J. B. THIES.

HAY-PRESS

No. 176,494. Patented April 25, 1876.

Fig. 1.

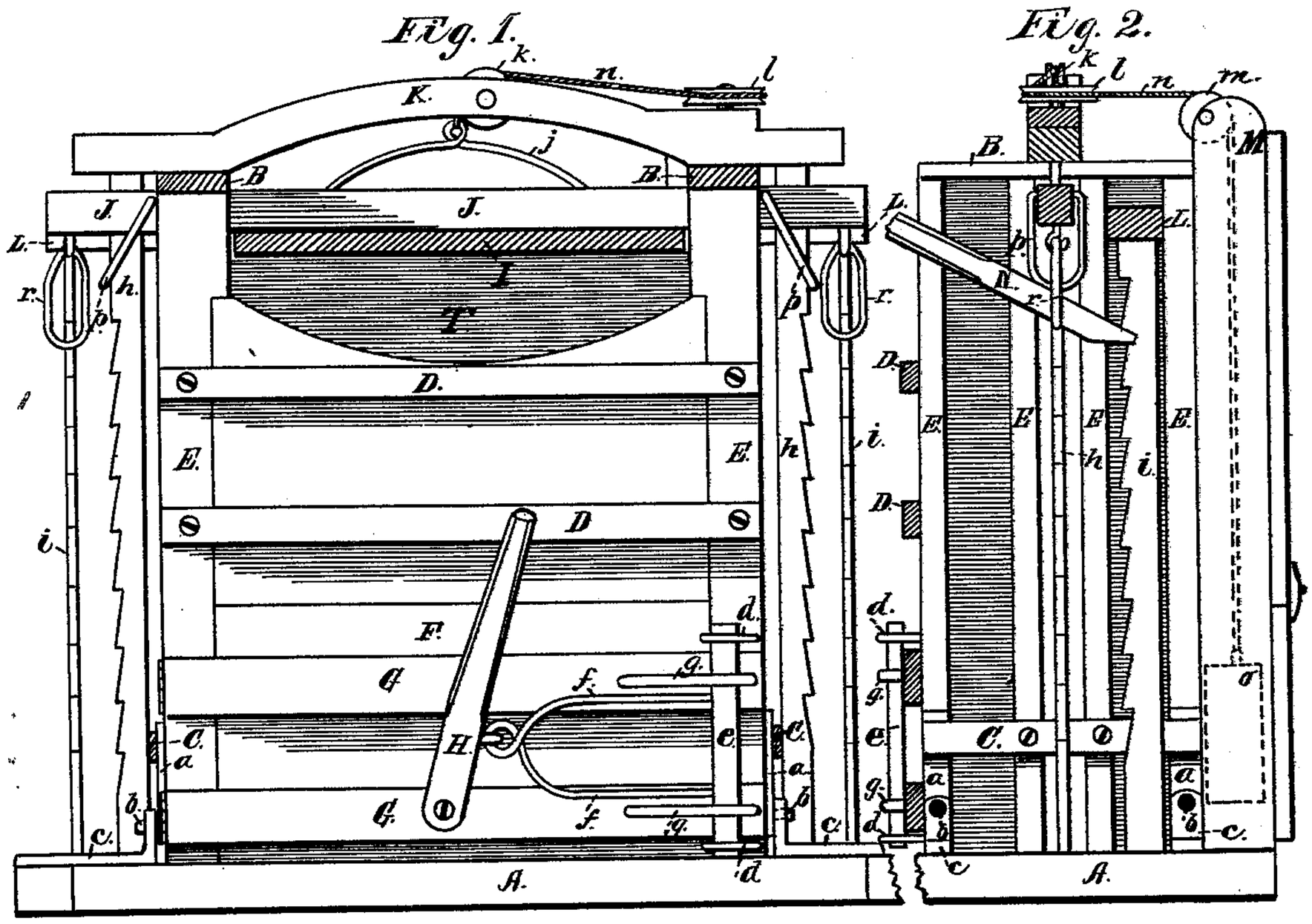
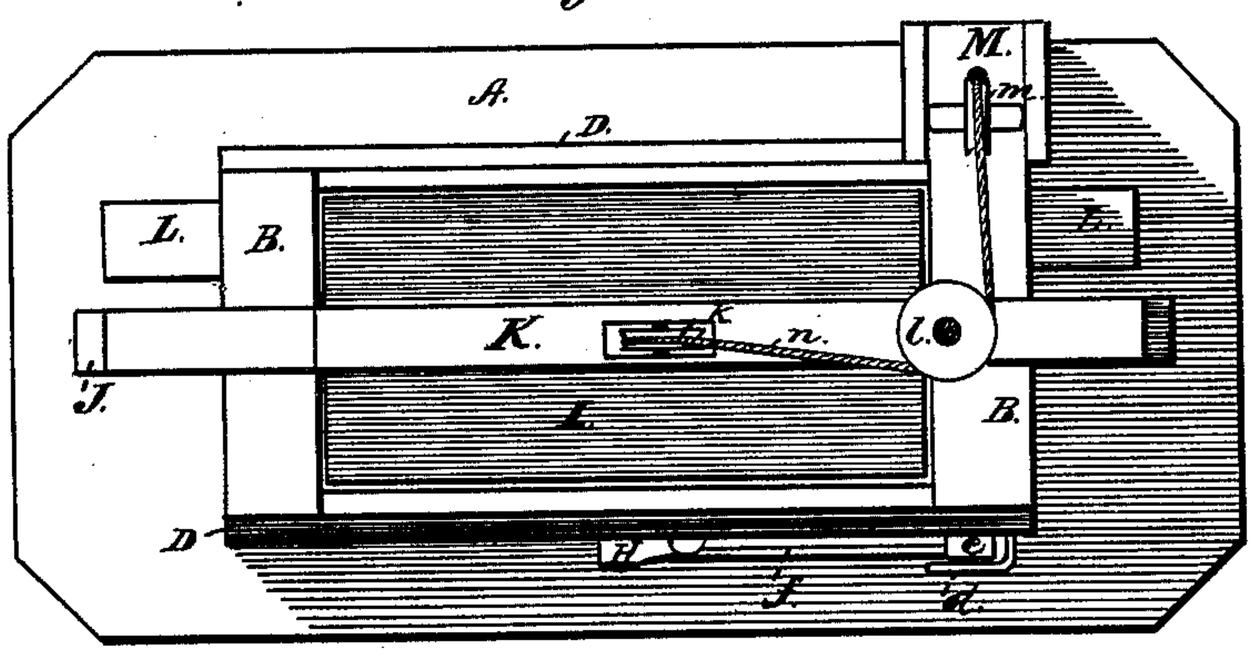


Fig. 2.

Fig. 3.



Witnesses;
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UNITED STATES PATENT OFFICE.

JOHN B. THIES, OF DAYTON, OHIO.

IMPROVEMENT IN HAY-PRESSES.

Specification forming part of Letters Patent No. **176,494**, dated April 25, 1876; application filed March 27, 1876.

To all whom it may concern:

Be it known that I, JOHN B. THIES, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Hay-Presses; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to that class of hay-presses which are used to compress loose hay into bundles for baling; and my improvements consist in the general structure of the press, whereby it can be readily taken to pieces for convenience in packing and shipping; also in other minor details, all as will be herewith described, and the invention distinctly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to make and use the same, I would thus proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a front elevation of my improved press. Fig. 2 is a side elevation of the same. Figs. 3 represents the same in plan view.

Corresponding letters of reference indicate like parts in all the figures.

The frame-work of the press at each end consists of four equidistant upright beams, E, set in mortises in the platform A. They are united at the top by a cross-beam, B, and near the bottom by a beam, C. The two exterior beams have fastened near their bottoms metallic strips *a*, from each of which projects a stud, *b*, that fits in an orifice in the upright portion of each of two metal plates, *c*, bolted on the platform. The space between the interior pair of beams is open, while the remaining spaces are closed by boards fastened upon the inside.

The sides of the press-frame are boards braced by beams D, that are bolted at their ends to the outer upright beams E. The lower half of the front side of the frame is a door, F, braced by two beams, G, which at one side are hinged to the upright beam E. Upon the opposite beam E, at the other side of the door, are two strong staples, *d*, behind which is slipped the bar *e*, working in guides *g*, that keep the door closed. Rods *f* pass from this bar and are united to a lever, H, pivoted at its lower end to the lower beam G. By moving this lever the bar *e* is withdrawn from the staples. The advantage of this arrangement is that by withdrawing the bar from both staples uniformly, the strain of the compressed hay that would be thrown upon either of the hinges, were either end of the bar removed before the other, is entirely obviated. Across the top of the platen I of the press is fastened a beam, J, whose ends project between the interior pair of end beams E. K is an arched beam bolted upon the beams B, and just over and in line with the beam J. Its ends project and are mortised to receive the ends of the two perpendicular metallic racks, *h*, whose lower ends pass through the platform A and are secured by nuts. L L are two short beams secured between a pair of the beams, E, near their tops, and mortised to receive the upper ends of the perpendicular metallic fulcrum-racks *i*, whose planes are at right angles to the planes of the racks *h*, and whose lower ends pass through the platform A and are secured by nuts. Both pairs of these racks are stout strips of metal, with one edge of each serrated, the points looking down. A semi-circular rod, *j*, with its ends fastened in the beam J, has secured to its center a cord or rope, *n*, which passes over the pulley *k* pivoted in the beam K, the pulley *l* pivoted upon the beam K, and the pulley *m* pivoted in the top of the well M, which is secured at the rear corner of the frame. The other end of this cord *n* is attached to a weight represented by the dotted lines *o*, Fig. 2, that moves up and down in the well M, and serves, to a little more than counterbalance the weight of the platen and its beam J. A metal loop, *p*, is pivoted in each end of the beam J and encompasses the racks *h*, with whose teeth it engages to hold the platen at any desired point. Loops *r* are pivoted one to the under side of each of the ends of the beams J and serve as bearings for the levers N that are passed through them, and whose ends engage with the teeth of the racks *i*.

The operation of the press is as follows, the platen being up in the position indicated in Fig. 1: The binding-ropes are passed through two orifices in the rear side of the frame in a line with the top of the door and lie upon the bottom of the bed. Hay in suffi-

cient quantity is then thrown in at the opening marked T, Fig. 1. The levers N are then passed through the loops *r* and their ends are held by the teeth of the racks *i*, which act as fulcrums and enable the platen to be brought down upon the hay and held at any point by the gravitating loops *p*. When brought low enough—that is, about in line with the top of the door—the door is opened, and the ends of the ropes encompassing the bale are secured and firmly tied, after which the bale is removed through the door. The door is then closed and the operation repeated.

It will be noticed that by removing the bolts that hold the sides of the press-frame in position and the hinges from the doors, and by removing the arched beam K, the two ends of the frame can be taken down by slipping the studs *b* out of the pieces *c*. This leaves only the racks *h* and *i* standing upon the platform, which can be taken down by removing the nuts upon their lower ends.

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

1. In a hay-press, the detachable frame-work consisting of the end beams E, the sides braced by the beams D, the door F, the top beam K, and well M, when the respective parts are constructed and arranged as described, and held upon the platform A by the studs *b*, in the manner and for the purpose specified.

2. In a hay-press, the combination of the above-described frame-work, the racks *h* and *i*, with their planes at right angles to each other, the beams K and L, loops *p* and *r*, platen I, beams J, cord *n*, pulleys *k*, *l*, and *m*, well *m*, and weight *o*, when the respective parts are constructed and arranged in the manner and for the purpose specified.

Witness my hand this 22d day of March, A. D. 1876.

JOHN B. THIES.

Witnesses:
CHAS. M. PECK,
PATRICK H. GUNCKEL.