

NATHAN CHAPMAN.

Improvement in Baling Presses.

No. 119,573.

Patented Oct. 3, 1871.

Fig. 1.

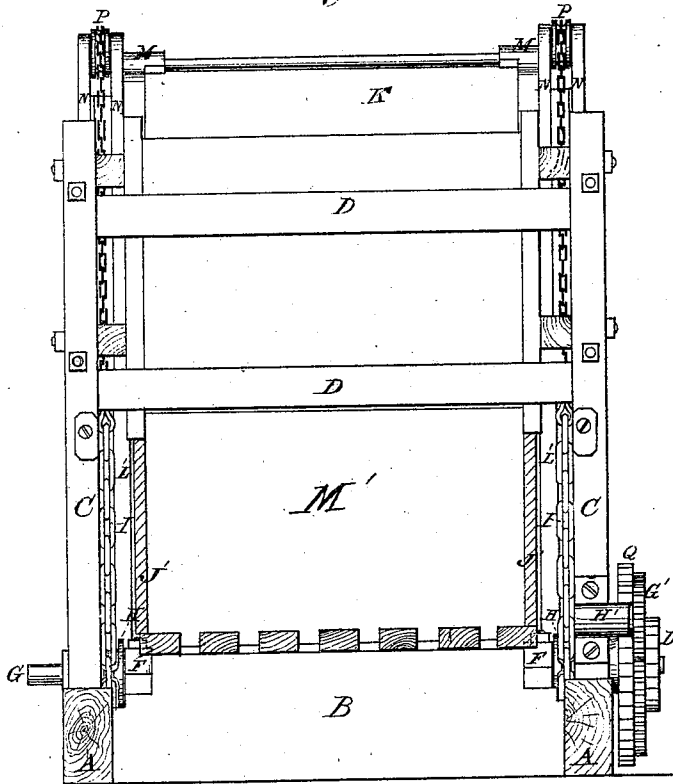


Fig. 2.

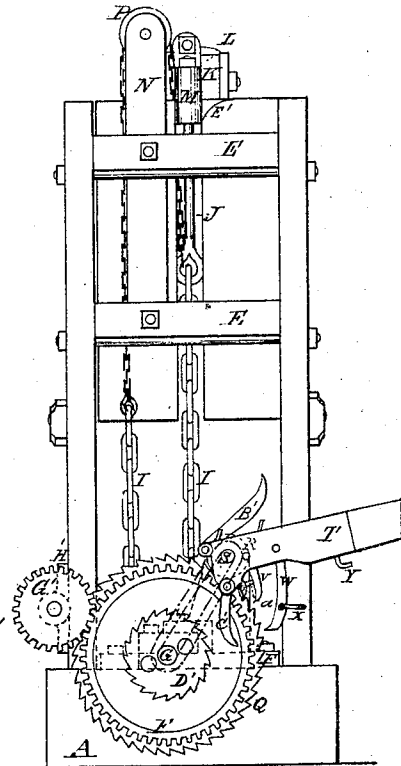
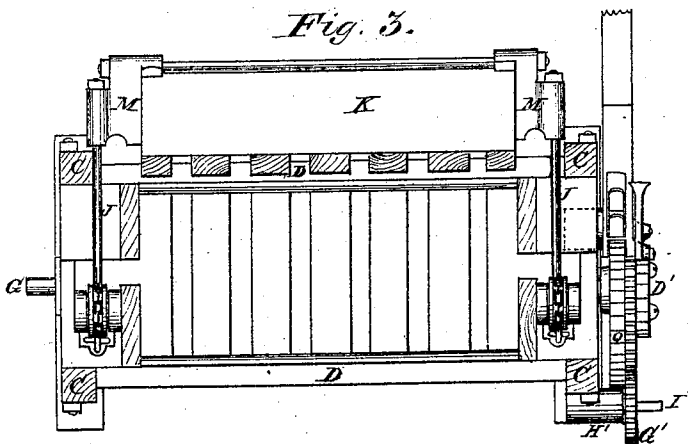


Fig. 3.



Witnesses:

T. C. Brecht.
Daniel Breed

Inventor:

Nathan Chapman
By his Atty J. Dennis Jr

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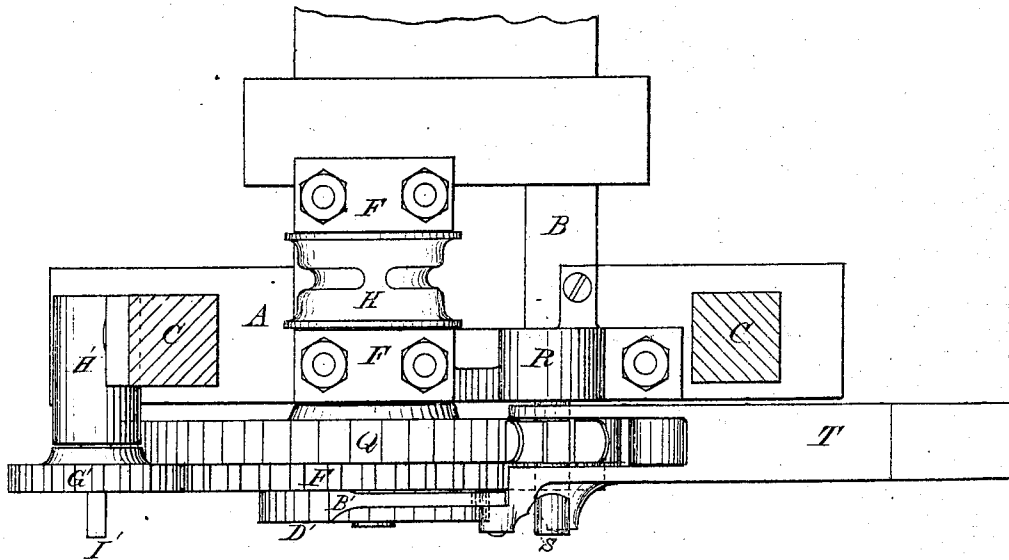
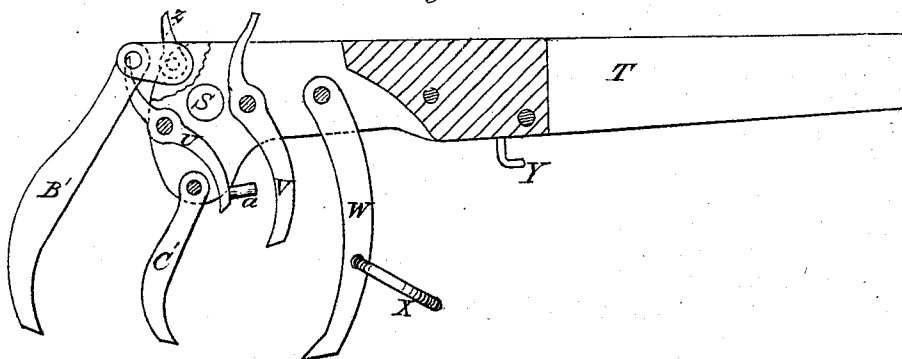


Fig. 4.



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UNITED STATES PATENT OFFICE.

NATHAN CHAPMAN, OF HOPEDALE, MASSACHUSETTS.

IMPROVEMENT IN BALING-PRESSES.

Specification forming part of Letters Patent No. 119,573, dated October 3, 1871.

To all whom it may concern:

Be it known that I, NATHAN CHAPMAN, of Hopedale, Worcester county, in the State of Massachusetts, have invented certain new and useful Improvements in Presses; and I hereby declare the following to be a full and exact description thereof.

The nature or essence of my invention consists in the particular construction and arrangement of devices forming the improvements in presses described in the following specification and represented in the accompanying drawing.

Figure 1 is a side elevation of my improved press. Fig. 2 is an end view of the same. Fig. 3 is a plan with the follower turned out. Fig. 4 is a top view or plan of the gearing and lever. Fig. 5 is a view of the levers and pawls.

In the accompanying drawing, A A are the end sills, and B the bed-sill; C C, the posts; D D, side bars; E E, end bars—the whole being firmly fastened together, forming a strong frame, to which the other parts of the press are either fastened or connected. To the end and bed-sills I fasten the boxes F F for the shaft G to turn in, which shaft is arranged in the bed of the press. On this shaft G I fasten the sprocket-wheels H; between the boxes which support the shaft G and these wheels fit the endless chains I, which are connected to the eyebolts J to work the follower K, which consists of two beams, L L, fastened to the iron ends M M, as shown in the drawing, the eyebolts being fastened in the ends M. The standards N are fastened to the end bars E, and are provided with pulleys P in their upper ends for the endless chains I to run over, and the standards N are provided with slots, so that they can be pushed up and fastened to tighten the chains when required. The endless chains from the wheels H pass up over the pulleys P and connect at or with the eyebolts J. To turn the shaft G and work the chains I fasten the ratchet-wheel Q to it, (the shaft,) and fasten the stand R to the box F, bed C, and sill A, to support the stud S, for the fulcrum of the lever T, which is arranged to vibrate on the stud and carry the three pawls U, V, and W; the first is attached to the short arm of the lever and the other two to the long arm of the lever, so that when the lever is raised the pawl U acts and turns the wheel, while the pawls V and W fleet to get a new hold upon the wheel; and when the lever is depressed the pawls

V and W act and turn the wheel while the pawl U fleets. By arranging the pivots of the pawls on each side of the fulcrum of the lever I am enabled to dispense with a pawl on a permanent pivot, as the pawls and lever will hold the wheel in any position desired. The stud S may extend far enough through the lever T to receive the end of a link to connect it to the end of the shaft G extending through the ratchet-wheel, and thus strengthen the working parts of the press. The pawl W is intended to work the wheel fast until the bale is partly pressed, when this pawl may be hitched up by putting the link X over the hook Y on the under side of the lever, which will hold it out of the way so that the ratchet can be worked with a greater power to complete the pressing of the bale. After the bale is pressed and bound the pawls U and V may be released from the wheel, and the latch z turned down against the upper end of the pawl U to hold it clear of the wheel, and at the same time the pin a in the pawl U holds the pawl V clear of the wheel. There are two ears on the lever T, one on each side of the fulcrum, which carry the pivots of the pawls B' and C', which act on the ratchet-wheel D' on the shaft G to turn the shaft backward and raise the follower of the press to the top, where the eyebolts gradually fall over the rounded ends of the blocks E' until the bolts lie flat on the tops of the blocks and the follower has swung off from over the press-box, leaving it ready to be filled. The lever T may now be raised to let the pawl C' drop down clear of the wheel, and the pawl B' may be raised up and turned back so as to release the wheel and shaft, so that it may be turned the other way by the other set of pawls after the press-box is filled with the material to be pressed. I have fastened a gear-wheel, F', to the shaft G, between the ratchet-wheels Q and D', which may be used to turn the shaft, when desired, by means of the pinion G' on a short shaft, I', fitted to turn in the stand H' fastened to the post C, so that, by applying a crank to the shaft I' and turning it, the shaft G may be turned to work the follower either way. The upper part of the press-box may be fastened to the side bars D and end bars E, and the side doors of the lower part may be pivoted in the end sills and fastened by latches or buttons on the posts, and the end doors J' may be held in place by the bars L' L' fastened to the top and bottom bars of the side doors for that

purpose, so that when the side doors are opened or let down they release the end doors J'. When it is desirable to increase the power of the press a ratchet-wheel and lever may be applied to the opposite end of the shaft G to work the follower down.

In the above-described press I claim the following improvements:

1. The combination and arrangement of the follower K, hung to the endless chain I by an eyebolt so as to be turned on and off the press-box automatically, substantially as and for the purpose described.

2. In combination with the short pawls U and

V, the pin *a* and latch *z* for holding the pawls clear from the ratchet-wheel when not working.

3. In combination with the eyebolts J and follower K, the blocks E', with rounded ends, which govern the motion of the eyebolts and follower when turning in and out of the press.

4. The end doors J' of the press-box, in combination with the side doors M', constructed and arranged, as shown, to release the end doors when the side doors are opened, substantially as described.

Witnesses: NATHAN CHAPMAN.

JOHN S. MEAD,

LEWIS FALES.

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