I. R. KULP.
Hay-Press.

No. 198,396. Patented Dec. 18, 1877.

Fig. 1.

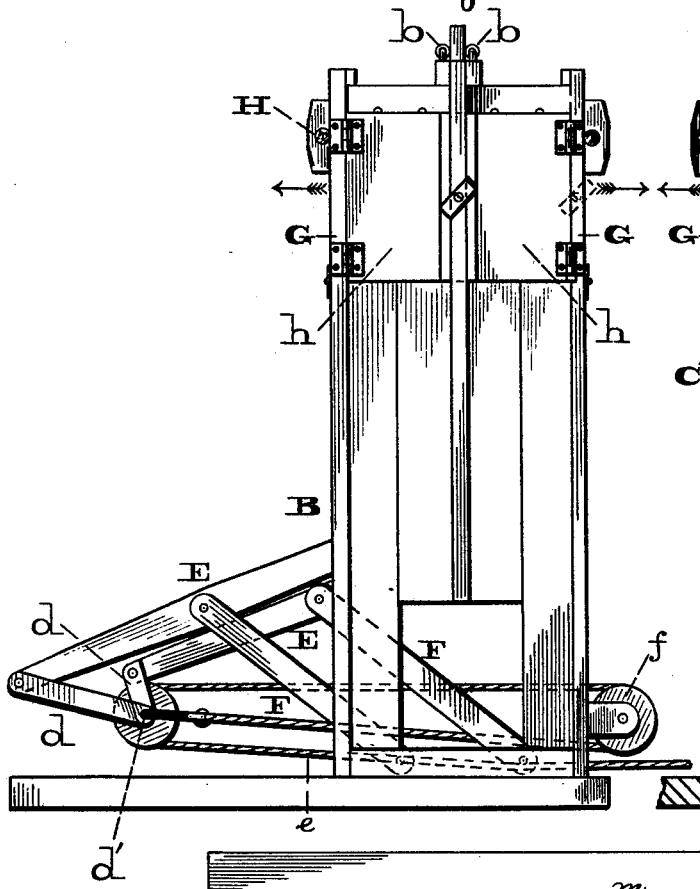


Fig. 2.

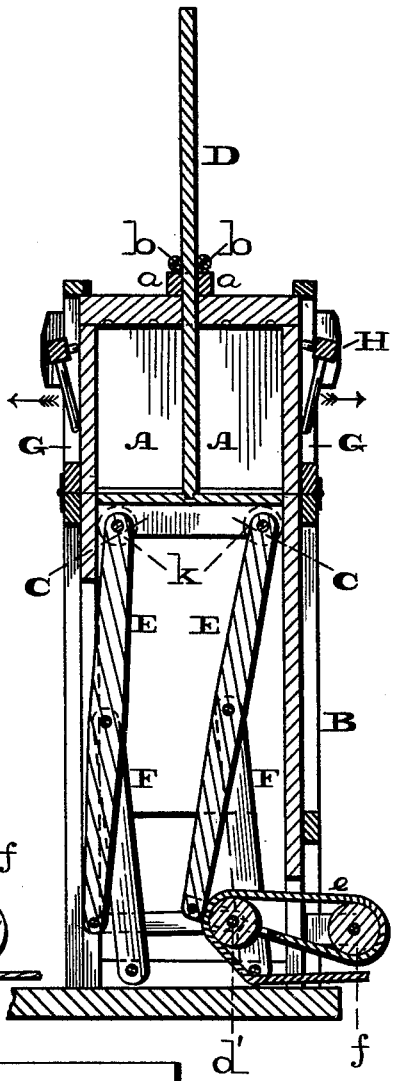
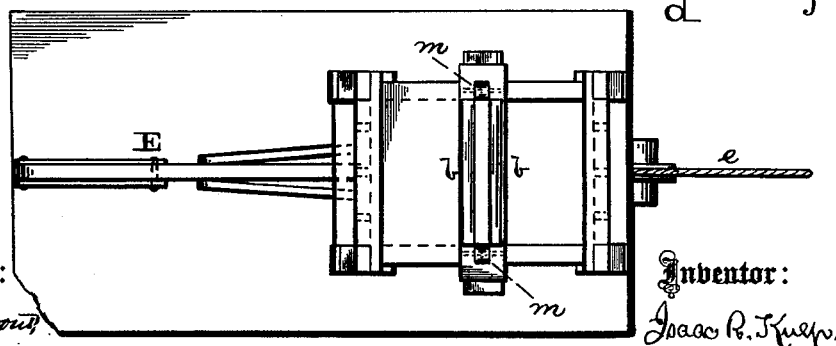


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

ISAAC R. KULP, OF HATFIELD, PENNSYLVANIA.

IMPROVEMENT IN HAY-PRESSES.

Specification forming part of Letters Patent No. **198,396**, dated December 18, 1877; application filed November 6, 1877.

To all whom it may concern:

Be it known that I, ISAAC R. KULP, of Hatfield, in the county of Montgomery and State of Pennsylvania, have invented a new and useful Improvement in Hay-Presses, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side view of the press embodying my invention. Fig. 2 is a central vertical section thereof. Fig. 3 is a top or plan view thereof.

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

My invention consists of a system of levers, whereby great power is exerted on the follower, two of said levers having a common axis on the roller, around which the operating-cord is passed, so that the levers possess the greatest possible strength.

It also consists of the press, constructed to press and bale two or more bales at one operation.

It also consists of rollers, variously arranged, for easing the motion of movable parts.

Referring to the drawings, A represents the box, which is supported on a suitable frame, B; and C represents the follower, from which rises a partition-board, D, thus dividing the box into two parts. This board D is guided in cross-pieces *a* at the top of the box A, and rollers *b* are mounted on said pieces, to bear against the board and ease the motion thereof.

E E represent two parallel levers, whose upper ends are pivoted to the follower *c*, and whose lower ends are pivoted to straps *d*, having a common axis on a roller, *d'*.

To the levers E, intermediate of their ends, there are pivoted parallel levers F, whose lower ends are pivoted to the base of the press. A cord, *e*, is connected to the axis of the roller *d'*, and it passes around a roller, *f*, fixed to the frame B, and around the roller *d'*, whereby provision is made for elevating the follower.

Doors *h* are hinged to opposite sides of the box, and on the diametrically-opposite sides there are doors G, which are hinged at their lower ends to the box, so as to open outward. In order to hold the doors G in closed position, there are pivoted to the outside of the box cams or locking-rollers H, which, when rotated in one direction, will bear against the door G, and in the other direction will move therefrom, for purposes to be explained.

The upper ends of the levers E carry rollers *k*, which bear against the inner faces of the supporting-frame B, thus easing the motions of the levers and follower. The cross-pieces *a* have journaled to them rollers *m*, at right angles to the rollers *b*, whereby the partition-board D moves with great freedom.

The follower is lowered, the doors *h* G are closed, and top boards of the box removed; or said boards may remain in position, and the doors *h* are opened. The hay or other article to be pressed is now placed in the box A, and the top boards are replaced, or the doors *h* are shut, the doors G being closed and held by the cams or locking-rollers H. Power is applied to the cord, rope, or chain *e*, and immediately the levers E ascend, thus elevating the follower C, and causing the compression of the article in the box. It will be seen that the levers E rise with quick motions and great power by the expenditure of comparatively small power on the cord *e*. It will also be seen that two bales are formed at the same time, owing to the partition-board D. The bales may now be secured by ropes or wires, and the doors *h* will be opened. At the same time the cams or locking-rollers H will be rotated so as to move from the doors G, whereby the doors G will open to a certain extent, and relieve the bales of pressure at the contiguous sides. The removal of the bales is now easily accomplished.

The follower may now be lowered by drawing down the levers E and F, and the box A is again clear for a fresh supply, the subsequent operations, as above stated, being repeated.

By removing the board D, a single bale of the capacity of the box A may be produced. The board D may be connected to a weight attached to a rope passing over a pulley suspended overhead, for assisting the ascent of said board and follower.

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

1. The follower C, levers E, and levers F,

in combination with the straps *d d*, each of which is pivoted to one of the levers E, and both have a common axis on the roller *d'*, substantially as and for the purpose set forth.

2. The box A, in combination with the follower C, having a partition-board, D, connected to and moving with it, substantially as and for the purpose set forth.

3. The follower C, with partition-board D, in combination with the right-angularly-arranged rollers *b m*, substantially as and for the purpose set forth.

ISAAC R. KULP.

Witnesses:
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