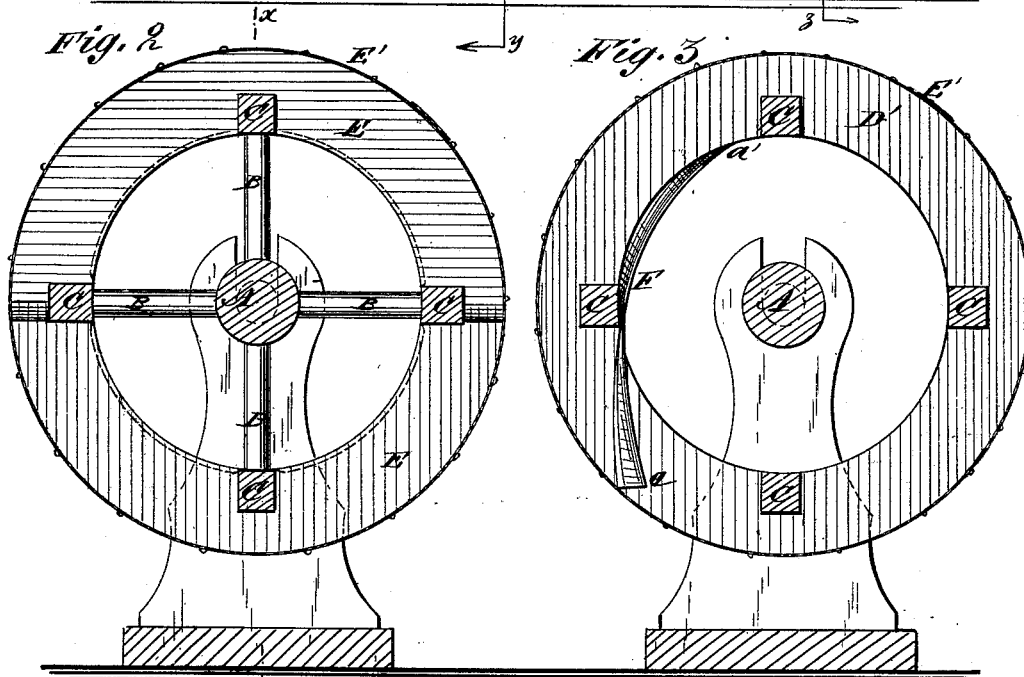
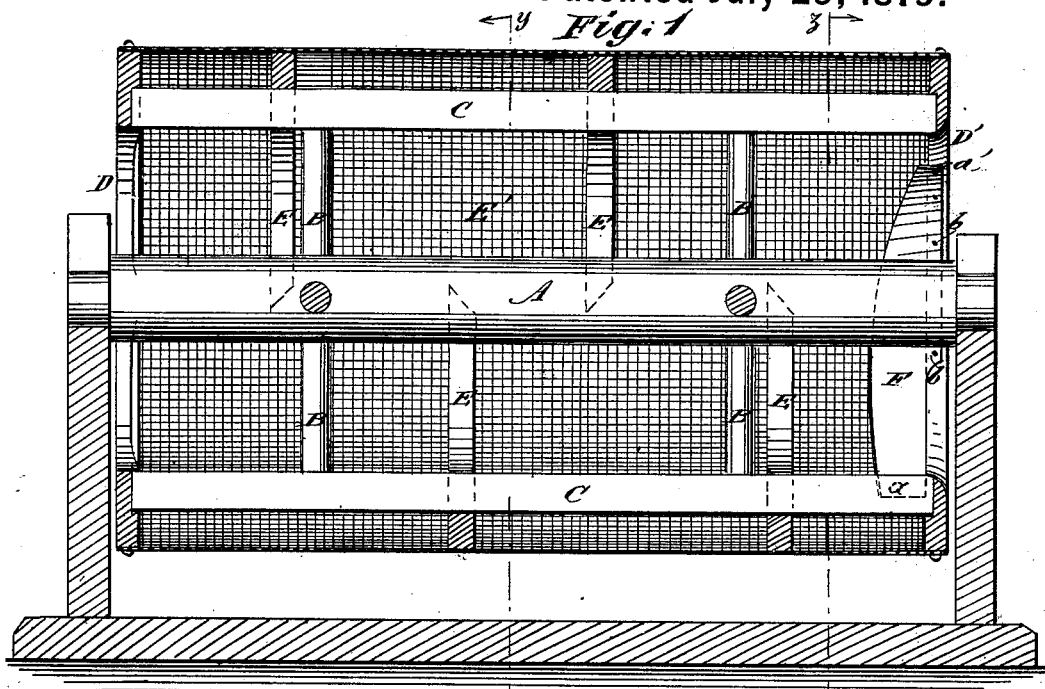


J. J. ZINN.
Flour-Bolt.

No. 218,105.

Patented July 29, 1879.



WITNESSES:
C. Neveux
C. Selgwick

INVENTOR:
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ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSIAH J. ZINN, OF UNION CITY, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND GEORGE D. GARDNER, OF WARREN, OHIO.

IMPROVEMENT IN FLOUR-BOLTS.

Specification forming part of Letters Patent No. **218,105**, dated July 29, 1879; application filed
April 7, 1879.

To all whom it may concern:

Be it known that I, JOSIAH J. ZINN, of Union City, in the county of Erie and State of Pennsylvania, have invented an Improved Flour-Bolt, of which the following is a specification.

The object of this invention is to construct the reels so that a smoother surface will be given to the bolting-cloth, for the purpose of permitting a sliding motion of the meal when it is in operation, and thus enable the flour to be bolted more evenly and cleanly than is now done.

In the accompanying drawings, Figure 1 is a longitudinal section of the improvement on line *x x*. Fig. 2 is a cross-section on line *y y*, and Fig. 3 is a cross-section on line *z z*.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A is the shaft of the reel and bolt, having arms B radiating from it at right angles. These arms, at the outer ends, are joined to the horizontal bars C, which are rabbeted at the ends in rings D D', so as to leave the outer periphery of the rings projecting some distance above the bars, as more clearly shown in Fig. 3.

E represents semicircular ribs, attached and arranged on opposite sides, and joined to the bars C at their inner edges, leaving part projecting above, as in the case of rings D D'. The manner of connecting these ribs to the bars is to place them alternately on opposite sides of the shaft A and at intervals apart, so as to leave a space between the ends.

By constructing the ribs of the reel of rings

and semicircular ribs, the bolting-cloth E forms a cylinder when placed on the same, and thus the inside offers a smooth even surface for the meal, so that it slides freely over it as it revolves, and thus bolts the meal more evenly and cleanly; also, it makes the bolting to be done more easily and rapidly (and that, too, without danger of choking) in rebolting than in the present construction.

At the tail-ring D' is a partially-spiral inclined flange, F, leading from the inside of the bolt to the inner edge of the ring, one end, *a*, being in contact with the bolting-cloth, while the other, *a'*, formed with a projecting rounded edge, *b*, is tacked to the edge of the ring, as more clearly shown in Fig. 3. The object of this is to take up the bran and offal from the bolting-cloth at the tail, and deliver it over the same outside of the bolt.

I am aware that it is not new to have ribs on the periphery of reels; but this would not allow the chop to slide gently over the entire surface of the cloth, but would carry up a portion and allow it to fall by its own gravity, producing an uneven and specky flour.

What I claim as new is—

The flour-bolt herein described, constructed with shaft A, annular heads D D', radial arms B, bars C, and alternately-arranged semicircular ribs, for supporting the cloth between the heads and permitting the free passage of the material, substantially as set forth.

JOSIAH JAY ZINN.

Witnesses:

THOMAS DONNELLY,
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