

F. B. LEWIS.

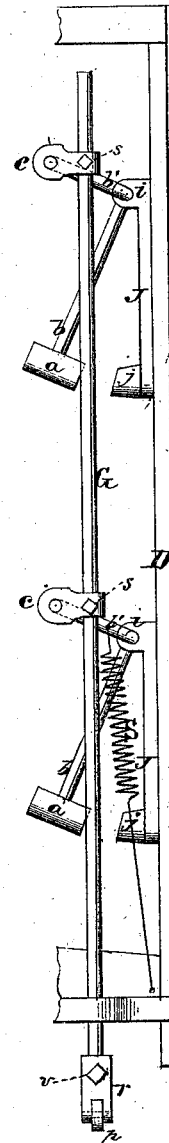
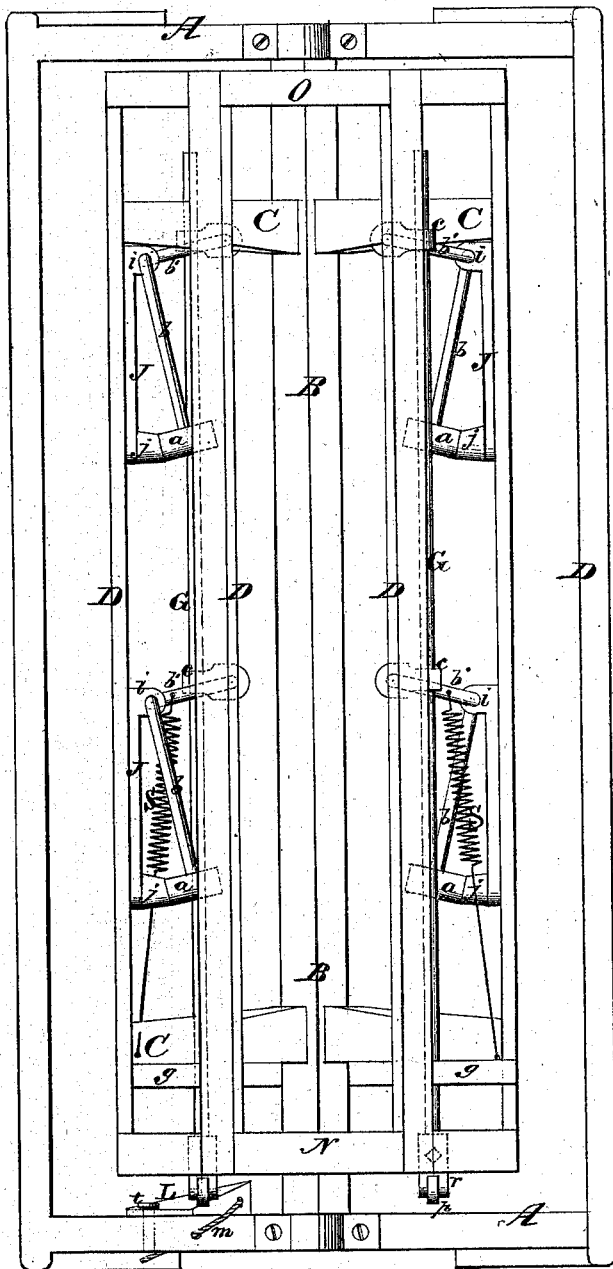
Improvement in Flour-Bolting Reels.

No. 115,331.

Patented May 30, 1871.

Fig. 1

Fig. 2



Inventor

Witnesses:
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J. Campbell.

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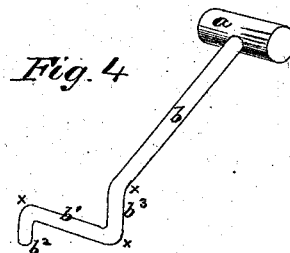
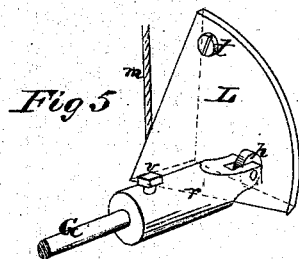
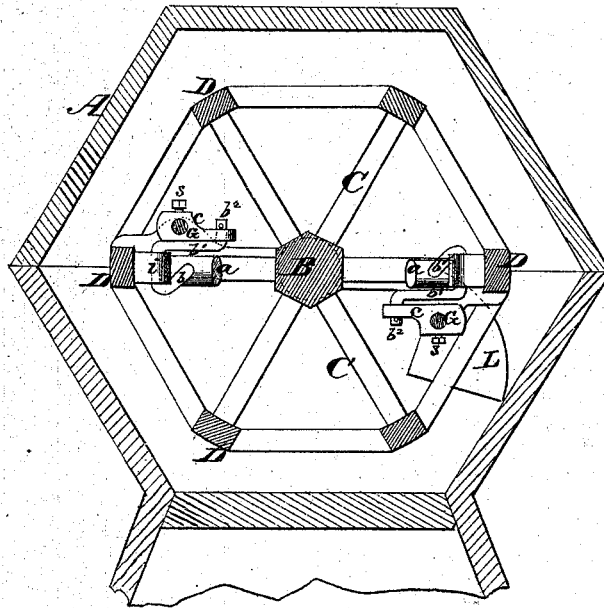
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Fig. 3



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UNITED STATES PATENT OFFICE.

FITCH B. LEWIS, OF TIFFIN, OHIO.

IMPROVEMENT IN FLOUR-BOLTING REELS.

Specification forming part of Letters Patent No. 115,331, dated May 30, 1871.

To all whom it may concern:

Be it known that I, FITCH B. LEWIS, of Tiffin, in the county of Seneca and State of Ohio, have invented certain Improvements in Bolting-Reels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1, Plate 1, is a top view of the reel as seen by removing the upper half of the reel-chest. Fig. 2, Plate 1, is a view of two hammers and their actuating mechanism, showing the hammers raised from their anvils ready to strike. Fig. 3, Plate 2, is a cross-section of the bolting-chest and the reel. Fig. 4, Plate 2, is a perspective view of a hammer and its rod. Fig. 5, Plate 2, is a perspective view, showing the wedge-cam, and also an anti-friction roller on one of the actuating-rods.

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

This invention relates to improvements on mechanism for operating hammers or knockers upon a bolting-reel for the purpose of jarring the reel during the operation of bolting flour. The nature of my invention consists, first, in cranking each hammer-handle in such manner that the handle serves as a pivot for the hammer, and also a means whereby the hammer can be operated by a rod having an endwise motion, as will be hereinafter explained; second, the anvil-bed, constructed with an eye at one end and with a raised anvil at the other; third, in a segment for operating the actuating-rods, which is beveled and so arranged inside of the reel, at one end thereof, as to be capable of adjustment for regulating the force of the blows of the hammer upon their anvils; fourth, in providing each actuating-rod with an anti-friction roller and applying this roller to a detachable socket, as will be hereinafter explained.

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

In the accompanying drawing, A represents a bolting-chest, within which a reel is arranged to rotate freely. This reel may be constructed in the usual well-known manner. It consists of a central shaft, B, from which arms C C

radiate, which have attached to them the reel bars or ribs D D, six, more or less, in number. G G are the hammer-actuating rods, two of which are represented in the drawing, arranged on opposite sides of the reel and parallel to the reel-shaft B. As the hammer mechanism is precisely alike on both sides of the shaft B, I will, for simplicity of description, refer to the mechanism on one side of this shaft. The rod G extends nearly the whole length of the reel, and near one end it passes through an arm, g, and is guided by said arm. That end of the rod G nearest this arm has a socket-bearing, r, secured on it by means of a set-screw, V; and to the end of this socket-bearing an anti-friction roller, p, is applied, which rolls against the surface of a cam-segment, L. By thus applying the roller to a removable piece, r, it will be seen that when the pulley wears out its place can be readily supplied without detaching the rod G. The cam L, which gives endwise motion to the rod G, is a beveled segment, which is hung inside of the chest A, at one end thereof, and which can be adjusted for giving more or less throw to said rod by means of a rope or chain, m. This segment L is pivoted at t, so that it can be adjusted within the range of the pulley p on rod G, as the pulley revolves with the reel. The drawing shows the rope m attached directly to the segment L; but a modification of this plan would be to apply an arm to the back of the segment and attach the rope to the end of this arm. To the reel-rib D, inside thereof, I secure narrow anvil-beds J J, each one of which has an anvil, j, formed on one end, and an eye-bearing, i, formed on the other end. To each bed J a hammer is pivoted in the following manner: a represents the hammer-head, and b its handle. The handle is bent at three points, x x x, (see Fig. 4,) in such manner as to form the pivotal part b³, which is received by the eye-bearing i; also a crank-arm, b¹, and a pivotal portion, b². The arm portion extends from the eye-bearing i to the inner end of an attaching-block, c, which is made fast to the rod G by a set-screw, s. Thus it will be seen that each hammer is attached to the anvil-bed J and to a block, c, on the actuating-rod G, by means of a single rod, which is bent so as to form the pivotal connections and the crank-

arm. The hammers are held down upon their anvils by means of a spring, S, applied as clearly shown in Figs. 1 and 2.

Having described my invention, I claim—

1. The hammer-handle, cranked at $x x x$ so as to form the pivotal portions $b^3 b^2$, and the crank-arm b^1 , in combination with the eye-bearing i and the attaching-block c , and the endwise movable rod G, substantially as described.

2. The combination, with the bolt-bar D, of the rod G, anvil J provided with raised portion j and eye i , hammer a having crank-handle $b b^1 b^2$ and actuated by spring S, when constructed, arranged, and operating as shown and described, for the purpose set forth.

3. The combination of the pivoted cam or beveled segment L, constructed, arranged, and operated as described, and the endwise movable rods with hammers attached to them, whereby the blow of the hammers can be regulated and controlled without stopping the reel by simply adjusting the segment directly, as herein set forth.

4. The bolting reel-hammer actuating-rod, consisting of the portion G, the socketed detachable portion r , roller p , and set-screw v , as herein described, and for the purpose set forth.

F. B. LEWIS.

Witnesses:

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