## C. T. HANNA.

FLOUR BOLT.

No. 110,456.

Patented Dec. 27, 1870.

Fig.1.

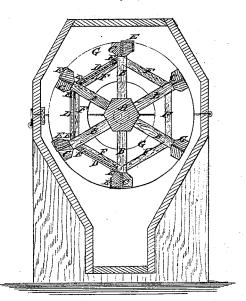
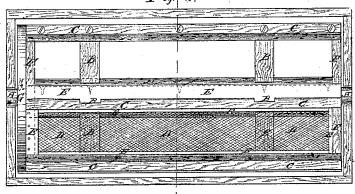
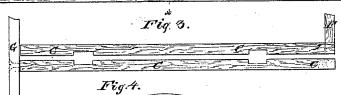


Fig. 2.









Attornous

## United States Patent Office.

## CYRUS T. HANNA, OF KEOKUK, IOWA.

Letters Patent No. 110,456, dated December 27, 1870.

## 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, CYRUS T. HANNA, of Keokuk, in the county of Lee and State of Iowa, have invented a new and useful Improvement in Flour-Bolts; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a vertical cross-section of my improved

flour-bolt taken through the line x x, fig. 2.

Figure 2 is a top view of the same.

Figure 3 is a detail view of one of the ribs.

Figure 4 is a detail view of a portion of the tailend of the bolt.

Similar letters of reference indicate corresponding

parts.

My invention pertains to improvements in flourbolts, and consists in the construction and arrangement of certain parts of the frame, as hereinafter described.

A is the shaft;

B are the arms; and

C are the ribs of the reel.

The ribs C are made in two parts, which are secured to each other and to the outer ends of the arms B by screws or bolts.

D is the bolt-cloth, which is made in sections, each section being of the size of the space between the

To the side and end edges of each section are attached strips, E, of ticking, five, more or less, inches in width.

In securing the bolt-cloth to the reel the tickings E, along the adjacent edges of two pieces of the bolt-cloth D, are placed together and inserted between the parts of the ribs C, care being taken to place the pieces of bolt-cloth upon the opposite sides of the arms B of that rib.

The parts of the rib C are then secured to each other and to the ends of the arms B by serews or bolts.

The tickings along the edge of one of these pieces of the bolt-cloth and along the edge of a third piece of the bolt-cloth are then placed together and secured between the parts of the next rib, in the same manner, and so on until the cloth is all secured in place.

Should any part of the cloth be too slack, the screws or bolts may be loosened and the cloth stretched by drawing the outer edges of the strips of ticking between the parts of said rib outward and again tightening the screws or bolts.

The strips of ticking E, at the ends of the pieces D of the bolt-cloth, are attached to the end pieces

One end of each tail-piece or strip F is securely attached to the end of one part of the ribs C, and the other end is left free, as shown in fig. 4, making the other part of said ribs free or moyable.

In the same way the other ends of the stationary parts of said ribs are secured to the head-piece G, while the ends of the other or movable parts of the ribs are left free, as shown in fig. 4.

By this construction the bolt-cloth can be securely and conveniently attached to the ribs, can be readily stretched or tightened, when desired, and will give a smooth surface of cloth upon the interior of the bolt.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The arrangement of the fast and loose ends of the tail-pieces F with the ends of the stationary and movable parts of the ribs C, substantially as herein shown and described, and for the purpose set forth.

2. The arrangement of the head-piece G with the ends of the stationary and movable parts of the ribs C, substantially as herein shown and described, and for the purpose set forth.

CYRUS T. HANNA.

Witnesses:

ALEX. TOLMIE, C. HENRY ALBERS.