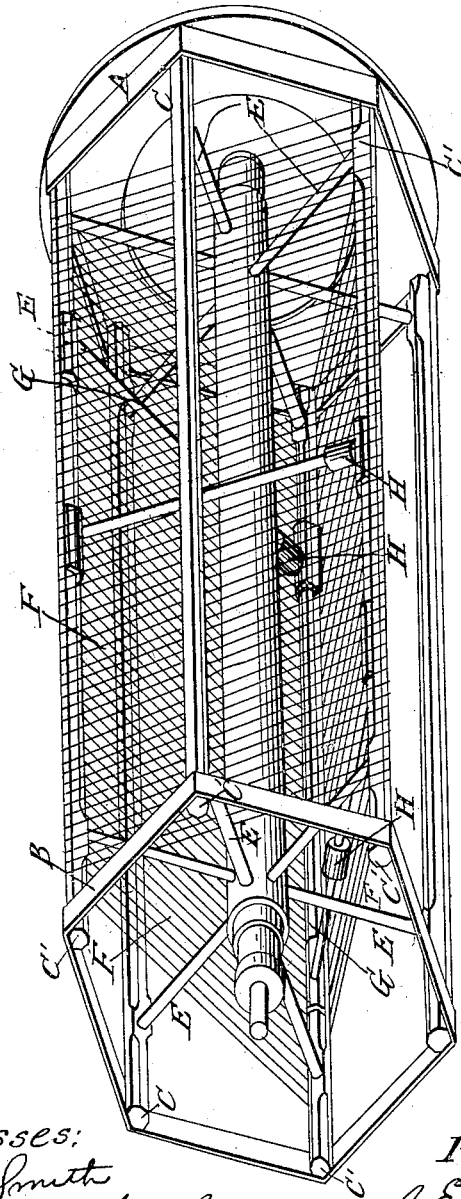


J. E. HUSTON.

Flour Bolt.

No. 49,629.

Patented Aug. 29, 1865.



Witnesses:

C. D. Smith
Edward H. Wright

Inventor:

J. E. Huston.

UNITED STATES PATENT OFFICE.

JAMES E. HUSTON, OF HILLSDALE, MICHIGAN.

IMPROVEMENT IN FLOUR-BOLTS.

Specification forming part of Letters Patent No. **49,629**, dated August 29, 1865.

To all whom it may concern:

Be it known that I, JAMES E. HUSTON, of Hillsdale, in the county of Hillsdale and State of Michigan, have made certain new and useful Improvements in Flour-Bolters; and I do hereby declare the following to be a clear and exact description of the same, reference being had to the accompanying drawing, making part of this specification, and in which my improvement is represented in perspective.

The object of my improvements is to obtain the more perfect separation of the flour from the bran and other offal; and my invention consists in an arrangement of wires stretched from alternate ribs within the frame of the bolter, so as to interpose a beating-surface between the incoming chop and the bolting-cloth, for the purpose of breaking up any aggregations or masses of the warm chop which comes from the stones, and dividing and separating them, and at the same time so acts upon the offal as to dust off the flour which adheres to it. The bolter is set in the usual position, nearly horizontal, and is constructed as to its ribs and outer covering in no way differing from those in ordinary use.

To enable others skilled in the art to which my invention appertains to fully understand and use the same, I will proceed to describe its construction and operation.

A is the head of the bolter, and B the strap or hook around the tail end.

C C C C' C' C' are the ribs upon which the cloth is stretched, but the latter is not shown in the drawing, as it would interfere with the perspicuity of the internal arrangements, wherein the novelty consists.

The bolter-frame is of hexagonal transverse sectional shape, and the ribs are secured to the shaft D by means of radial bars or spokes E.

Between the alternate bars C' C' C' are stretched a series of wires, F F, forming what might be called a "screen," were it not that it is merely interposed in the way of the chop to momentarily arrest it, as will be more perfectly explained, and is not intended to make permanent separation of materials of different grades of fineness. I have termed it a "beating-surface of wires," as that gives a correct idea of its construction and functions.

Attached to and connecting alternate ribs

C C C are rods G, on which are sliding weights or knockers H, which, as the bolter revolves, traverse the length of the rods G and come in collision with the rib C, agitating the two sections of bolting-cloth which are attached to the said rib, and jerking out the flour which clogs the interstices of the cloth.

The chop is admitted, as usual, at the head end and in the three-sided space formed by the wires F, which are not so close as to sift or separate in any degree by an accumulation of the coarser material on one side and admitting the passage of the finer particles, but merely to strike the passing chop and divide it whenever it may have become aggregated into masses; and the object of this barrier of wires is also, to whip the bran that it will part with its loose adhering flour, without the necessity of a second operation, by passage through a bran-duster for that special purpose, which latter operation unfortunately often knocks off specks of the bran into the flour, which cannot afterward be removed.

The wire I prefer to use is about No. 16 of the ordinary wire-gage, and they may be about one-sixth of an inch apart. I state these dimensions in good faith as the result of my present judgment, but do not bind myself precisely to them.

I am aware that other bolters have been constructed with interior wire-covered spaces, into which the chop from the mill is introduced, and through the meshes of which the flour and some finer offal passes before it reaches the bolting-surface; and I am also aware that bolters have been constructed having knockers which slide upon wires by their gravitation as the bolter revolves, and by means of percussion jar the bolt so as to remove the flour from the meshes with more or less effect, but I know of none that secure this result by means of the action of the wire barrier assisted by the knocking device described.

My improvement can be attached to any ordinary bolt to increase its efficiency by loosening the chop and preventing its falling dead upon the bolting-cloth.

I have not shown any of the accessories—such as the frame of suspension of the bolt or the method of rotation—as these are in no way involved in my claim.

Having thus fully, clearly, and exactly described the nature, construction, and operation of my improvements in flour-bolters, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The barrier F, consisting of the parallel wires stretched between the ribs of the bolter-frame, substantially as described, and inter-

posed between the inlet-aperture for the chop and the bolting-surface on the ribbed frame.

2. In combination with the said barrier, the knocking device, as described.

J. E. HUSTON.

Witnesses:

ALEXR. A. C. KLAUCKE,
EDWARD H. KNIGHT.