

(No Model.)

2 Sheets—Sheet 1.

P. K. DEDERICK  
BALING PRESS.

No. 257,153.

Patented May 2, 1882.

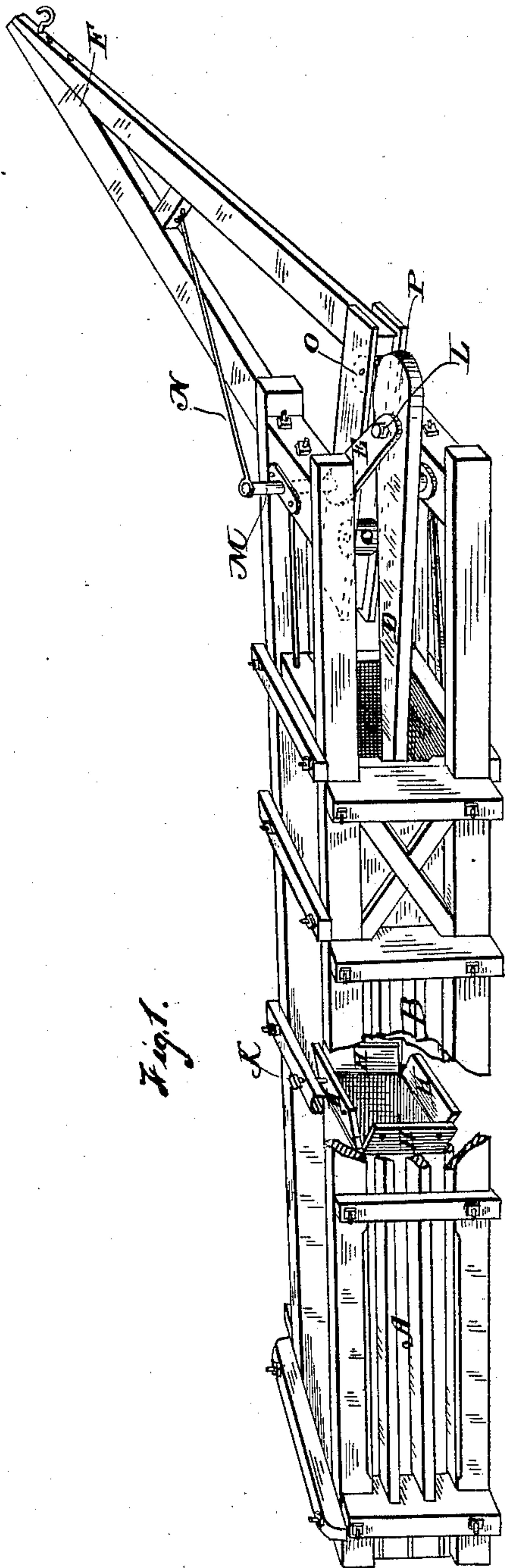


Fig. 1.

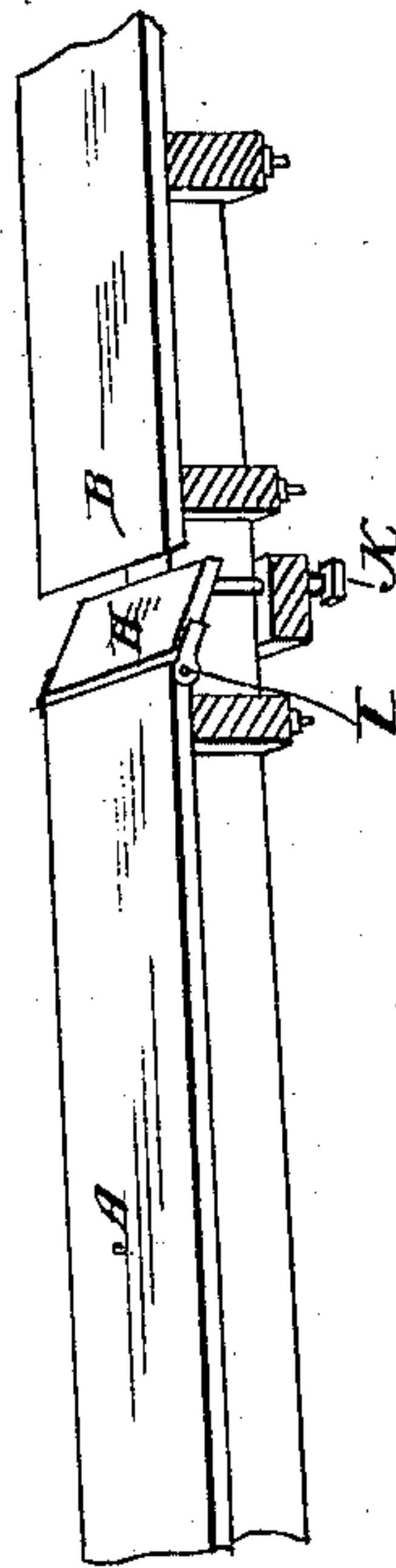


Fig. 2.

Attest.  
J. H. Knight.  
Fred P. Church.

Inventor  
P. K. Dederick.  
By Melville Church  
His atty.

(No Model.)

2 Sheets—Sheet 2.

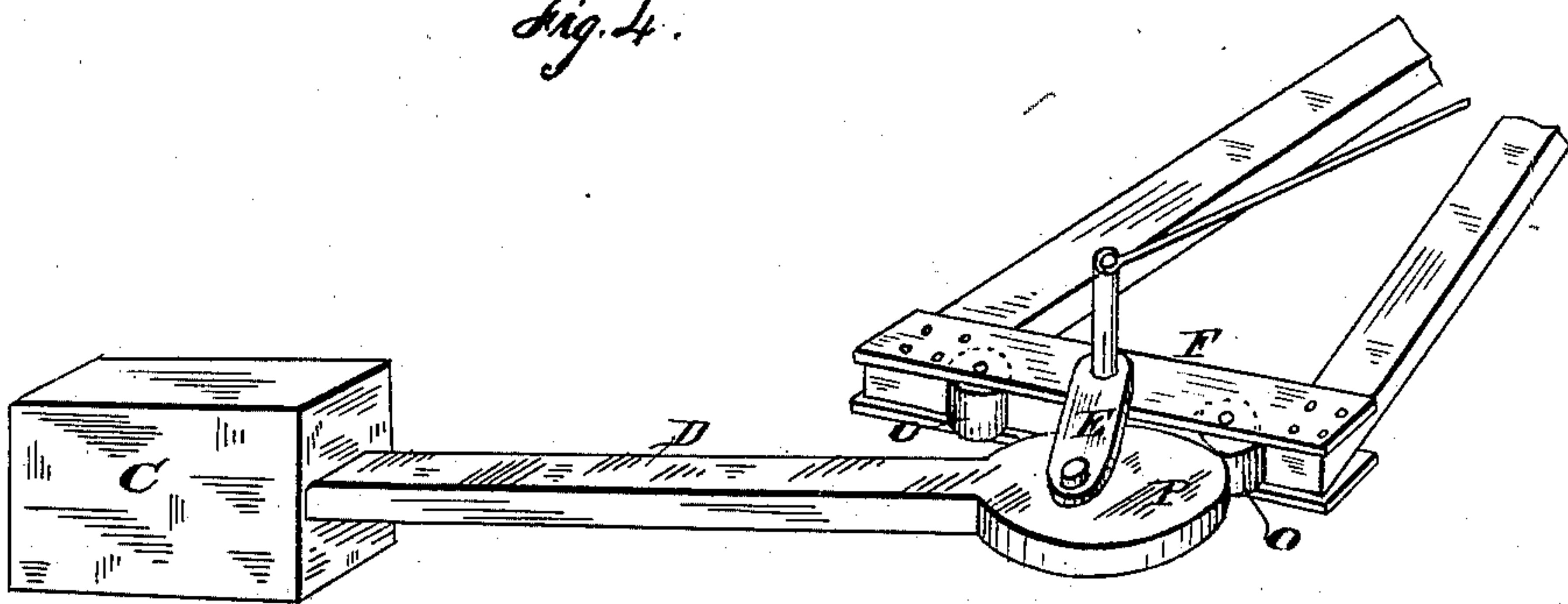
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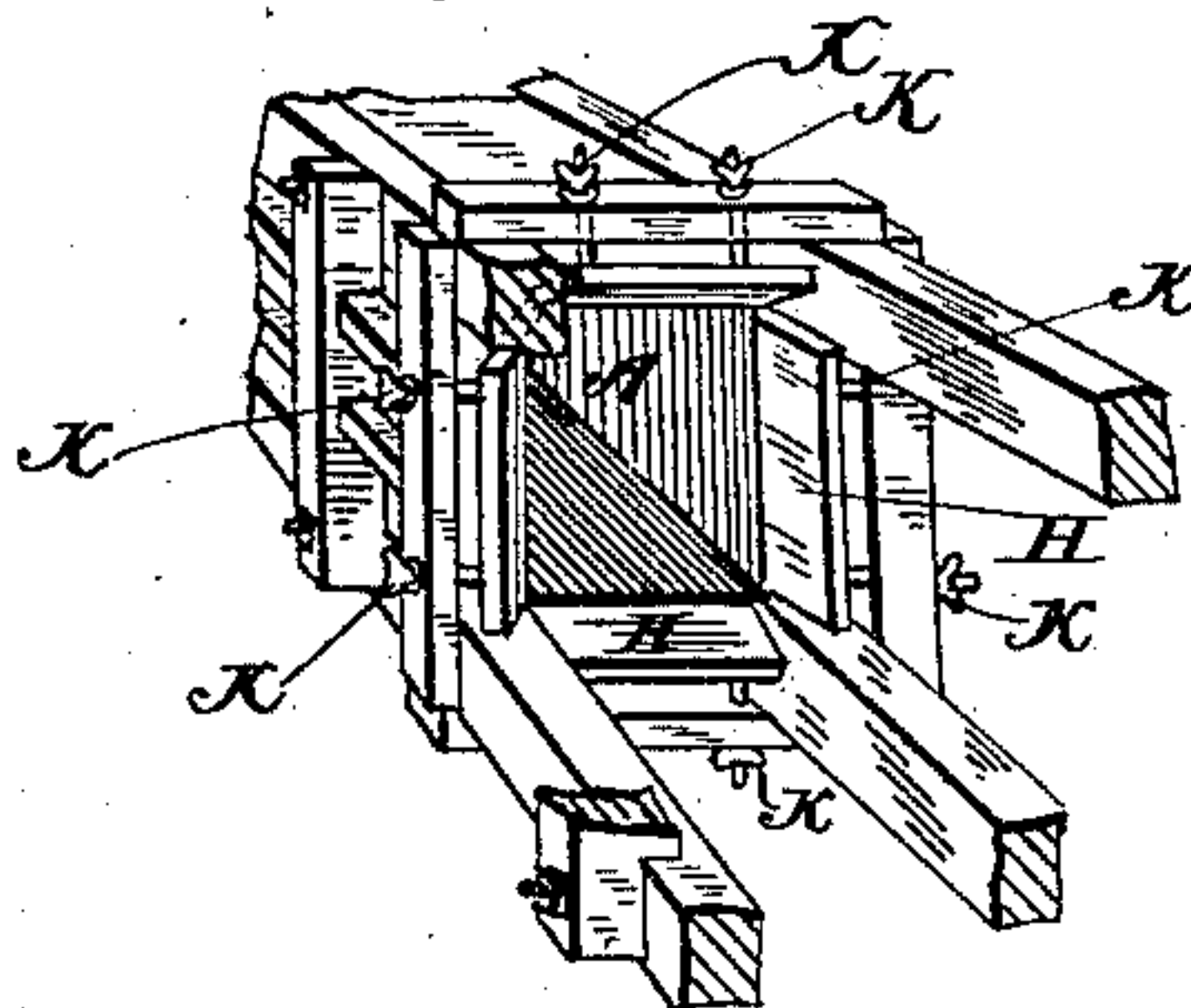
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*Fig. 4.*



*Fig. 3.*



*Attest*

*J. H. Knight.*  
*Fred F. Church.*

*Inventor.*

*P. K. Dederick.*  
*By Melville Church*  
*His atty*



# UNITED STATES PATENT OFFICE.

PETER K. DEDERICK, OF ALBANY, NEW YORK.

## BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 257,153, dated May 2, 1882.

Application filed December 27, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, PETER K. DEDERICK, of Albany, county of Albany, State of New York, have invented certain Improvements in Baling-Presses, of which the following is a specification.

My invention relates to that class of presses for which Letters Patent were granted me dated October 29, 1872, Nos. 132,566 and 132,639, and the various modifications of the same for which Letters Patent have since been granted me.

My present improvement consists, first, in the manner of constructing the entrance into the bale-chamber from the press-box; secondly, in the construction of the pressing-power.

Figure 1 is a perspective view of my improved press with a portion of the side broken away, disclosing the mouth of the bale-chamber. Fig. 2 is a sectional view of one of the sides of the press-box and bale-chamber. Fig. 3 is an inside end view of the bale-chamber with the press-box removed. Fig. 4 is a sectional view, illustrating the power of the press.

Similar letters represent similar parts.

A is the bale-chamber; B, the press-box; C, the traverser; D and E, the arms of the toggle; F, the horse-lever.

At the junction of the press-box with the bale-chamber I hinge short sections of the lining of the bale-chamber on one, two, or more of its sides, as shown in Figs. 1, 2, and 3, H representing the sections hinged to the bale-chamber, with their movable ends extending to the press-box B and hinged to the bale-chamber at I, as shown in Fig. 2, and so that the hinged leaf or part may be vibrated to increase or diminish the shoulder formed at the junction of the press-box, as well as enlarge or diminish the size of the mouth of the bale-chamber, as shown in Figs. 1 and 3, so that the section of material formed will be larger or smaller, as desired, and thus increase or diminish the friction within the bale-chamber, thereby increasing or diminishing the solidity of the bales without adjusting any other part of the bale-chamber, which may be rigid with straight or tapering sides. These hinged sides of the mouth or entrance to the bale-chamber form an inclined or beveled entrance when screwed back, which gradually contracts the size of the section of material being formed and smoothly conducts

it into the bale-chamber, no matter at what angle adjusted. In very light work the hinged leaves may be set so that their inside surfaces are on a line with the inside of the press-box and bale-chambers, and may even be projected inside, so as to form the section smaller than the bale-chamber. These hinged sections may be adjusted in any suitable manner with bolts or rods. I have shown set screws, two to each leaf, for adjusting them, K being set-screws, which have their bearing in timbers secured to the frame, as shown, and the ends of the screws bear against the loose end of the hinged section or leaf.

The hinge might be dispensed with and any suitable bearing substituted that would retain the edge of the leaf in place when in operation, as if hinged or pivoted, and allow the other end to vibrate as desired. It should be observed that in Letters Patent No. 132,639, October 29, 1872, I have shown the incline surfaces to form the section larger than the bale-chamber, but they are stationary.

In Letters Patent No. 224,281, February 10, 1880, I have shown adjustable bevels or surfaces to form the entrance to the bale-chamber; but they are not hinged, and instead of vibrating the entire surface moves in, and is much less effective and less desirable than when vibrated as herein shown.

The power of the press is what is known as the "double-acting toggle" operated by horse-lever; and in order to more clearly define my invention, I refer to Letters Patent granted Huntington and Carter, No. 126,394, May 7, 1872, and to Letters Patent granted Albert A. Gehrt, No. 199,052, January 8, 1878. By "double-acting toggle" I mean that the toggle-joint is operated back and forth, so as to project alternately at opposite sides of the press.

In both machines, as shown by Letters Patent above referred to, the horse-lever operates directly on the toggle-joint, so that the power obtained is simply that of the joint multiplied by that obtained from the lever to which the horse is attached. Experience has demonstrated that this power is not sufficient for extremely compact baling, such as required in baling cotton and some other materials, and one of the primary objects of this invention is to supply this deficiency.

The arm D of the toggle is pivoted to the



traverser C and the arms E, of which I preferably use two, one above and one below the arm D, with a pin, L, securing all together and forming a joint. The other ends of the arms E are mounted on a pin or shaft, M, as is also the lever F, and supported from sagging by the rod N. In this instance I form the lever F in the form of a brace bolted together at the outer end, as shown, and connected together by plates or timbers at the press, as shown also, although the lever may be constructed in any suitable manner.

The lever is provided with rollers O to bear against the arm D of the toggle, extended beyond the pin or pivot L, as shown at P, Fig. 1, so that the roller bears against this extension, and at the commencement of the operation moves the toggle-joint much faster than if applied directly against them, as in the presses referred to. As the toggle moves on the roller O moves out and around the end P, and finally moves up the outside of the arm P, toward the joint or pivot L, at which time the joint moves much more slowly than the horse-lever, and the power is proportionately increased. The joint is forced over the center, and the expansive force of the pressed material projects it at the opposite side of the press, and the operation is repeated in the reverse direction, the other roller and end of the lever being brought to bear. Instead of double acting, or operating both ways, the joint might be forced to the center and then reversed in the same direction to the starting-point; but this would require a back-and-forth movement to each stroke, and will thus accomplish but half the work in the

same time. I prefer the end P formed, as shown in Fig. 1, with rounded eccentric-like end; but it will be effective with cornered, octagonal, square, or triangular form, or a cam may be formed as shown in Fig. 4. The end P vibrates between the arms E, and its length may be varied, but must clear the pin M, so as to vibrate past it in operating both ways.

The horse-lever might be mounted on a separate journal and the arms E attached to separate bearings, thereby dispensing with the pin L, and thus permit of greater variation in the arms of the joints; but this greatly impairs its strength. Smooth surfaces might be substituted and the rollers dispensed with with the same effect, although the friction would be slightly increased. The friction-roller O might be inserted in the end of the extension P, Fig. 1, and the horse-lever or connecting-plates securing it to the press be made of suitable shape and brought to bear against it with the same effect; but this would be simply a variation of the cam.

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

1. The combination, with the bale-chamber, of the vibratory adjustable entrance to the same, substantially as described.

2. The combination-arm E, with the arm D, extension or cam P, and sweep or horse lever F, as and for the purpose set forth.

P. K. DEDERICK.

Witnesses:

W. A. SKINKLE,  
J. T. BUTLER.