

Flour-Bolts.

Patented Dec. 31, 1872.

FIG. 1

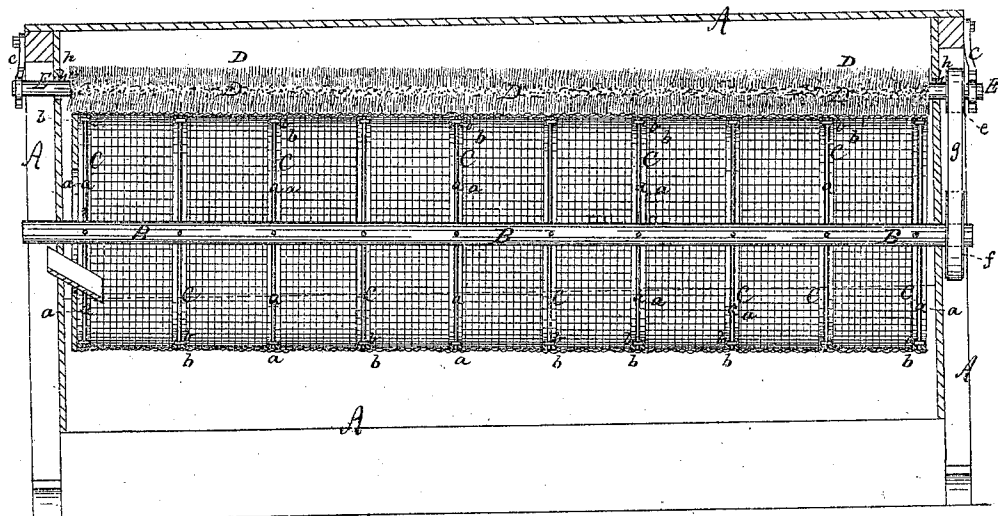


FIG. 11

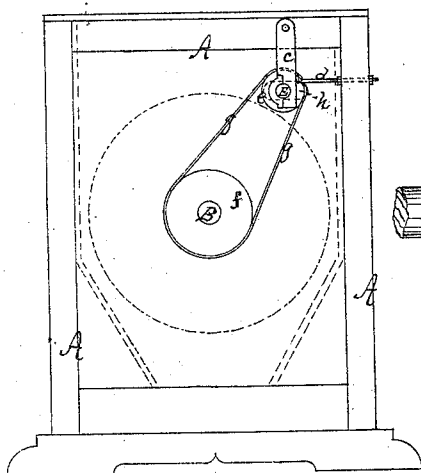


FIG. 111

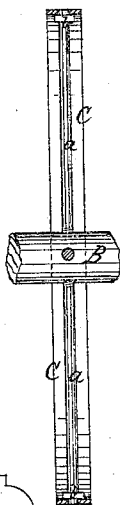
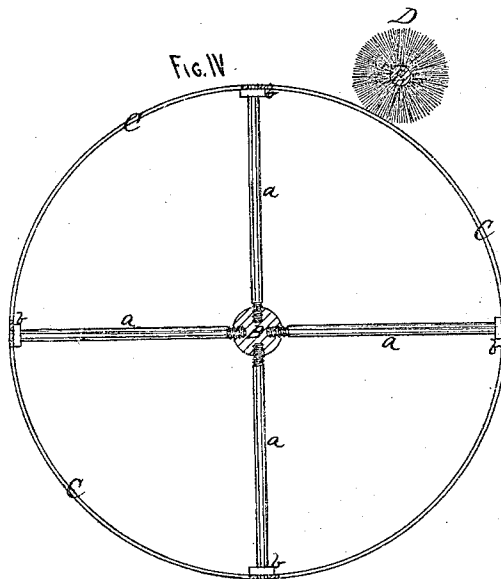


FIG. IV



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JOHN BROWN, OF NORTH BUFFALO, NEW YORK.

IMPROVEMENT IN FLOUR-BOLTS.

Specification forming part of Letters Patent No. 134,354, dated December 31, 1872.

To all whom it may concern:

Be it known that I, JOHN BROWN, of North Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Flour Bolts and Separators, of which the following is a specification:

Nature of the Invention.

The invention relates to separators or bolts for flour-mills; and the invention consists in forming the reel of a series of hoops or rings which can be adjusted when desired to cause them to assume a circular form, thereby doing away with the usual longitudinal ribs, by which means the bolting-cloth or wire-cloth may be kept in a perfect or true circle. It also consists in a revolving and adjustable brush, whereby the cloth is prevented from clogging, as hereinafter fully explained.

In the drawing, Figure 1 is a sectional side elevation. Fig. 2 is an end view, showing the adjustable hanger. Figs. 3 and 4 are enlarged views of the expanding-hoops.

A represents a frame in which a shaft, B, of the reel works. C C are the hoops or rings surrounding this shaft, and connected therewith by arms or spokes *a a*. The lower ends of these arms are provided with screw-threads which set into the shaft B or into nuts secured thereto. The other ends of the spokes have a square head or nut, *b*, attached at a short distance from the ring, forming shoulders which support the rings C, as shown in Figs. 3 and 4. By these means the hoops or rings can be adjusted so as to cause the reel to assume a circular form at pleasure. This is an important part of my invention, as the bolting-cloth may thus be always kept in a perfect circle and present an even surface to the brush, and should the shaft not be perfectly true the hoops may be so adjusted by the screw-arms as to make the outer periphery of the cloth true. It also enables me to do away with the usual longitudinal slats or ribs, making the reel much lighter, and also gives more cloth surface than when ribs are used, and by the circular shape the action is much more even and regular as well as speedy. Immediately above the bolting-cylinder I arrange a circular revolving brush, D, formed on a shaft, E, setting in oblong slots *h h'* in the frame-work and suspended by means of hangers *c c'*. This brush is made adjustable nearer to or further from the bolt-

ing-cylinder by means of rods *d d'* and slots *h h'*, and is revolved by pulleys *e f* and a belt, *g*, or their equivalents.

This brush is very important in keeping the bolting-cloth clean and removing all the bran and flour that would otherwise clog the meshes. Heretofore brushes could not be applied because the reels were not perfect circles, and the operation of the brushes upon the surface of the bolting-cloth was prevented by the projection of the ribs or slats of the reel.

Another advantage is that wire-cloth, if desired, may be used instead of bolting-cloth in connection with the brush, whereby a great saving may be made, as bolting-cloth wears quickly and is expensive. If preferred, a reciprocatory instead of a rotary movement may be given to the brush.

The hoops or rings may be made of heavy wire, light rods, or of wood, and thus obtain a very light frame for the reel.

This separator can be used for bolting, cooling, or separating; and the whole device will be found to be equally well adapted for farina, corn-meal, &c.

Claims.

1. In a flour bolt or separator, I claim the bolting-cloth supported directly upon a series of independent and disconnected rings, C C, each of said rings being contiguous to, and adjustably supported upon the reel-shaft, by the arms *a a*, as set forth, whereby said bolting-cloth can be made to present a circular form to the action of the material to be bolted, as herein shown and described.

2. I claim the combination of an adjustable rotating circular brush with the bolting-cloth and reel of a flour bolt or separator, substantially as and for the purpose specified.

3. I claim the arrangement of the brush D on shaft E, setting in slots *h h'*, suspended by hangers *c c'*, and adjusted closer to or further from the bolting-cylinder by the rods *d d'* or their equivalents, as and for the purpose hereinbefore specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN BROWN.

Witnesses:

J. R. DRAKE,

C. N. WOODWARD.