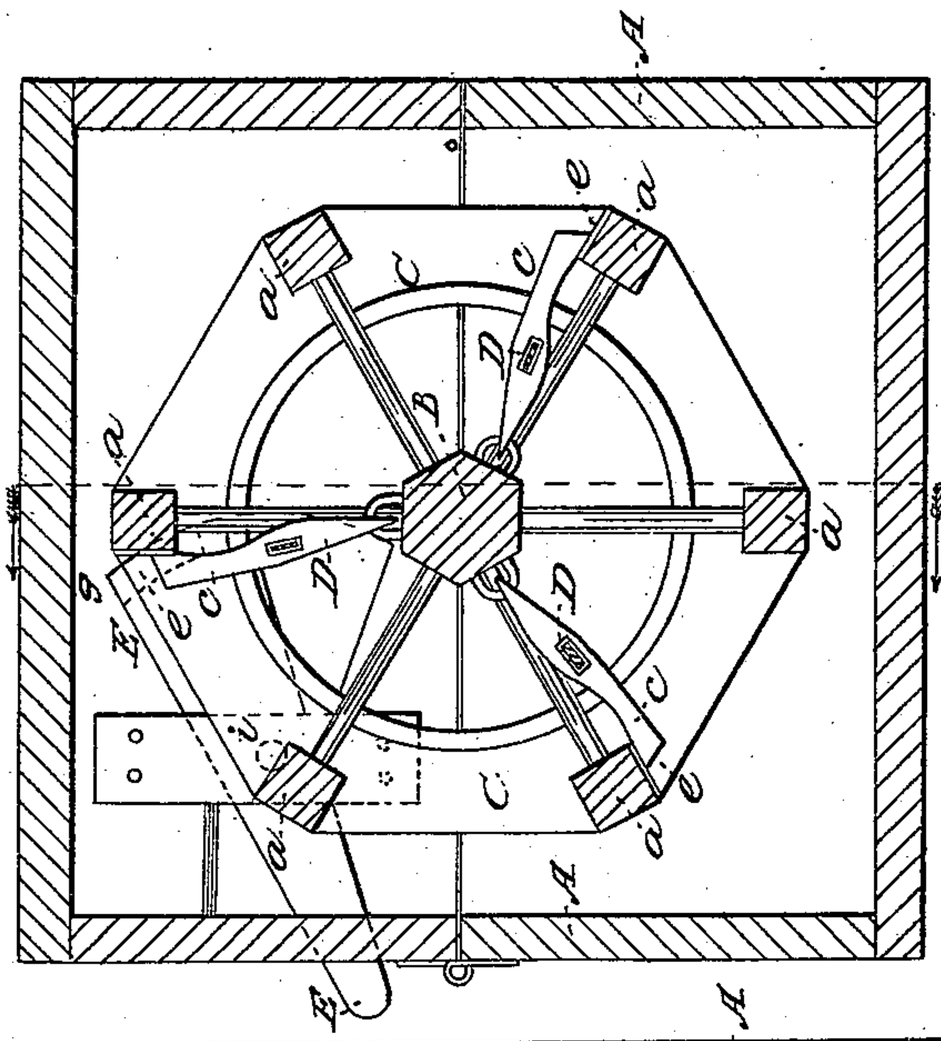
J. W. WALTERS.

Flour Bolt.

No. 64,603. Patented May 7, 1867.

FIG. 2



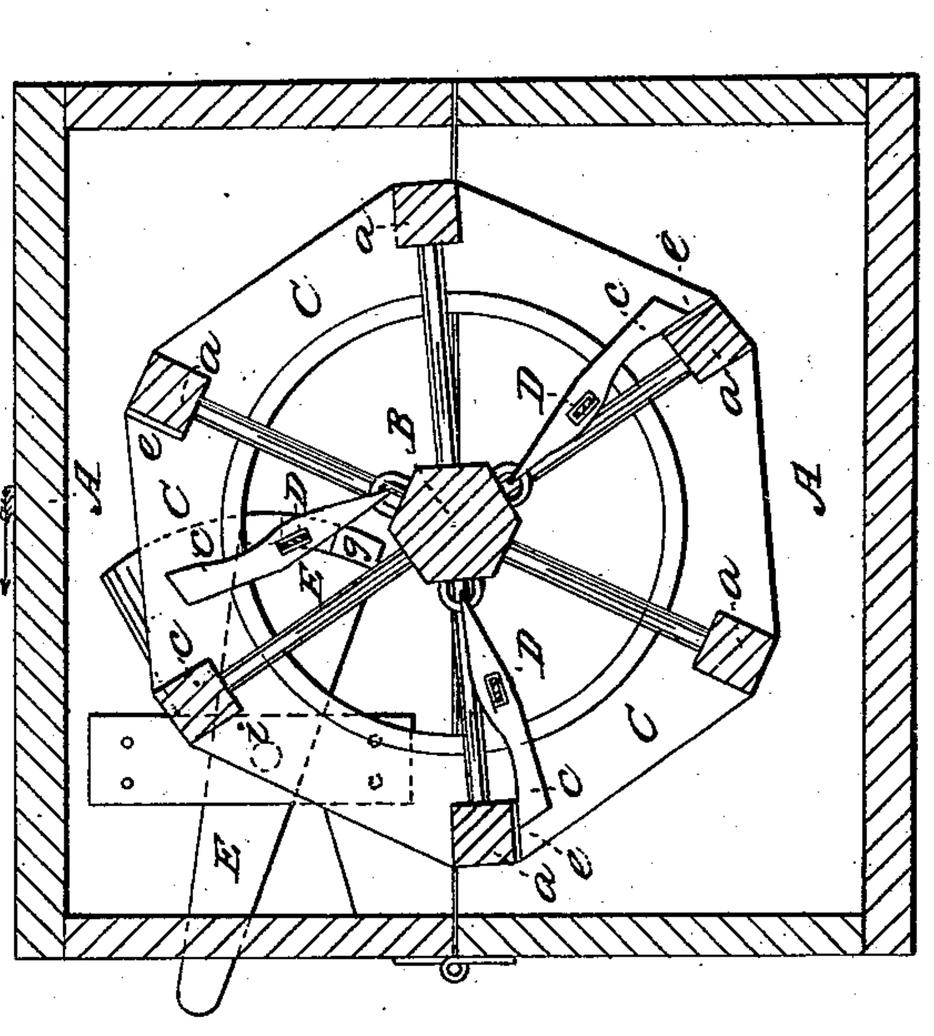


FIG. 3

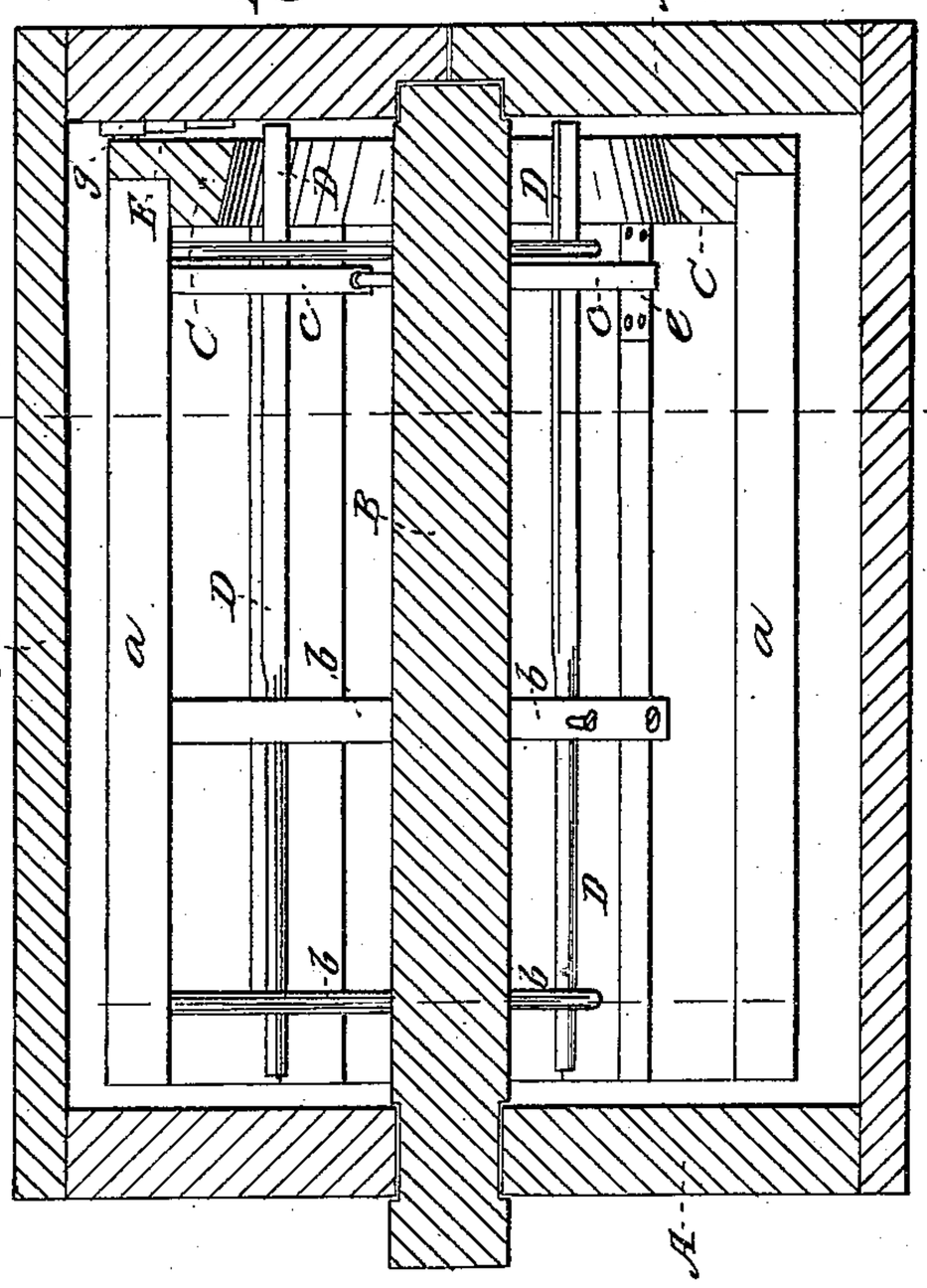
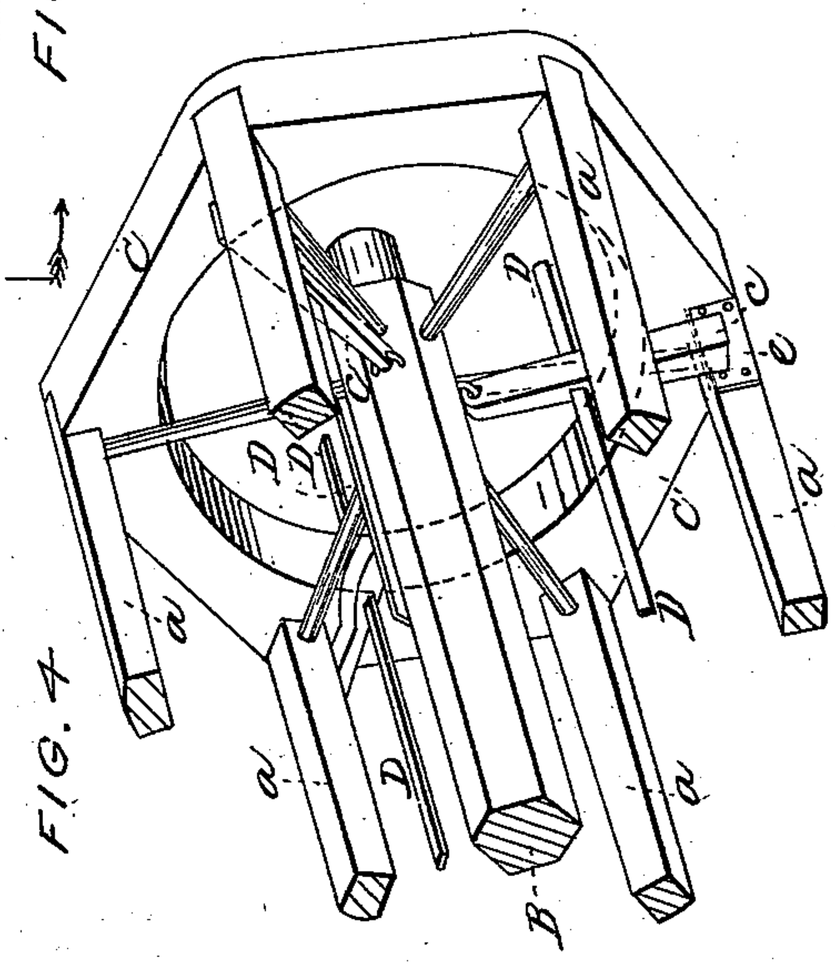


FIG. 1

FIG. 4



WITNESSES:

R. F. Campbell

John Schafer

INVENTOR:

J. W. Walters

by Mason, Fenwick & Lawrence

United States Patent Office.

J. W. WALTERS, OF TIFFIN, OHIO.

Letters Patent No. 64,603, *dated May* 7, 1867.

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, J. W. WALTERS, of Tiffin, in the county of Seneca, and State of Ohio, have invented a new and improved Flour-Bolt Shaker; and I do hereby declare that the following is a full, clear, and exact description thereof. reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section, taken in a vertical plane through the improved bolting arrangement.

Figure 2 is a transverse section, taken through fig. 1, in the vertical plane indicated by red line *x x*, showing the segment which acts upon the knockers moved out of action.

Figure 3 is a similar view of the same parts, showing the segment adjusted so as to operate the hammers or knockers.

Figure 4 is a sectional perspective view of the bolting-reel, showing the arrangement of the knockers and their springs.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improved device for jarring bolting-reels so as to facilitate the passage of flour through bolting-cloths, and consists in the employment within a bolting-reel of a number of pivoted hammers, which are arranged so as to strike upon the reel-ribs, and which are provided with springs that pass through the hammers, and project from one end of the reel so as to be acted upon by an adjustable stop as the reel is rotated, said stop being so constructed and arranged as to admit of the giving of a more or less forcible blow to the hammers, or to stop their motion at pleasure, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

Within the bolting-chest A is arranged a rotary reel, which may be made in the usual well-known manner, of longitudinal ribs *a a*, secured around a central shaft, B, to radial arms *b b*, which project from this shaft, as shown in the drawings. Within this reel, and near its open head C, a number of hammers *c c c*, are suitably pivoted to the central shaft B, and project outward so that they will strike upon their respective ribs *a a a*, upon metal plates *e*, which may be secured upon the reel-ribs to protect them from rapid wear. D D D are spring-rods, which pass longitudinally through the reel, and which are secured at their ends furthest from the hammers *c c* to the radial arms of the reel, as shown in the drawings, fig. 1. The free ends of these spring-rods D pass through or are suitably attached to their respective hammers so as to forcibly hold the outer ends of the latter against their ribs, as shown in figs. 2, 3, and 4. The free ends of the spring-rods D project through the open head C of the reel so as to be acted upon by an adjustable segment which is applied to the inside of the chest A. The segment E is pivoted at *i* to the chest A, and seated into a recess therein, so that only that portion of this segment which acts upon the ends of the spring-rods D will project beyond the surface of the end of the chest. The curved end of the segment E has a stepped rib, *g*, formed on it, which rib serves as a means for springing the free ends of the rods D backward, as the reel is rotated, and then releasing them so as to cause the hammers to strike their respective ribs, and thus jar or shake the reel-frame and bolting-cloth. The stepped rib *g* is designed for enabling the attendant to give a more or less forcible blow to each hammer by adjusting the segment E so as to bring the proper step of said rib into action. For this purpose one end of the segment E projects through the chest A, and may have a lever or connecting-rod attached to it. By adjusting segment E to the position shown in fig. 2 the reel will rotate without bringing the projecting ends of the hammer-springs D in contact with either one of the steps on the curved rib *g*, consequently the hammers will not strike. When the segment is moved to the position shown in fig. 3 the stepped rib *g* will alternately arrest and release the hammer-springs as the reel rotates, and cause the hammers to strike upon the reel-ribs, as above explained.

It will be seen by reference to figs. 1, 2, and 3, that the device which acts upon the hammer-springs is so arranged as to cause the hammers to strike at the highest point of the reel, so as to cause the flour which is carried up to such point to fall through a space which is equal to the inner diameter of the reel. This I effect with hammers which are pivoted to the reel-shaft inside of the reel, the force of the blows of which hammers can be regulated at pleasure, and while the reel is in motion. By having the spring-rods D pass through the hammers at a point intermediate between their striking and their hinged or pivoted ends, as shown, the springs serve as the handles of the hammers, and thus the necessity of using a handle and a spring made separate from

one another is avoided. The spring handles serve as the support of the hammer, and also to return them with a blow against the ribs, and thus centrifugal force cannot prevent their acting against the ribs.

I am aware of D. Lewis's patent, and do not claim anything shown in said patent, but what I do claim, is—

1. Construeting the rod that actuates the hammer for a bolting-reel, with a spring capacity in itself, for the purposes described and substantially as set forth.

2. The combination of the stepped segment E and the spring-rod D that actuates the hammer, with a flour-bolting reel, substantially as described.

3. The pivoted segment E, when constructed with steps *g*, upon its point of contact with the spring-rod D, and made adjustable for the purposes described.

4. The arrangement of the segment E with its stepped ribs in the top of the bolting-reel case, substantially in the manner and for the purpose described.

J. W. WALTERS.

Witnesses:
A. H. BYERS,
WM. W. CRILEY.