P. C. Ingersoll,

Cotton Press.

No. 46,051. Patented Jan. 24, 1865.

Fig. 1.

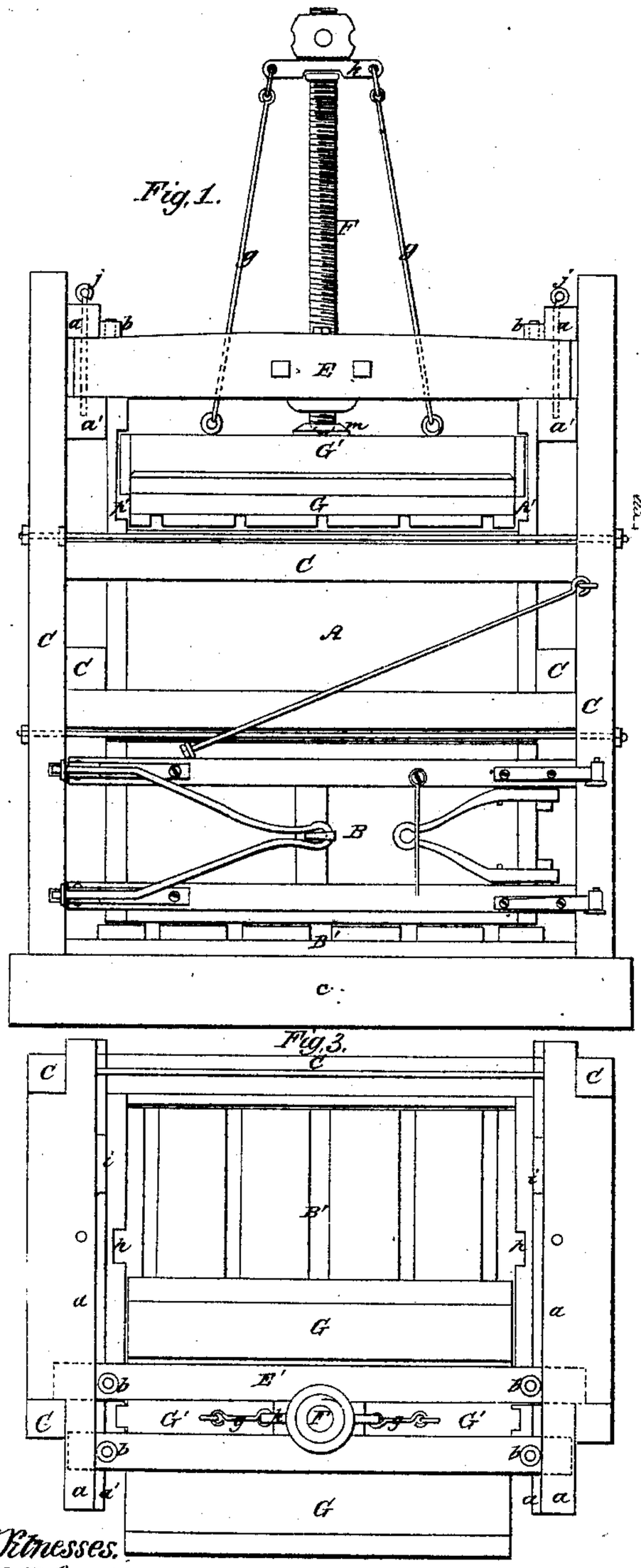

Fig. 2.

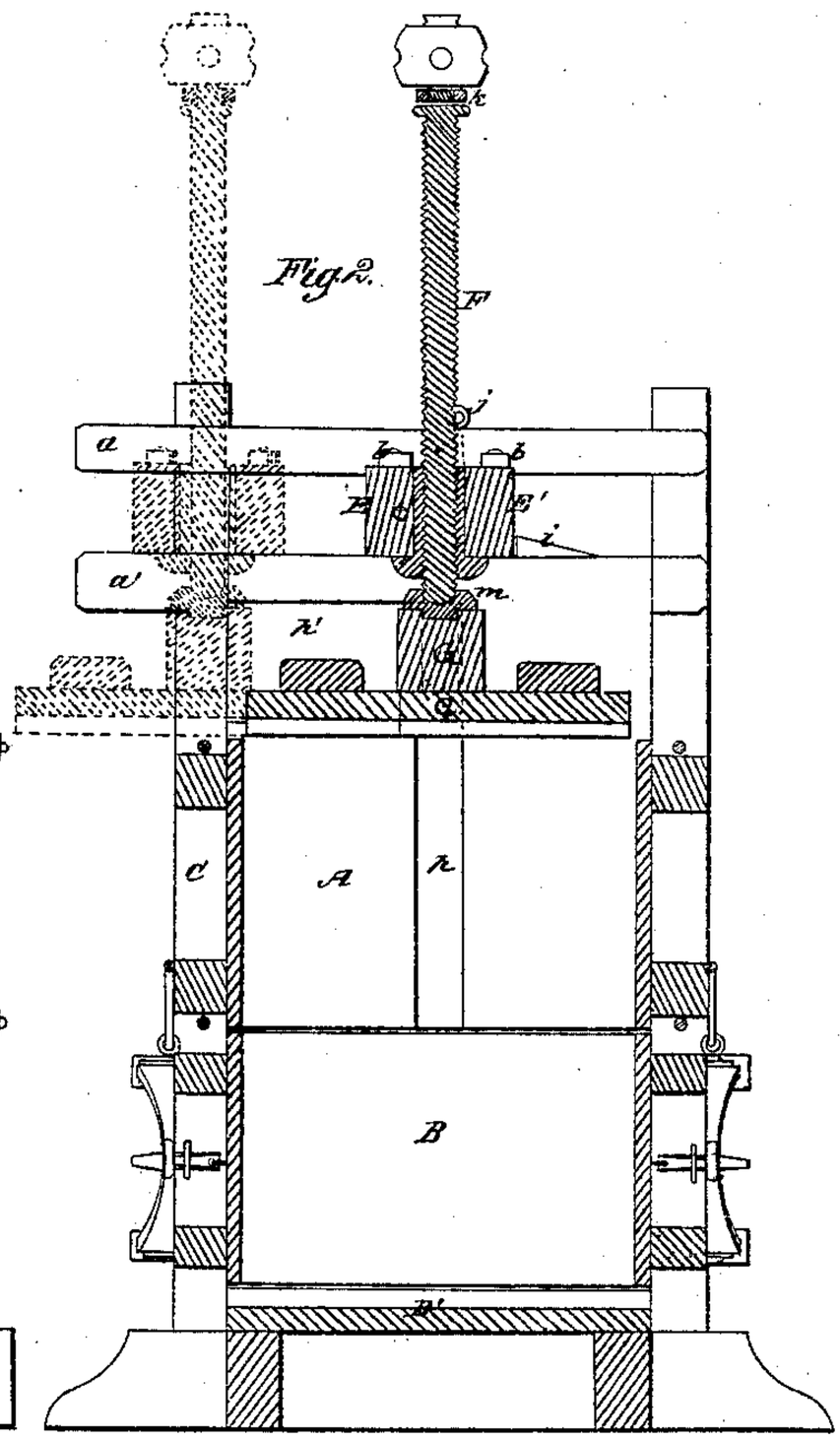

Fig. 3.

Witnesses.
R. F. Campbell
E. Schafer.

Inventor.
P. C. Ingersoll
by his attorneys,
Munn, Lewis & Munn.

UNITED STATES PATENT OFFICE.

P. C. INGERSOLL, OF GREEN POINT, NEW YORK, ASSIGNOR TO HIMSELF AND HORACE F. DOUGHERTY, OF SAME PLACE.

IMPROVEMENT IN PRESSES.

Specification forming part of Letters Patent No. **46,051**, dated January 24, 1865.

To all whom it may concern:

Be it known that I, P. C. INGERSOLL, of Green Point, county of Kings, and State of New York, have invented a new and Improved Press for Baling Purposes; 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 an elevation of one side of my improved press. Fig. 2 is a vertical transverse section taken centrally through the improved press. Fig. 3 is a top view of the machine.

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

This invention relates to certain novel improvements in machinery for pressing cotton, hay, hides, &c., for the purpose of binding the same into compact and portable bales.

The object of my invention is to facilitate the introduction of the material to be pressed into the top of a press-box, which has a follower that is operated by a screw, as will be hereinafter described.

Another object of my invention is to prevent the canting of the follower in the act of pressing from injuring the screw which is employed to operate said follower, and at the same time provide for elevating the follower, after the pressing operation, in a horizontal plane, or in such manner that it shall not bind or wedge itself against the sides of the press-box, as will be hereinafter described.

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

The press-box which I have represented in the accompanying drawings consists of two upright sections, A B, the lower one of which is made up of removable sides, for the purpose of binding and removing the bale. The upper section, A, has stationary sides, two of which extend up a short distance above the other two, and serve as guides for the follower when it is elevated to its highest point. This press-box is sustained against lateral thrust by means of a strong frame-work, C C, which is suitably braced and secured to sill-beams *c c*, upon which latter the floor B′ of the box is secured.

The description of the press-box I have thus given in general terms for the reason that my invention is not confined to a press-box of any particular construction, though I prefer to employ the one represented in the accompanying drawings, with its lower baling-section constructed of removable sides, which are held in place by means of hinged clamps, as I have described in my patent of June 16, 1863.

The vertical posts, which form a part of the frame-work for sustaining the press-box, extend above the top of this box, and have four horizontal beams, *a a a′ a′*, secured to them, and arranged in such manner as to form lower supports and upper guides for the ends of the bridge-beams E E′ when these beams are arranged directly over the center of the press-box, as shown in Fig. 2 in black lines, or when they are moved to one side of this box, as shown in Fig. 3 in black lines and in Fig. 2 in red lines. These beams E E′ may be secured together so as to leave a space between them, and thus afford them a wide steady base, and they are prevented from moving endwise, or out of their parallel plane with the longitudinal sides of the press-box, by means of the friction-rollers *b b*, (shown in Figs. 1, 2, and 3,) which press against the edges of the upper beams, *a a*. The bridge-beam E′ may be made somewhat longer than the beam E, for the purpose of causing it to abut against the frame-posts when the two beams E E′ are adjusted as shown in Fig. 3, and thus stop it at this point. The lower supporting-beams, *a′ a′*, have stops *i i* affixed to them at such points as will stop the bridge-beams directly over the center of the press-box, and the two vertical pins *j j* are used to hold these bridge-beams in the above-mentioned position.

At an intermediate point between the ends of the bridge-beams E E′, and secured rigidly between them, is a nut, *e*, through which a long screw, F, passes vertically. This screw is used to elevate and depress the follower G, to which it is attached by means of two rods, *g g*, which are connected at their lower ends to the central batten, G′, and at their upper ends to the extremities of a horizontal yoke, *k*, which is pivoted loosely to the screw-shaft F near its upper end, as shown in Fig. 1.

The lower end of the screw F is rounded and fitted loosely into a corresponding depression formed in a step-block, *m*, which is secured at the center of the batten G′, as shown in Figs. 1 and 2. By this mode of connecting the follower to the screw-shaft F, it will be seen that the follower will be elevated in a horizontal plane and prevented from moving either to one side or to the other of the press-box by the action of the suspension-rods *g g*, which should be attached to the follower at equal distances from the center of the block *m*, and as near the extremities of the batten G′ as is found practicable. The ends of the batten G′ project out beyond the follower and enter vertical slots *p p*, formed in the sides of the press-box, so that during the operation of elevating or depressing the follower the slots *p p* will guide the same and prevent its longitudinal edges from wedging against the sides of the press-box. When the follower G is elevated to its highest point and the batten G′ brought in a line with the horizontal slots *p′ p′*, as shown in Figs. 1 and 2, the follower G, bridge-beams E E′, together with the screw-shaft F, can all be moved to one side of the press-box, as represented in red lines, Fig. 2, and in black lines, Fig. 3, thus leaving the upper end of the press-box open.

After the box is filled with the material to be baled, the follower, with its attachments, are moved back again to their former position, and secured in place by means of the pins *j j*. The screw F is now turned by means of a sweep-lever applied to its upper end, or by any other desirable contrivance, and the follower is moved downward into its box. During the descent of the follower it may cant a little out of a horizontal plane; but in this event it will be seen that the screw-rod F will in nowise be injured, as provision is made by seating the lower end of said screw into a socket to allow the follower to rock slightly. The rods *g g* are used to hold the follower up against the lower end of the screw F and keep this follower in a horizontal plane during its ascent. These rods enable the screw to lift the follower out of the press-box after the pressing and baling operations.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Elevating and depressing the follower by means of a screw-shaft having its lower end fitted loosely to the follower, combined with suspension-rods *g g*, substantially as described.

2. The combination of the loosely-fitting yoke K, screw-shaft F, and suspension-rods *g g* with a follower, substantially as described.

3. Providing for opening the upper end of the press-box by the employment of a laterally-sliding follower, applied and operating substantially as described.

4. The laterally-sliding screw-support or bridge-beam E E′, in combination with a follower, G G′, and supporting-bars *a′ a′*, substantially as described.

5. The friction-rollers *b b* and bridge-beams E E′, in combination with the holding-down beams *a a*, substantially as described.

6. The stops *i i*, or their equivalents, in combination with the laterally-adjustable bridge-beams E E′, substantially as described.

P. C. INGERSOLL.

Witnesses:
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