it into the sack or barrel that surrounds it, substantially as described.

2. A traversing or yielding platform so constructed and arranged as to hold the sack or barrel up around the cylinder containing the packer, substantially as described, and yield as the sack or barrel is filled with packed flour or other substance being packed by the machine.

3. In combination with the traversing platform, one or a series of weights arranged so as to counterbalance the weight of the material being packed on the platform, so as to pack the flour or other substance uniformly from the bottom to the top of the sack or barrel.

JUDSON MATTISON.

Witnesses:

JOHN L. MILLIS,
O. J. HARMON.