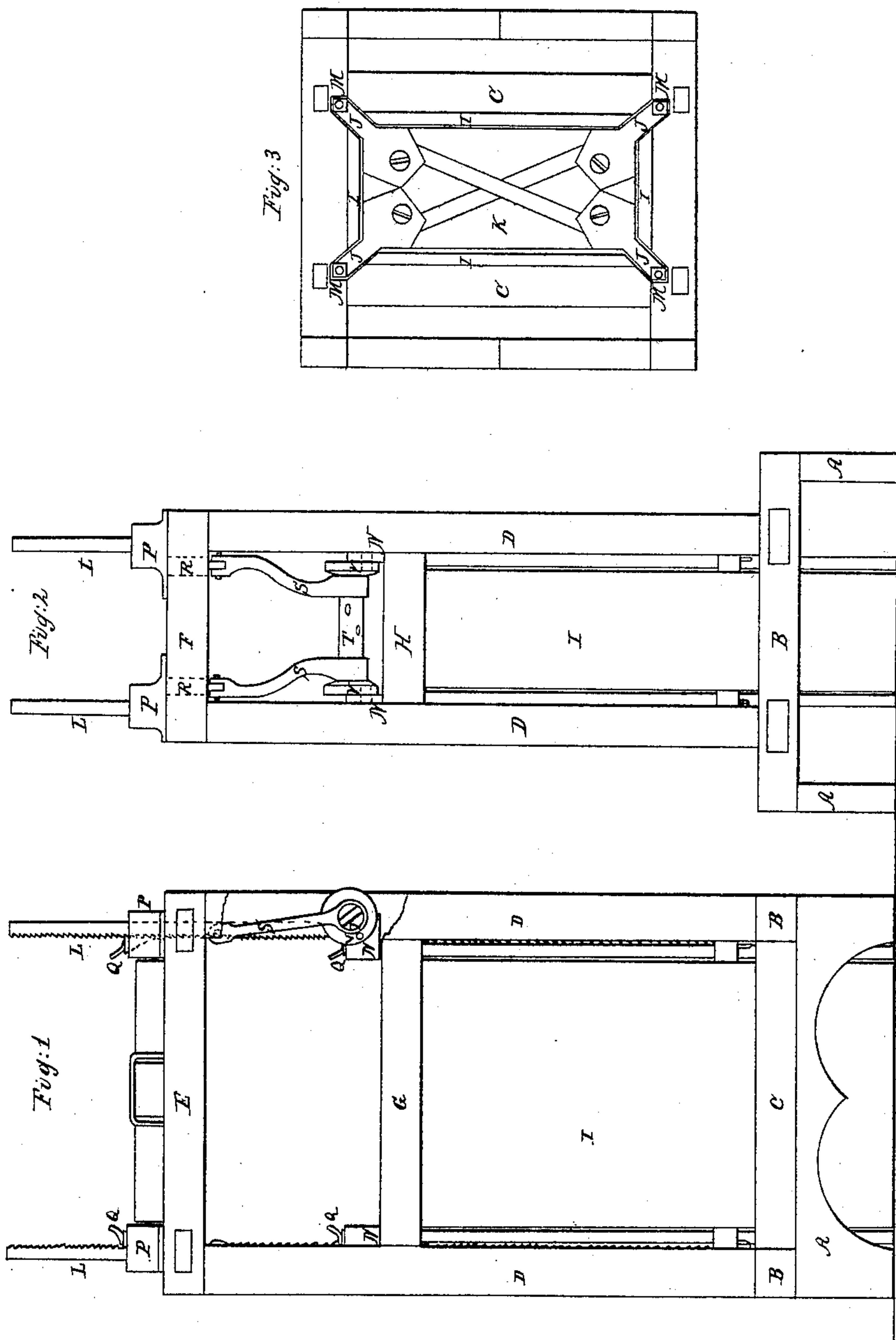


N. CHAPMAN.
COTTON AND HAY PRESS.

No. 61,159.

Patented Jan. 15, 1867.



Witnesses
J. C. Dennis
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United States Patent Office.

NATHAN CHAPMAN, OF MILFORD, MASSACHUSETTS.

Letters Patent No 61,159, dated January 15, 1867.

IMPROVEMENT IN COTTON AND HAY PRESSES.

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, NATHAN CHAPMAN, of Milford, Worcester county, State of Massachusetts, have invented certain new and useful improvements in Cotton and Hay Presses; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements, without further invention or experiment.

The nature of my invention and improvements consists in working the follower of the press by ratchet-rods and stationary locking-boxes, provided with ratchet wedges or pawls, and connected by vibrating links and crank rock-shafts to traversing locking-boxes, provided with ratchet wedges or pawls to work the press by a lever inserted in holes in the rock-shafts, and vibrating so as to traverse the traversing locking-boxes on the ratchet-rods, and work the rods through the stationary locking-boxes to draw the follower towards the head-block and press the bale; and in extending an arm diagonally from each corner of the follower through the press-box to the ratchet-rods which work the follower. Also in the use of four rods to work the follower and move it evenly, and keep it from tipping in pressing a bale. In the accompanying drawings—

Figure 1 is an elevation of the side of the press.

Figure 2 is an elevation of one end; and

Figure 3, a plan of the bottom.

In these drawings, A A are side sills to which the bars B B are fastened, which bars are connected by the side bars C C, forming the bottom frame of the press. Into this bottom frame, the posts D D at the four corners of the press are fastened, and at the top they are fastened into the top frame, consisting of the side rails E E, and end rails F F, as shown in the drawing. The posts D D are also connected about one-third of the way down from the top by the bars or girders, G and H, which bars support the upper end of the press-box I, the lower part of the box being held by the bottom frame. There are openings in the four corners of the press-box for the arms J of the follower K to traverse in, which arms, J J, extend out of the press-box, and are perforated for the ends of the ratchet-rods L L, which pass through them and are fastened by the nuts M M. There is a rabbet cut in the inside corners of the posts for the ratchet-rods to traverse in, as the follower is raised and lowered by the ratchet-rods. These ratchet-rods, or racks with ratchet teeth, pass up in the rabbet in the inside corners of the posts, through the traversing locking-boxes N N, then through the top frame, and through the stationary locking-boxes P P, which rest or are fastened on the top of the top frame, as shown in the drawings. These locking-boxes, N N and P P, are mortised so that the rods L L will pass freely through them, and the mortises are made largest on the upper side, with one side inclined, as shown by dotted lines in fig. 1. The inclined side of the mortises is opposite the ratchet teeth on the rods, and the wedges Q Q are fitted to the inclined side of the mortise, and provided with a series of ratchet teeth adapted to catch the teeth in the ratchet-rods and hold them as the rods are pushed up. And as the rods draw down the inclined sides of the mortises press the teeth on the wedges against the teeth on the rods, and the greater the strain on the rods the harder the wedges are pressed against them, which prevents the rods and wedges from stripping the teeth off of each other, and therefore make a very strong and powerful press with a very small quantity of metal. The traversing locking-boxes N N are mortised and furnished with wedges the same as the others. And there are arms, R R, shown by dotted lines in fig. 2, which extend down from the boxes P through the top frame, and have the links S S hinged to them so as to vibrate. The lower ends of these links are perforated for the rock-shaft T to turn in, which rock-shaft is provided with a crank-pin, V, at each end, (shown in dotted lines in fig. 2,) which enters holes in the locking-boxes N N, so that when a lever is inserted in one of the holes in the rock-shaft T and depressed, it raises the boxes N N and pushes the rods L L up through the boxes P P, and raises the follower to press the bale. And as the lever is vibrated, the follower is raised towards the head-block until the bale is pressed sufficiently, when it may be bound or hooped, and then taken out of the press. It is apparent, in fig. 2, that there is ample room between the links S S for the pressman to sew the bagging over the end of the bale. The head-block is represented on the press in fig. 1. Although I have not represented any doors to my press, I contemplate they may be arranged and fastened in such convenient manner as may be preferred.

Having described my improvements in presses—

I claim traversing and holding the ratchet-rods which work the follower by the stationary locking-boxes P P, provided with ratchet wedges or pawls, and connected by vibrating links and crank rock-shafts to traversing locking-boxes N N, provided with ratchet wedges or pawls to work the press by levers inserted in the holes in the rock-shafts and vibrated.

I claim the four arms on the follower extending through the press-box and fastened to the ratchet-rods working at the corners of the press.

I claim the use of four rods, or one at each corner of the follower, to move it even and keep it from tipping.

NATHAN CHAPMAN.

Witnesses:

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