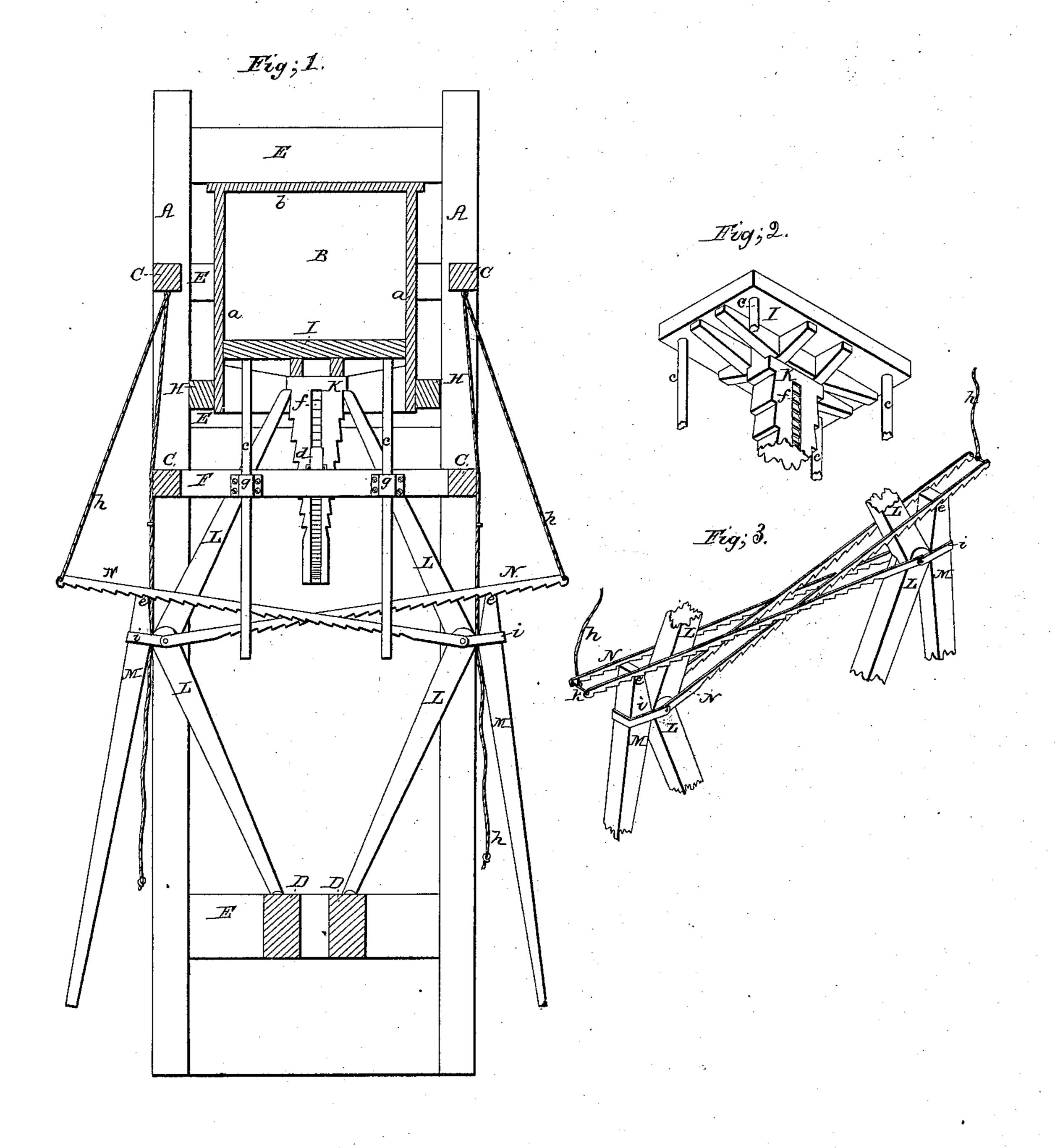


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Palented Ann. 24, 1847.



United States Patent Office.

LORENZO POTTER, OF WARREN, OHIO.

IMPROVEMENT IN PRESSES FOR COTTON, HAY, &c.

Specification forming part of Letters Patent No. 5,088, dated April 24, 1847.

To all whom it may concern:

Be it known that I, Lorenzo Potter, of Warren, in the county of Trumbull and State of Ohio, have invented an Improved Toggle-Joint Lever-Press; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical sectional elevation, and Figs. 2 and 3 are perspective views of

parts of the same detached.

My improvement in the toggle-joint leverpress consists in an improved manner of operating the levers by means of ratchet-bridles and hand-levers combined with the togglejoints. 'The supporting-frame of my improved press is composed of the corner-posts A, transverse beams D, C, E, and F united by tenon and mortise in any well-known or usual manner. B is the box, in which the substances to be pressed are placed. a a are the sides, and b is the top of the same. I is the platen, working in the pressing-box. K is a conical-sided feeding-follower connected to and descending vertically from the center of the platen I. The feeding-follower K has shoulders on its sides for the reception of the upper ends of the upper toggle-joint levers, L L, the distance between which (shoulders) gradually diminish from the upper to the lower end of the follower. The feeding-follower K descends between, and its sides are guided by two central beams, F, (only one of which is shown in Fig. 1,) having their ends secured by mortiseand-tenon joints to the transverse beams CC. Graduated ratchets f are let into each side of the feeding-follower K, which receive pawls d, attached to the upper sides of the beams F. The pawls d catch and retain the platen after it has been elevated by the action of the toggle-joint levers L. The platen I is guided and kept in a horizontal position by the four rods c c, attached to and descending vertically from the lower side of the same, passing through and working freely in loops gg, secured to the outer sides of the central beams, F. The toggle-joint levers L are constructed and connected in the usual manner. Their lower bearings are upon the beams D D. Their up-

per bearings are against the shoulders on the follower K. The joint-pin of each togglejoint passes through the ends of bridle ratchet-pieces N N, placed on each side of the same, and extending beyond and on each side of the opposite toggle-joint levers, where their ends are united by a cross-bar, k. The joint-pin of each toggle-joint also passes through the ends, and secures to the same a metallic strap or clevis, i, which embraces and is made fast to a hand-lever, M, its upper end extending a short distance above the joint, which serves as a fulcrum for the lever. On both sides of the upper end of each hand-lever M there projects a pin, e, upon which the extended ends of the bridle ratchet-pieces N rest. Power is applied to the toggle-joint levers L L through the medium of the hand-levers M and the ratchet bridle-pieces N, as follows: As the lower ends of the hand-levers are carried outward, the pins e on their upper ends glide freely under the inclined sides of the teeth on the under edge of the ratchet bridle-pieces. As they (the lower ends of the levers) are drawn inward, the pins e take hold of the vertical sides of the ratchet-teeth on the bridle-pieces, and draw upon the toggle-joints tò which they (the bridle-pieces) are connected, the levers at the same time reacting upon the toggle-joints to which they are connected, and thus simultaneously draw both toggle-joints nearer to each other. This movement of the hand-levers is continued till the levers L are brought to a vertical position. The extended ends of the bridle-pieces are then elevated by the hand-ropes h h, (the pawls d retaining the platen.) The togglejoints are then drawn outward by the handlevers, and their upper ends are reset against lower shoulders on the follower K, when they are again brought to a vertical position by the hand-levers and ratchet-bridles, as above set forth. In this manner the operation is continued until the platen has been elevated to a sufficient height to produce the requisite amount of pressure. I shall generally apply the power for working the press to one of the hand-levers M, and allow the other handlever to hang loosely—attaching a weight to it, if necessary—for the purpose of enabling the pins e at its upper end, which catch into

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the ratchet-bridles resting upon them, to retain the toggle-joint levers L L and prevent their falling apart, while the operating-lever is drawn back for the pins at its upper end to reset themselves in another notch of the operating ratchet-bridles resting upon the same. The sides of the feeding-follower K descending from the center of the platen are of a conical form, as herein described, for the purpose of allowing the shoulders in the same for the reception of the upper ends of the toggle-joint levers to project over each other a sufficient distance to enable the levers to be brought to a vertical position without losing their hold upon the same.

It will be perceived that each hand-lever M acts simultaneously upon both toggle-joints by the aid of the ratchet bridle-pieces resting upon its pins ee, and that the levers act independently of each other; consequently both toggle-joint levers can be operated by one or both hand-levers, as shall be found to be most

convenient.

Having thus fully described my improved toggle-joint lever-press, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The manner of operating and retaining the toggle-joint levers L L by means of the hand-levers M M and the ratchet-bridles N N, combined with each other and with the toggle-joints, in such a manner that each hand-lever acts equally upon both toggle-joints, substantially as herein set forth.

2. The combining the toggle-joint levers with the platen through the medium of the conical-sided notched feeding-follower K, substantially in the manner and for the purpose

herein set forth.

LORENZO POTTER.

Witnesses:

Z. C. Robbins,

T. C. DONN.