2. Sheets. Sheet 1.

F. Frey,

Hay Press.

No. 105,062. Patented July 5. 1870.

Fig. 1.

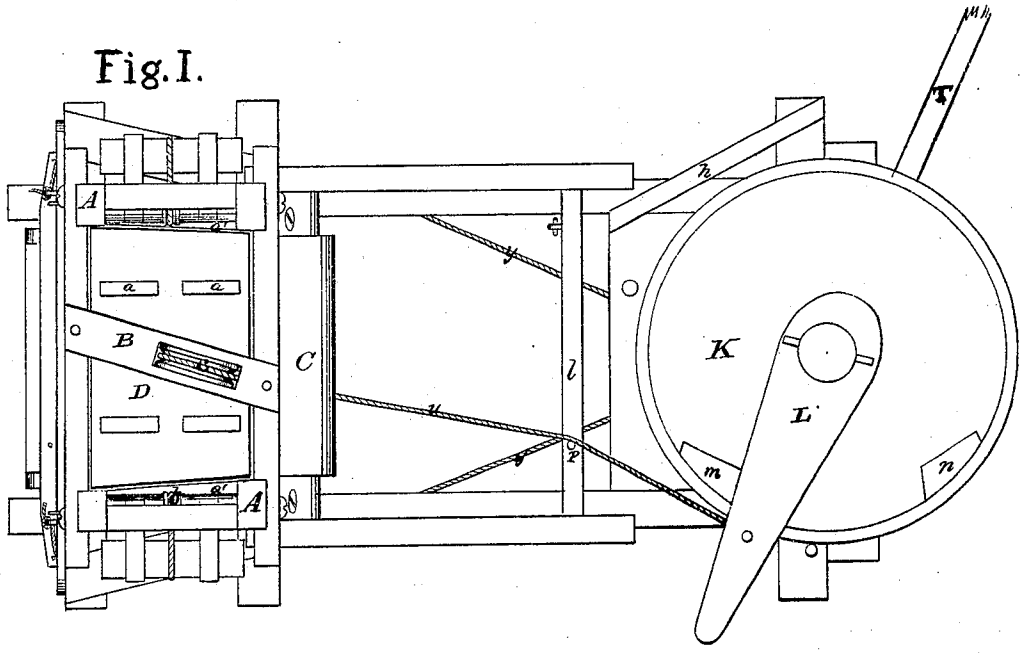
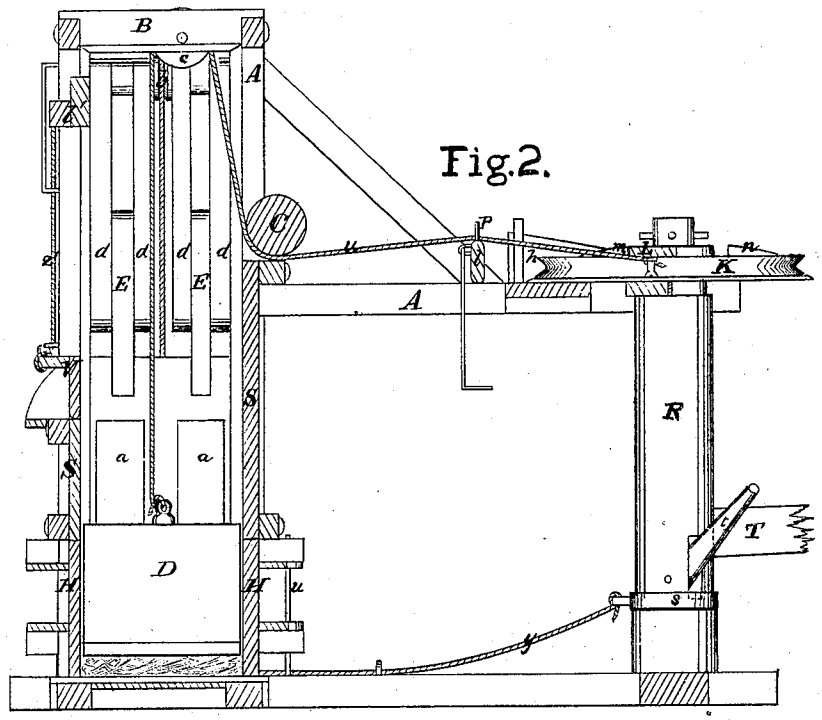


Fig. 2.



Witnesses.
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Chas. Kenyon

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Attorneys

2 Sheets, Sheet 2.

F. Frey,

Hay Press.

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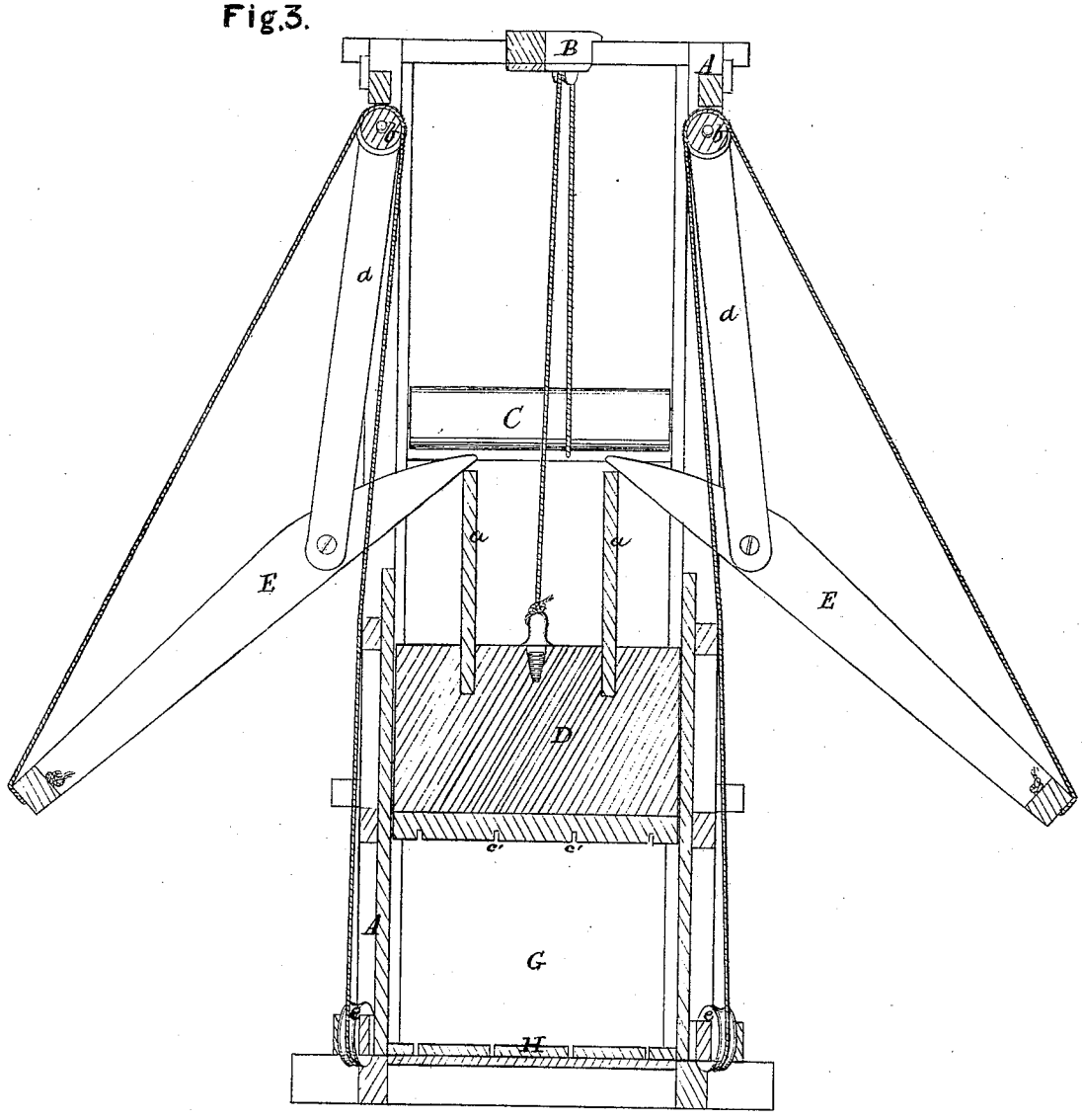
Fig. 3.



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United States Patent Office.

FRANKLIN FREY, OF LIBERTY, ILLINOIS, ASSIGNOR FOR THREE-FOURTHS TO A. H. BUTTS, JR., WILLIAM H. MEACHAM AND CHARLES J. KARNEY.

Letters Patent No. 105,062, *dated July* 5, 1870.

IMPROVEMENT IN HAY-PRESSES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FRANKLIN FREY, of Liberty, in the county of Adams and State of Illinois, have invented a new and valuable Improvement in Hay-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 drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a top view of my invention.

Figure 2 is a central vertical longitudinal section; and

Figure 3 is a transverse section of the same.

My invention relates to means for baling hay, cotton, &c., and consists mainly in the construction and novel arrangement of devices forming a combined beating and leverage press, designed to operate efficiently for the purposes above set forth.

The letter A of the drawing designates the frame of the press.

The box or compartment in which the hay is placed is formed by the doors H, parallel walls, S S, and side walls, *a' a'*, which are somewhat inclined toward each other horizontally, to facilitate the removal of the bale.

Each door is secured by means of a hook, arranged to engage with a stud in a hinged vertical bar, adapted to swing against the free end of the door when shut.

The upper part of the frame is open between the corner uprights, to allow of the introduction of the hay, and of the ends of the pressing-levers E.

The doors and hinged latch-bars are made very strong, and arranged to turn upon the tie-rods *u*, which secure the frame to the foundation sills.

V represents a hinged ledge, adapted to drop down, to admit of the introduction of the hay, and provided with ropes, *z' z'*, whereby it is connected to the sliding bar *l'*.

After the hay is introduced the ledge V is raised, thereby keeping it within the box.

D represents the beater-weight, provided with the transverse grooves *c'*, and raised by turning the horizontal pulley K, bearing the catch-bar L, to which the suspending rope *e*, passing over the pulley *a* and under the roller *b*, is attached.

When the pulley has made nearly a complete revolution, the catch-bar L is lifted from the lug *m* on the pulley, by the inclined plane *h*, attached to the frame, releasing the beater, which falls at once on the hay.

The horizontal pulley is secured to a vertical shaft, R, which is operated by means of sweeps, T.

l represents a hinged shifter, which lies upon its side during the beating process, but, when it is desired to discontinue the operation of the beater, the shifter is raised.

The letters E E designate the pressing-levers, pivoted to the arms *d d* pendent from and pivoted to a rod at the top of the frame, between the uprights. These levers are made double, and have their ends connected by cross-bars to which the operating ropes *y y* are attached. The bearing-ends of the levers are shod with iron.

The operating rope *y* is arranged to pass upward between the levers and arms, over the pulley *e*, and then around the pulley *e* in the oblique block at the base of the press.

Both ropes *y y* then pass to the vertical shaft, and are attached to the revolving collar *s*.

This collar is seated upon a shoulder at the lower part of the shaft, and is arranged to rotate freely during the operation of the beater. But when the levers are to be operated, the hinged-catch *t* is dropped into the notch *u'* in the collar, which will then revolve with the vertical shaft as it is turned by the sweeps, or other power.

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

1. In combination with the inclined plane *h*, the grooved horizontal pulley K, provided with lugs, *m n*, and the radial arm L, to which the beater-rope is attached, when constructed and arranged to operate as specified.

2. In combination with the radial arm L, and horizontal driving-pulley of a beater-press, the shifter *l*, when constructed and arranged to operate as specified.

3. In combination with the pressing-levers E E, the pendent arms *d d*, oblique pulleys *e e*, and rotating collar *s*, notched to receive the key *t*, pivoted to the rotating-shaft R of a beater-press, as specified.

4. The double lever E, consisting of two levers, having their long arms rigidly connected together at the ends, in combination with the pendent arms *d d* and beater D, having uprights, *a a*, substantially as shown and described.

5. The beveled pressing-chamber G, as specified.

6. The tie-rods *u*, when constructed and arranged to operate as and for the purposes set forth and shown.

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

FRANKLIN FREY.

Witnesses:

L. E. EMMONS,

M. R. BUTZ.