

Philip G. Stophilbeen,

Hay Press.

N^o 42,223.

Patented Apr. 5, 1864.

Fig. 1.

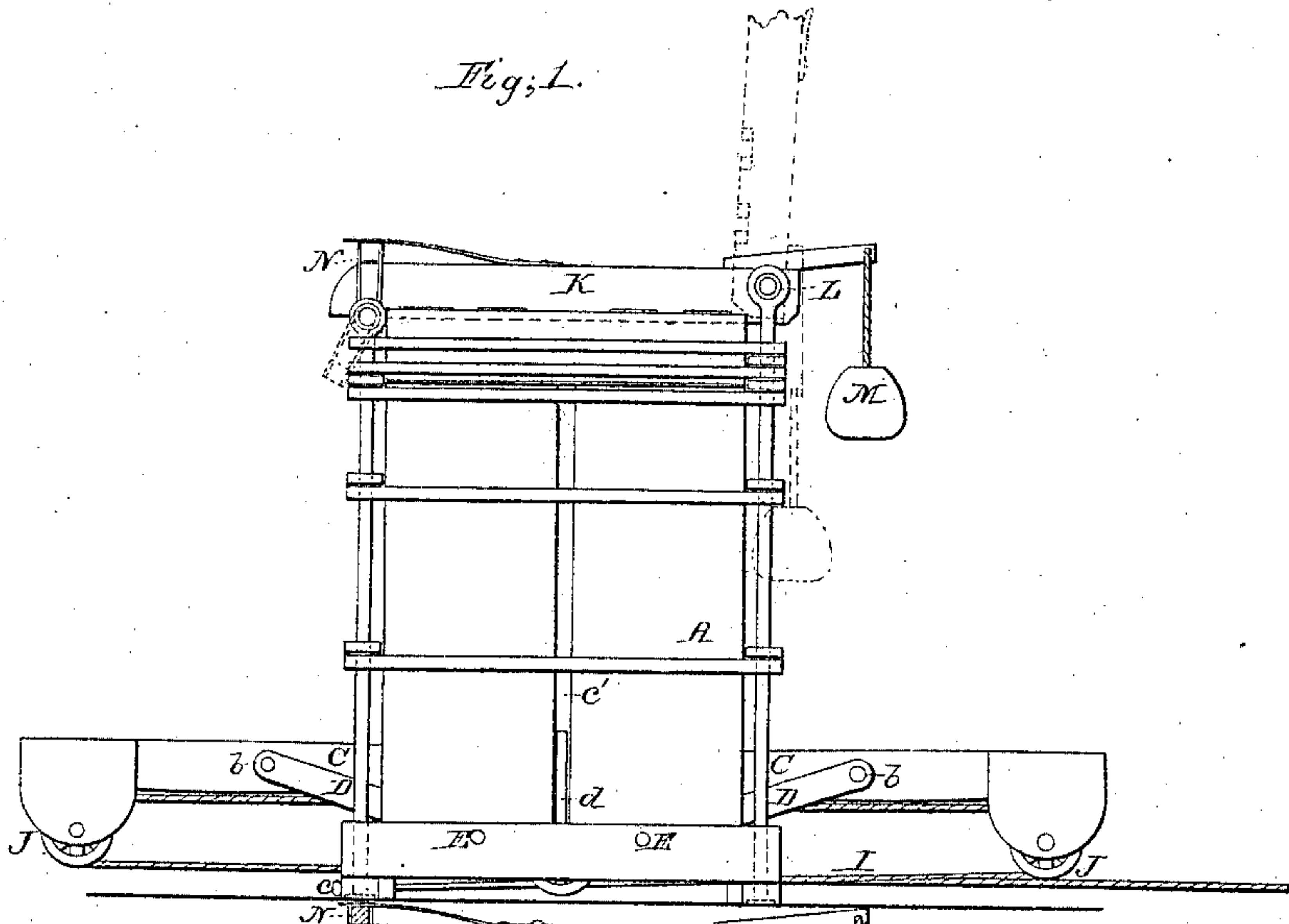


Fig. 2.

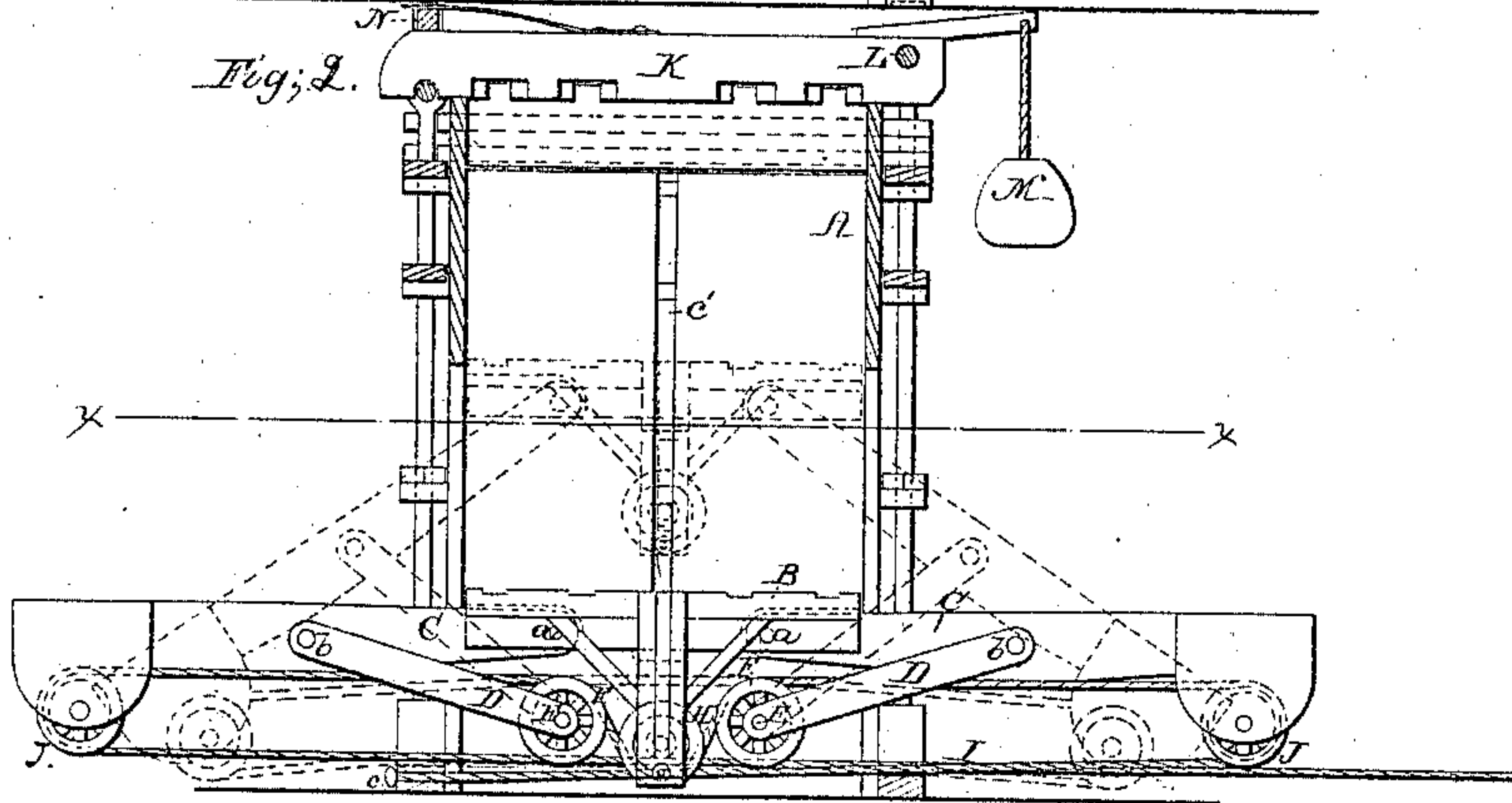
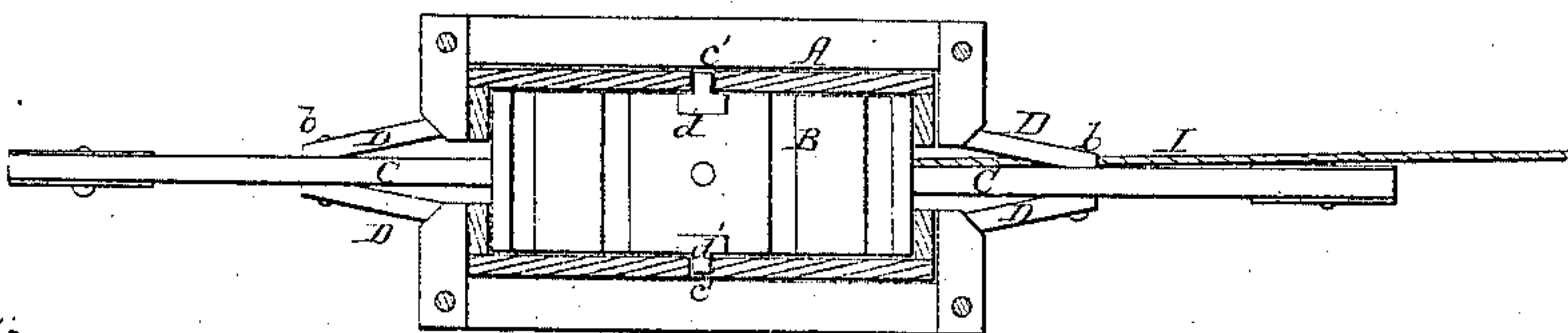


Fig. 3.



Witnesses;

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UNITED STATES PATENT OFFICE.

PETER PHILIP, OF HUDSON, AND P. J. STOPHILBEEN, OF SCHODACK, N. Y.

IMPROVEMENT IN BALING-PRESSES.

Specification forming part of Letters Patent No. 42,223, dated April 5, 1864.

To all whom it may concern:

Be it known that we, PETER PHILIP, of Hudson, in the county of Columbia and State of New York, and PETER J. STOPHILBEEN, of Schodack, in the county of Rensselaer and State aforesaid, have invented a new and Improved Press for Baling Purposes; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation of our invention; Fig. 2, a side view of the same with the side of the press-box nearest the eye removed for the purpose of showing the interior; Fig. 3, a horizontal section of the same, taken in the line *x x*, Fig. 2.

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

This invention relates to an improved baling-press of that class in which side levers are employed for operating the plunger.

The invention consists in a novel and simple means for elevating the plunger at the commencement of its work, whereby the levers at such time may be nearly or quite in a horizontal position, and several advantages obtained over the ordinary baling-presses, as will be hereinafter set forth.

The invention also consists in a simple means for insuring a horizontal movement of the plunger, and also in an improved arrangement of the head or cover of the press-box, whereby the filling of the latter and the removal of the bale therefrom are greatly facilitated.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents the press-box, of rectangular form, and provided with a plunger, B, which works or moves upward during the pressing operation.

C C represent the side levers by which the plunger is operated, and which are attached one to each end of the plunger by a pivot or joint, *a*, said levers being each connected by arms D to the stationary rods or bars E at the lower end of the press-box, the upper ends of said arms being connected to the levers C by pivots *b*, and their lower ends being fitted loosely on the rods or bars E, the latter being underneath the pivots or joints *a* of the levers C C, as shown in Fig. 2. On each of the rods

or bars E there is placed a loose pulley, F, and to the under side of the plunger B there is attached a pendant having a pulley, H, at its lower end, the latter being in line with the center of the space between the pulleys F F.

I represents the rope through the medium of which the levers C C are operated to force the plunger B upward. One end of this rope is attached to the lower end of the framing of the press-box, as shown at *c*, and said rope passes around pulleys J J at the ends of the levers C C, over the pulleys F F on the rods or bars E, and underneath the pulley H, attached to the plunger B, as will be fully understood by referring to Fig. 2. By this arrangement it will be seen that when the plunger B is down and the levers C C in a horizontal position, as shown in Figs. 1 and 2, the rope I, when pulled, will throw up the pulley H and plunger B, as said pulley will be down below the pulleys F F, over which the rope I passes, and the plunger in rising carries upward, of course, the inner ends of the levers C, so as to bring the pivots or joints *a* above the pivots *b*, which connect the arms D to the levers C, and the rope I is then allowed to act directly upon the levers C to throw or force upward the plunger B. If the pulley H were not employed and arranged in connection with the rope I and pulleys F F, as shown, the levers C C could not be allowed to descend to a horizontal position, as they could not be acted upon by the rope in consequence of the pivots *b* and pivots or joints *a* being in or nearly in the same horizontal plane. In order to obviate this difficulty, the ordinary presses of this class are provided with deeper press-boxes than that in our improvement, and with proportionably longer levers C, so that the joints or pivots *a* are not allowed to descend to the level of the pivots *b*; hence the advantage of our improvement will be seen. We are enabled to use a press-box and framing of a less height or depth than usual in order to compress bales of a given size, for the plunger B is allowed to descend to the bottom of the press-box, and no allowance required to be made for an oblique position of the levers, either as regards the length of the same or the height of the press-box and framing, and the press being lower it may be filled and the bale removed therefrom with greater facility. We would

remark that although the pulley H has been described as being attached to the plunger B, still it may be connected to an independent frame, the latter, when elevated, pressing against the under side of the plunger. The same result, it will be seen, is obtained in either case. The plunger B, in this class of presses, is quite liable to be elevated or forced upward out of a horizontal position, one end being raised above the other, thereby causing much friction in the operation of the press. We obviate this difficulty as follows: The press-box A has two vertical slots, *c c'*, made in it at two opposite sides. These slots extend the whole height of the press-box, and the plunger B has two vertical bars or strips, *d d*, attached to it, which work in the slots *c c'*, the latter being at the centers of the sides of the press-box, and the bars or strips *d d* at the centers of the two sides of the plunger B. These bars or strips are of sufficient length to have a good bearing-surface in the slots *c'*, and effectually prevent the tilting or tipping of the plunger B out of a horizontal position. Instead of the strips or bars *d d*, friction-rollers may be employed (two or more) at each side of the plunger, and placed at such a distance apart at each as to effect the same result.

K represents the head or top of the press-box, against which the material in the latter is compressed. This head or top is attached at one end by a joint or hinge, L, to the upper part of the framing of the press-box, and said head or top is counterpoised by a weight, M, which renders the elevating of the head or top comparatively easy. When the head or top is down, it is secured in a closed state by a fastening, N, arranged in any proper way. The advantage of this arrangement of the head or top K admits of the upper end of the press-

box being perfectly unincumbered in filling it and in removing a bale therefrom. The usual way is to hinge the head or tip to the press-box or framing at its side, or arranging it in such a manner as to slide laterally out from the same, and this serves as a great obstruction.

We are aware that it is common to hinge the tops of baling-presses by their sides; but this necessitates the use of a link or catch applied at each end of the top to secure it while the press is working. By our mode of hinging the top at one end we are enabled to use the hinge also as the means of securing that end, and thus require but a single link or catch at the other end.

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

1. The employment or use of a pendant pulley or bracket, H, or its equivalent, arranged relatively with the plunger B, rope I, levers C C, and the pulleys F F, or equivalent rope-guides, so as to throw up the plunger B when the latter is at the bottom of the press-box and the levers C C in a horizontal position, as herein set forth.

2. The strips or bars *d d*, attached to the plunger B at two opposite sides thereof, in combination with the vertical slots *c c'* in the sides of the press-box A, all arranged substantially as and for the purpose herein specified.

3. The combination of the box A, head or top K, hinge L, and fastening M, all constructed, arranged, and operating as specified.

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Witnesses:

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