

R. W. CUNNINGHAM.

Flour Bolt.

No. 110,635.

Patented Jan. 3, 1871.

Fig. 1.

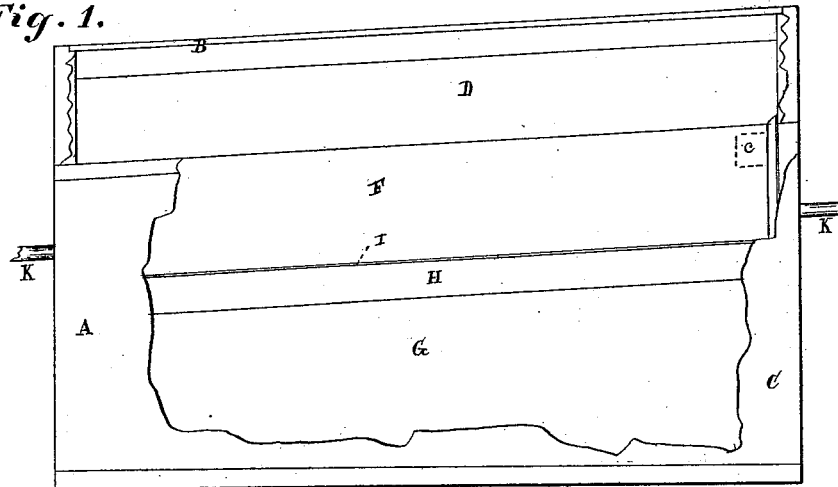


Fig. 2.

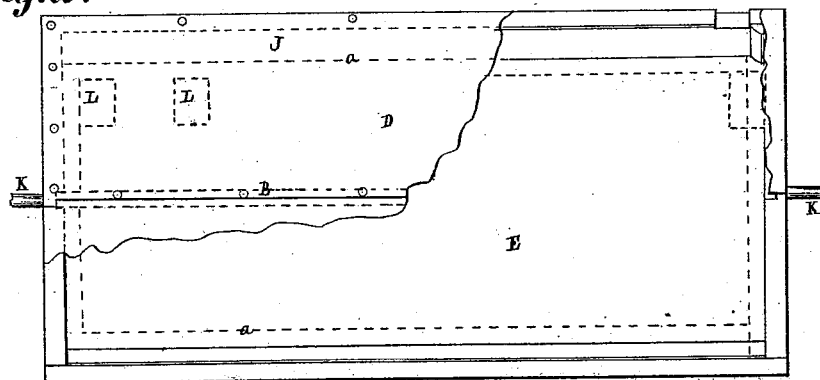
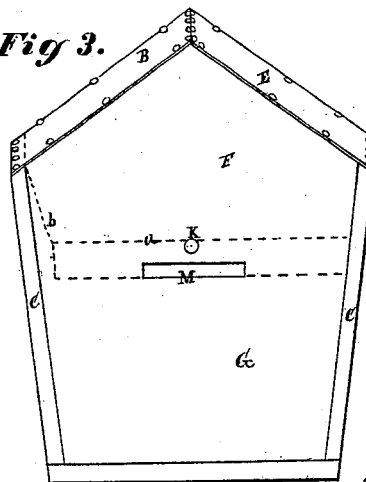


Fig. 3.



Witnesses.
W. Burridge.
D. S. Humphrey.

Inventor.
R. W. Cunningham
per Burridge & Co
Attorneys
Cleveland, O.

United States Patent Office.

ROBERT W. CUNNINGHAM, OF CHESTERVILLE, OHIO.

Letters Patent No. 110,635, dated January 3, 1871.

IMPROVEMENT IN FLOUR-BOLTS.

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

To all whom it may concern:

Be it known that I, ROBERT W. CUNNINGHAM, of Chesterville, in the county of Morrow and State of Ohio, have invented certain new and useful Improvements in Flour-Bolt, of which the following is a full and complete description, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side view of the bolt.

Figure 2 is a view of the top.

Figure 3 is an end view.

Like letters of reference refer to like parts in the several views.

This invention has for its object the combination of a flour-bolt and cooler, to which is given a vibratory motion.

The chop or meal is passed into the bolt from the stone through a spout, and falls upon the bolting-cloth. Said cloth forms the floor of an upper chamber or section of the bolt, and through which it is sifted into a lower section or chamber, and discharged therefrom to the outside, as herein more fully described.

In the drawing, fig. 1—

A represents the flour-bolt, the side of which is shown as being broken away, in order that the inside may be seen.

Said flour-bolt consists of an oblong case, having an angular or double top, B. The sides C taper downward from the top, as shown in fig. 3.

The top of the case is covered with bolting-cloth D, whereby the upper part is ventilated. The top, however, may be made tight by a board covering, as represented on the side E.

Said case is divided into an upper and lower compartment or chamber, F G, fig. 1, by a partition, H, also indicated by the dotted line a, in figs. 2 and 3. Said partition consists of a light frame-work, fitted to the inside of the case, and covered with bolting-cloth I, fig. 1.

The frame is so fitted to the case that one side thereof does not touch the inside of the case, but is a short distance therefrom, leaving a space, J, fig. 2, between the edge of the frame and the side of the case.

The space J referred to is not open between the two compartments, but is covered by a portion of the bolting-cloth used for covering the frame, the cloth being continued from the edge of the frame upward to the top of the side of the case, and to which it is secured, as indicated by the dotted line b, fig. 3. By this means the space is closed, but not so completely as to prevent ventilation nor prevent the fine meal from sifting through to the chamber below.

The practical working of this apparatus is as follows:

The bolt is hung on the journals K, in any suitable frame, or a bolting-chest, which is then made to vibrate by means of any appropriate mechanism, arranged for that purpose.

The chop or unbolted meal, direct from the stone, is conveyed into the bolt through a spout in the top thereof, and which then falls upon the cloth of the partition, through which the fine meal is sifted by the vibratory movement of the bolt, which shakes and throws the meal from side to side and against the cloth covering the space J, along the side of the partition. The fine meal sifted through falls upon the floor of the lower compartment or section, and from which it escapes through the openings, indicated by the dotted lines L, seen in the end of the floor of the bolt, whereas the bran or coarse meal is conveyed down to the lower end of the partition or bolting-floor, and discharged therefrom through the opening M, fig. 3.

The heat of the lower compartment escapes through the partition and through the space J into the upper compartment, thence to the outside through the cloth covering of the bolt and the side openings indicated by the dotted lines c, in the upper side of the bolt. By this means the fine meal is sifted from the coarse bran, &c., none of which lodges about in the bolt to sour, mildew, or breed worms, as is often the case in the ordinary mode of bolting.

The ventilation of this bolt is such that the flour is sufficiently cooled to admit of its being put up in sacks or barrels immediately on leaving the bolt; hence, the cooling apparatus usually employed for this purpose is dispensed with, thereby rendering the process of the manufacture of flour less expensive.

Claim.

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

The herein-described vibratory flour-bolt, constructed with tapering sides C, cloth partition H, whereby said bolt is divided into an upper and lower chamber, F G, space J when covered with bolting-cloth b, openings M and L, and cloth top B, all arranged in relation to each other for operating in the manner substantially as described, and for the purpose set forth.

ROBERT W. CUNNINGHAM.

Witnesses:

W. H. BURRIDGE,
C. K. CUNNINGHAM.