(No Model.)

F. HAYNES.

COTTON PRESS.

No. 247,909. Patented Oct. 4, 1881.

Fig. 1.

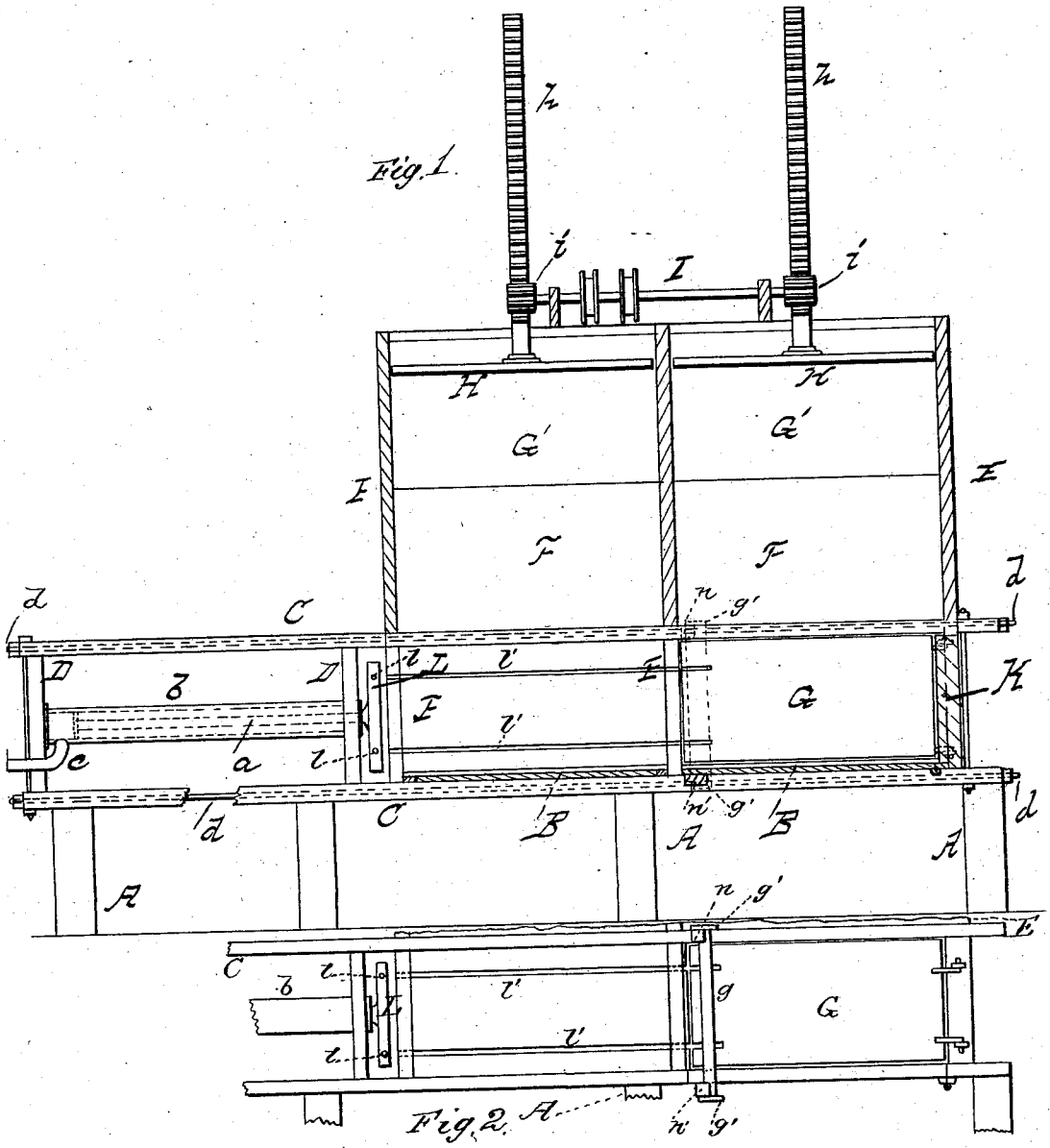


Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

FRANK HAYNES, OF MONTICELLO, ARKANSAS.

COTTON-PRESS.

SPECIFICATION forming part of Letters Patent No. 247,909, dated October 4, 1881.

Application filed May 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, FRANK HAYNES, a citizen of the United States, of Monticello, in the county of Drew and State of Arkansas, have invented a new and valuable Improvement in Cotton-Presses; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 is a vertical section of the device. Fig. 2 is a detail.

This invention has relation to cotton-presses; and it consists in the construction and novel arrangement in horizontal endwise relation of a cotton-box having a presser-lid, and a hydraulic cylinder and follower, with other devices constituting a horizontally-acting hydraulic press, all as hereinafter shown and described.

In the accompanying drawings, the letter A represents the sills or pillars to support the press, and B indicates the floor of the cotton-box.

C indicates the horizontal framing bars or beams, and D the upright bars or beams of the frame.

The stationary parts of the wall of the box are lettered E, and F is a removable portion of the wall on each side over that portion of the interior into which the cotton is finally compressed.

Below the movable portion F of the box-wall, and between this portion and the floor of the box, is the door G, which is hinged at the end farthest from the horizontally-moving follower L, and is provided at its other end with a latch or catch adapted to be unfastened by the follower at the termination of its pressure movement, to allow the doors to open. The follower L is provided on its ends with pins or spikes *l*, which move in the side slots, *l'*, in the press, which slots are continued on into the side doors. The letter *g* represents a bar having the heads *g'*, which latter engage a stud, *n*, above the side doors, and a batten, *n'*, on the bottom door, the body of the bar resting in grooves in such stud and batten. As the follower comes forward its pins strike the bar *g*, allowing the doors to fly open.

Above the side walls of the box, are horizontal openings G', extending upward to the lid H, and serving to admit the cotton, which is designed to be thrown into the box over its wall. The lid H is movable vertically, and is designed to fit the interior of the cotton-box neatly. It is provided with upright rack-bars *h*, which engage the pinions *i* on the shaft I, which is driven by suitable gearing, so as to be easily controlled.

K represents the abutment-block, arranged in upright position on the bed-framing opposite to the follower. It is firmly braced and bolted to resist the pressure. This block extends only high enough to correspond with the thickness of the compressed bale, as shown in the drawings. Opposite the abutment K, and of a little less breadth and height, as it is designed to move within the framing, is the follower L, carried on the end of the piston *a*, which works within the cylinder *b* horizontally, and in endwise relation to the cotton-box. The feed-pipe of the hydraulic cylinder is indicated at *c*, but the pump and tank are not illustrated, as these parts are of ordinary construction. Large iron bolts *d* are provided in the horizontal framing, extending from the end of the cylinder-frame to the abutment-block, and serve to sustain the end pressure when the follower is moving toward the abutment-block.

The operation of the press is as follows: After the bagging is adjusted on the follower and abutment-block and the doors and removable portions of the box are placed in position, the cotton is thrown into the box, the lid being occasionally run down on it to put it in compact condition. When a sufficient quantity of cotton has been introduced the lid is brought down to the press-line about even with or a little below the horizontal tie-rods, which extend from the upper portion of the cylinder-frame to the abutment-block, thereby excluding from the pressure-box so formed all that portion of the cotton-box which is above the lid in this position. The lid is then locked down by means of any suitable fastening and the pump set in action to force the follow-block

toward the farther portion of the pressure-box until it is brought home, loosening the fastenings of the doors, which is a signal that the pressing is finished. The doors and portable parts of the box are then removed and the bale "tied out" as usual. The discharge-faucet is then turned on and the bale dropped to the ground, ready to be rolled away.

It will be observed that in this press the direction of movement or action of the compacting or stamping lid is at right angles to that of the follower-block, so that the operations of the two are conducted without interference.

What I claim, and desire to secure by Letters Patent, is—

1. In a cotton-press, the combination, with the cotton-box and horizontal hydraulic cylinder *b*, arranged in endwise relation to each other, of the end abutment, K, the horizontally-moving follower L, piston *a*, and the vertically-moving compacting-lid H, substantially as specified.

2. The combination of follower L, having pins *l*, with locking-bars *g*, notched studs *n*, and batten *n'*, whereby the follower automatically releases the doors, as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

FRANK HAYNES.

Witnesses:
J. E. FARLEY,
E. K. HAYNES.