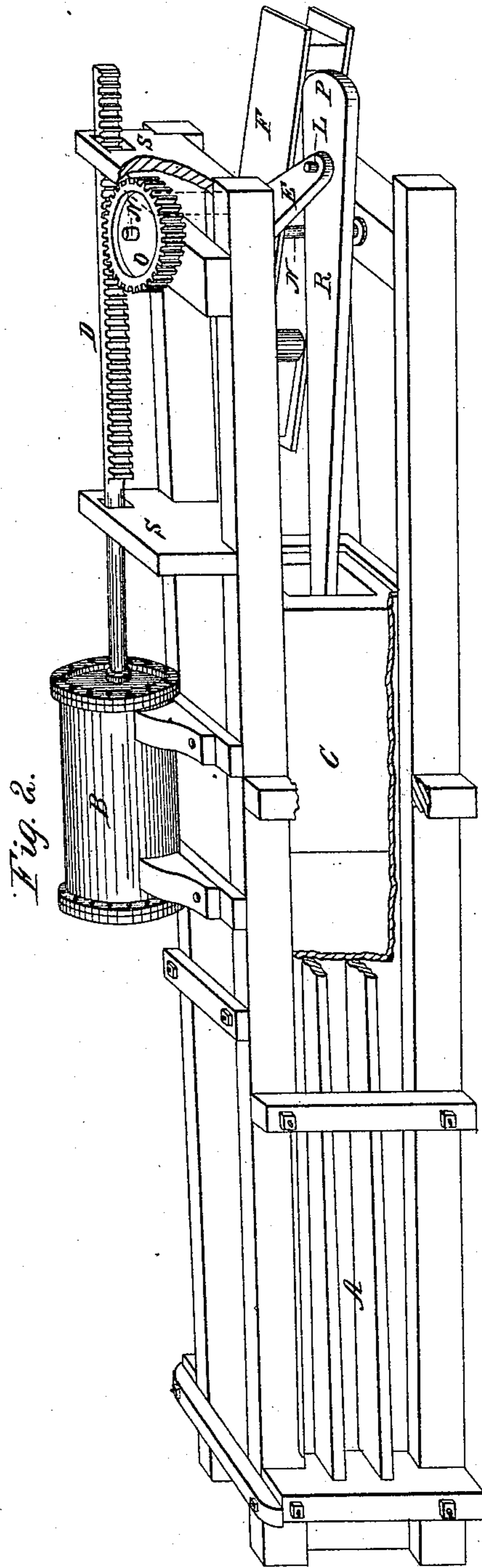
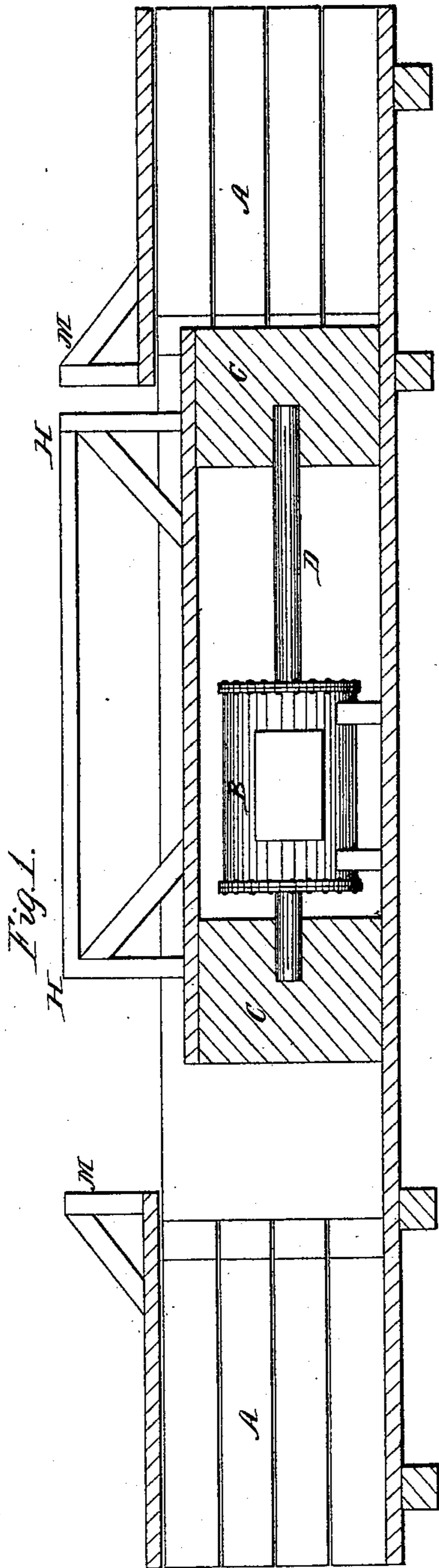


(No Model.)

P. K. DEDERICK.
BALING PRESS.

No. 287,107.

Patented Oct. 23, 1883.



Witnesses:
W. C. Jordine
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UNITED STATES PATENT OFFICE.

PETER K. DEDERICK, OF LOUDENVILLE, NEW YORK.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 287,107, dated October 23, 1883.

Application filed September 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, PETER K. DEDERICK, of Loudenville, in the county of Albany and State of New York, have invented certain new and useful Improvements in Baling-Presses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and to the figures and letters of reference marked thereon.

My invention relates to that class of presses for which Letters Patent were granted me October 29, 1872, No. 132,566, and No. 132,639, and the various modifications of the same for which Letters Patent have since been granted me; and it consists, chiefly, in combining with my improved press an engine or a steam or hydraulic cylinder and piston in such a manner that the movement of the piston in either direction condenses or presses a section, which I term "double-acting" or "double-working" the piston; also, in combining a preliminary condenser with a cylinder and press, either or both of which improvements economize steam or power. By reference to Letters Patent No. 173,965, granted George Fordham Jones, February 22, 1876, it will be observed that a steam-cylinder is shown for the purpose of condensing sections into bales, as also in Letters Patent granted me November 29, 1881, and January 16, 1883, No. 250,135, and No. 270,760; but in all these cases the piston is used for pressing or condensing a section in but one direction, and then reversed by steam or otherwise preparatory for use in condensing another section, which is a great loss of steam in both directions as compared with the method herein described.

Figure 1 is a side sectional elevation illustrating a direct-acting piston and cylinder in accordance with my improvements. Fig. 2 is a perspective view illustrating the application of the double-acting pressing-cylinder and piston to the double-acting toggle.

Similar letters represent similar parts.

A are bale-chambers; B, cylinder; C, traverser; D, piston-rod.

It should be observed in Letters Patent No. 132,566, referred to, that a double press with chamber at each side of the power is described,

as also in No. 177,220, May 9, 1876, to which the double-acting steam-cylinder is peculiarly applicable, as shown in Fig. 1. The cylinder B is firmly secured to the frame of the machine, and the rod D plays through it and is secured to the piston within. The traverser C may be separate and secured at each end of the piston-rod or connection, as shown. The condensers H are firmly secured to the traverser and operate against the stationary heads M M, thus partially condensing the loose material and requiring less stroke or move of the steam-piston to receive the charge in the press-chamber; hence economy in steam, or a condenser operating to condense the loose material on the reverse of the traverser similar to Letters Patent No. 151,477, granted me June 2, 1874, may be used. The material is fed alternately between the condensers H M at the opposite chambers, and the steam-piston alternately projects the traverser C toward and so as to pack the condensed material into the chambers H, which may be operated on the continuous process or provided with doors in the chamber, all as described in my various patents referred to.

Fig. 2 represents the double-acting steam-cylinder and piston as applied to the baling-press patented to me May 2, 1882, No. 257,153, and Letters Patent No. 199,052 and No. 126,394, referred to therein. This machine I have shown with but a single bale-chamber, A, and traverser C. To the traverser C is attached an arm, R, of a toggle-joint, the other arm or arms, E, being mounted loosely on shaft or pin N and connected at the point L to the arm R. F is a cross-head, also mounted on the shaft N; and firmly secured to it. P is an extended end of arm R, on which the cross-head F is brought to bear to force the loose toggle-joint back and forth over the center, all as set forth in Letters Patent No. 257,153, referred to. On the shaft N, at the top, I secure a spur-wheel, O, or a segment may be used, if preferred, to which I have fitted a rack, D, moving in guides S S, secured to the frame. This rack D is really an extension of the piston-rod D, and moves with it, so that as the piston of cylinder B moves either back or forth it turns the wheel O, shaft N, and cross-head F back

or forth, and moving the toggle-joint L over the center at each movement, the expansion of the pressed sections reversing the traverser and toggle, as more fully described in Letters Patent referred to.

If preferred, the arms E of the toggle may be firmly secured to the shaft N, so as to turn with it, and thus dispense with cross-head F; but this would require a longer stroke of piston, hence more expensive in power; or the shaft N may be extended so as to operate another similar press and toggle-power, thus constituting a double press with both chambers at the same end and in the same direction, either on top or aside of each other. In this case the arms E of the toggle of both presses are also firmly secured to the shaft at such angle that the traverser of one is withdrawn as the other is projected within the chamber from the opposite side, and each being reversed at the limit of their stroke, instead of passing them over the center, as in double-acting the toggle, but still double-acting the cylinder and piston by pressing a section in one chamber as the piston moves in one direction and in the other chamber on the reverse.

In Letters Patent No. 280,456, granted me July 3, 1883, I have illustrated some varia-

tions in connection with double-acting the piston of a cylinder, as herein described. All that is necessary is to utilize the back-stroke of the piston to press another section in another or the same chamber.

By means of the preliminary condenser I am enabled to shorten the stroke of the traverser nearly one-half in consequence of the condensed charges requiring that much less room in the press-box to receive them. This proportionately economizes steam.

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

1. The combination of a baling case or cases with an engine or cylinder, B, and piston D, operating to pack material in small quantities into bales by double-acting the piston or condensing a section at both the forward and backward stroke of the piston.

2. The combination of an engine or cylinder and piston with a baling-case and preliminary condenser, for the purpose set forth.

PETER K. DEDERICK.

Witnesses:

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