

(No Model.)

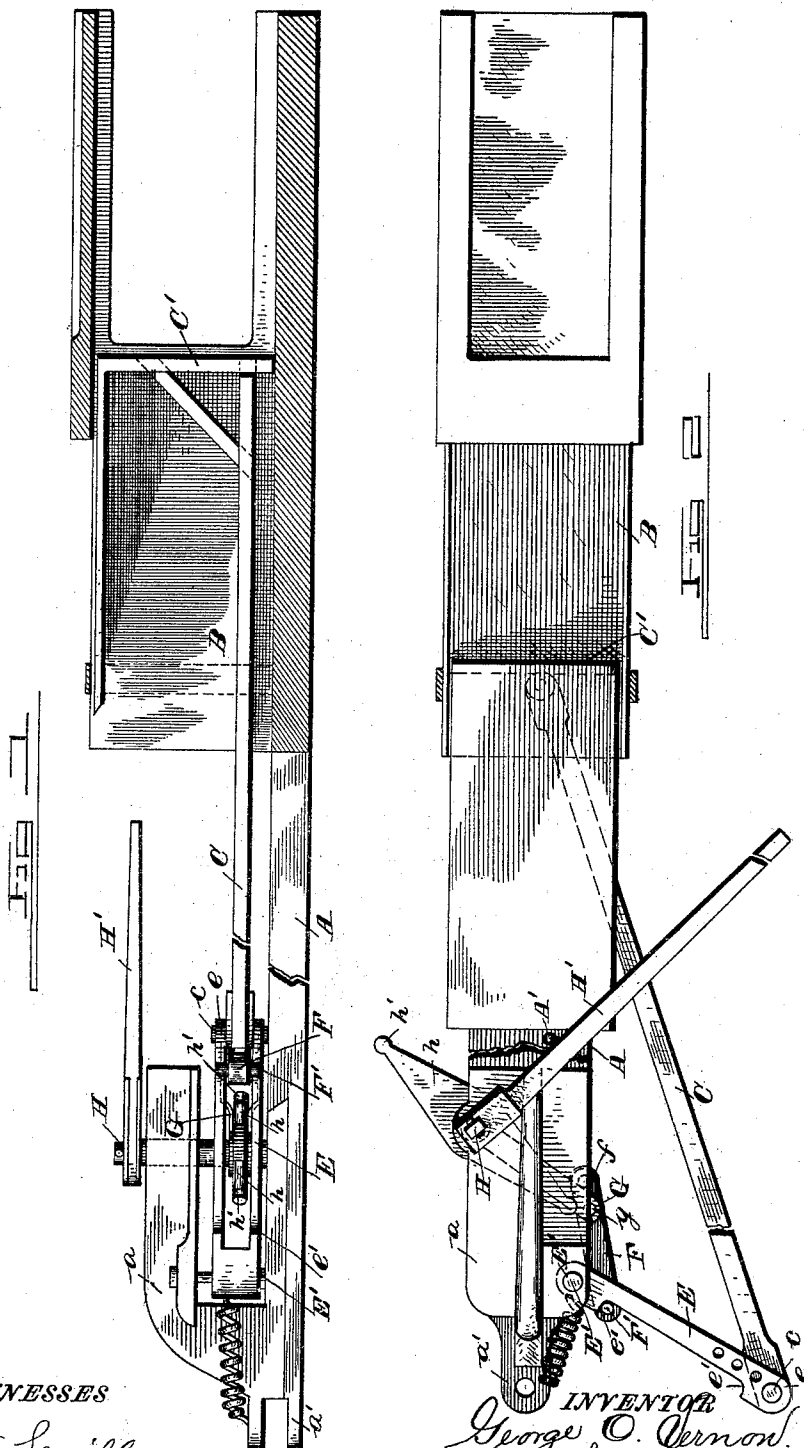
2 Sheets—Sheet 1.

G. O. VERNON.

POWER MECHANISM FOR BALING PRESSES.

No. 466,731.

Patented Jan. 5, 1892.



WITNESSES.

C. W. Sewill;
Jas. R. Mansfield.

INVENTOR
George C. Vernon.
By
W. H. Alexander
Attorney

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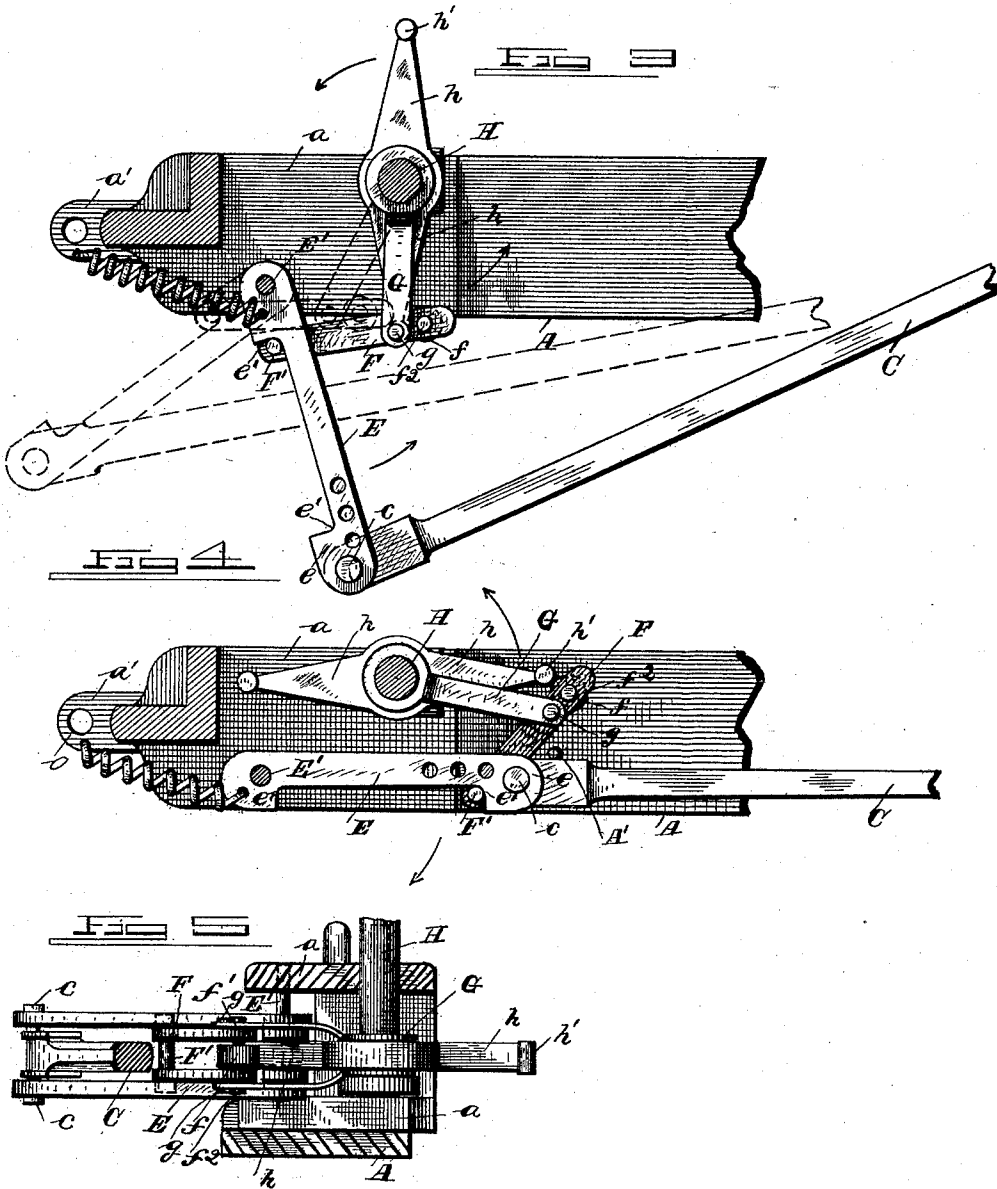
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UNITED STATES PATENT OFFICE.

GEORGE OMAR VERNON, OF ALBANY, OREGON, ASSIGNOR OF ONE-HALF TO
HARRY WARD PRICE, OF SAME PLACE.

POWER MECHANISM FOR BALING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 466,731, dated January 5, 1892.

Application filed April 29, 1891. Serial No. 390,932. (No model.)

To all whom it may concern:

Be it known that I, GEORGE OMAR VERNON, of Albany, in the county of Linn and State of Oregon, have invented certain new and useful Improvements in Power Mechanism for Baling-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a side elevation of my improved baling-press, the box being in section. Fig. 2 is a plan view thereof. Figs. 3 and 4 are detail plan views of the operating devices enlarged with the top piece removed, showing the parts in different positions. Fig. 5 is a detail transverse sectional view.

This invention is an improvement in power baling-presses of the class known as "rebounding-plunger" presses; and its object is to operate the plunger from a revolving post or shaft which can be turned by horse or other power directly or indirectly applied thereto, so that the plunger can be operated more than once during each revolution of the post, and will be given a very lengthy stroke; and to these ends the invention consists especially in the novel devices for positively actuating the plunger during the revolution of the post, and in certain other novel details of construction and combination of parts, as will be clearly understood from the detailed description and drawings.

Referring to the drawings by letters, A indicates the bed plate or beam of the machine, at one end of which is the baling-box B, of ordinary construction, but long enough to correspond to the stroke of the plunger, which can, however, be regulated and varied by adjustment of parts hereinafter mentioned.

The plunger C' is connected to one end of a pitman C, as shown, the other end of which is pivotally connected or hinged by a bolt c between the ends of limbs e e of a slotted or bifurcated bar E, as shown, and the other end of said bar is pivoted or hinged on a bolt or pin E' in a casting a, attached to the end of beam A opposite box B. As shown, this casting or housing is roughly U-shaped and is laid on one side, the pin being fixed between

the legs thereof, and this casting may be provided with perforated ears a' on its shank to connect it to a suitable anchorage or fastening. The bar and pitman form a kind of toggle which when straightened will move the plunger into the end of the box, and when closed or contracted will draw the plunger therefrom. The ends of limbs e e may be provided with a series of perforations, with either of which bolt c may be engaged, thus varying the length of stroke of the plunger by shortening the toggle formed by the pitman and bar.

F designates a horizontal link passing loosely through the slot in bar E, but confined therein by studs F' F' on its outer end, on which may be placed friction-rollers, if desired, which engage with the outer edges of limbs e e, which are recessed at e' e' to accommodate the studs and limit the play of the link longitudinally of the bar. The inner end of link F is pivotally connected by a bolt g to metallic straps G G, whose other ends are loosely secured to a vertical post H, journaled in the legs of casting a, near the inner ends thereof. The link and straps thus form a kind of toggle connection between the bar E and post. The inner portion of link F is horizontally slotted, as at f'. In its extremity is a friction-roller f, journaled on a bolt or pin f², as shown. On the post H, between straps G, are mounted horizontal arms h h, which, as shown, stand diametrically opposite each other and are cast in one piece. These arms are tapered toward their extremities, but are preferably formed with knobs or rounded heads h', as shown, which engage the roller f when the toggle formed by link F and straps G is extended or open, as indicated in Figs. 3 and 4; but when the toggle is closed or contracted, when the plunger is moved fully inward, as indicated in Fig. 2, the heads h' disengage the roller. The arms h as they revolve move between straps G, which are loose on the post. This post is revolved by any suitable means, as by a sweep H', connected to its upper end, to which draft-animals can be hitched. A pin A' may be set in beam A, so as to engage pitman C and prevent its being moved too far inward, so that the plunger will rebound and throw the

pitman and through its connections the bar and toggle-joint F G into the position shown in Fig. 1, and, if desired, springs or cords and weights (not shown) may be employed to facilitate this back-throw or rebound of the plunger when released.

The operation is briefly as follows: When the plunger is retracted, the pitman is thrown outward and turns the bar E away from the box, and the bar E, swinging away from the box, draws link F backward and causes it to move toward the pivoted end of the bar, bringing its roller *f* in such position that when the post is revolved the first arm *h* that passes between straps G will catch roller *f*, and will, as the post revolves, forcibly pull link F forward and inward. Owing to the toggle connection between said link and straps, as the link moves forward and inward, its studs F' engage bar E and turn the same forward, thus moving the plunger inward by the pitman C. It will be observed that as the plunger is moved inward link F slides down toward the pivotal connection of bar E and pitman C, so that the greatest power is exerted on the plunger just when it is most needed, and just when the plunger reaches the inward limit of its stroke the arm *h* disengages the link F, and the plunger rebounds, throwing back the parts into position to be engaged and forced inward immediately by the succeeding arm. By operating the bar E by means of the toggle actuated from the post, I am enabled to get a much longer stroke of plunger than would be possible if the bar E were engaged by the arms of the post, as has been heretofore generally done, and I gradually increase the power applied to the plunger, so that the greatest force is exerted thereon just at the moment the arm disengages link F. In the drawings I have shown two arms on the post; but it is possible, if desired, to provide it with more than two arms, so that the plunger will be forced inward a number of times during each revolution of the post. It is not essential to the working of the machine that link

F be provided with a friction-roller or that arms *h* have rounded heads, only that they be so constructed that the arms will cause the links to move, as described, during a portion of their revolution.

The essential feature of my invention is the operation of the bar E or its equivalent by means of a sliding link which is engaged intermittently and automatically by a revolving arm during part of the rotation thereof.

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

1. The combination of the pitman, the bar pivotally connected to the pitman and to a fixed support, and a sliding link on said bar with a revolving arm adapted to automatically engage, draw forward, and disengage said link during its rotation, and devices for regulating the movement of the link, substantially as described.

2. The combination, with a pitman and bar pivotally connected and constituting a toggle, substantially as described, of a movable link engaging said bar, with a rotating post provided with an arm adapted to automatically engage, draw forward, and disengage said link during its rotation, and connections between the link and post, substantially as and for the purpose set forth.

3. The combination of the pitman, the bar pivotally connected thereto and to a fixed support and the rotating post, and an arm thereon, with a toggle loosely connected to said post by one member and by its other member loosely connected to said bar and adapted to be operated by said arm during the rotation of the post, substantially as specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE OMAR VERNON.

Witnesses:

W. C. POWELL,
E. E. DAVIS.