

D. A. FANGHAENEL.

Improvement in Baling-Presses.

No. 129,119.

Patented July 16, 1872.

Fig. 1.

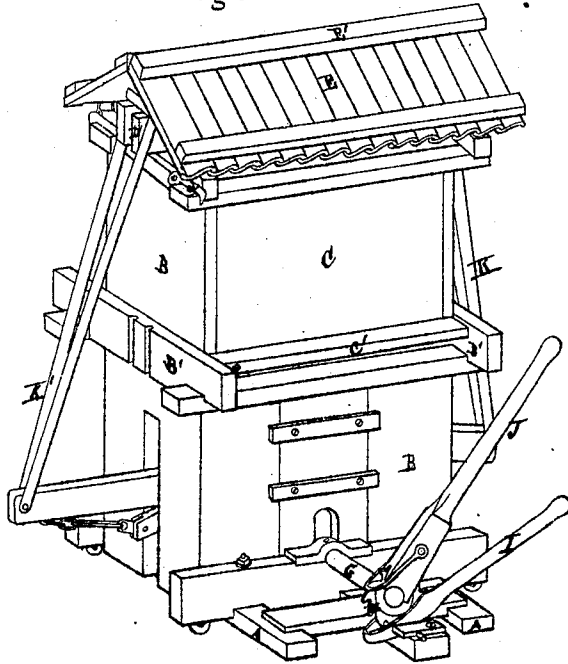
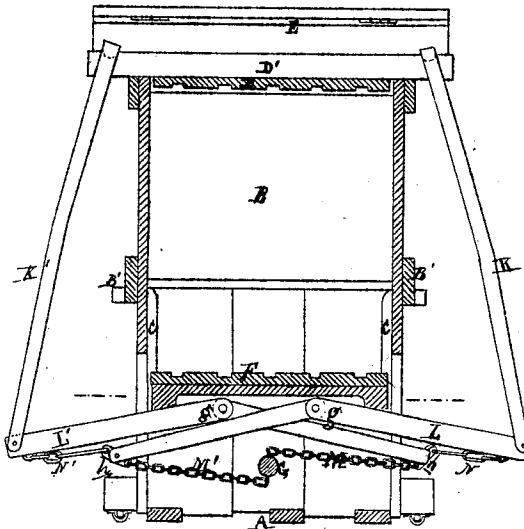


Fig. 2.



Witnesses:

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Inventor:

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per attorney
H. S. Sprague

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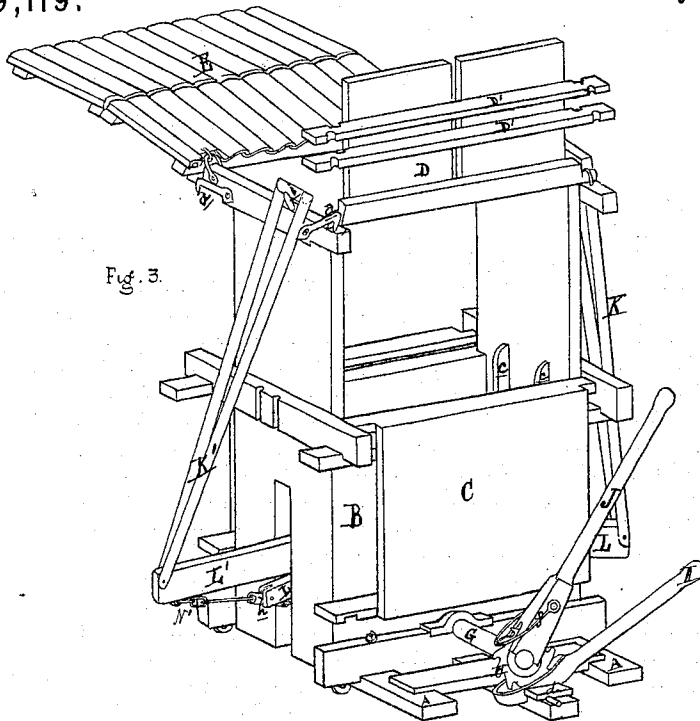


Fig. 3.

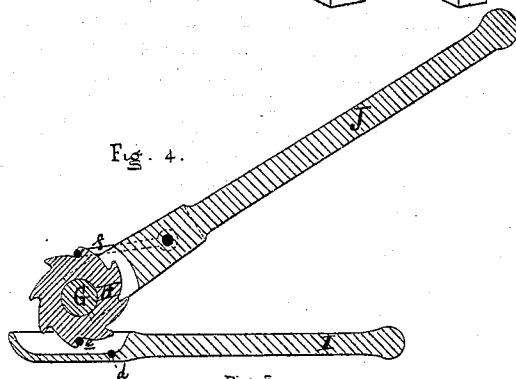


Fig. 4.

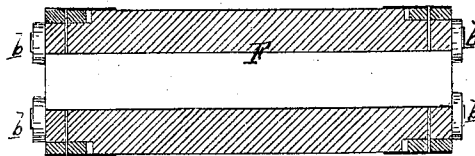


Fig. 5.

Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

DANIEL AUGUST FANGHAENEL, OF KANSAS CITY, MISSOURI.

IMPROVEMENT IN BALING-PRESSES.

Specification forming part of Letters Patent No. 129,119, dated July 16, 1872.

To whom it may concern:

Be it known that I, DANIEL AUGUST FANGHAENEL, of Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Improvement in a Baling-Press; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1, Sheet 1, is a perspective view of my press closed. Fig. 2 is a longitudinal vertical section of the same. Fig. 3, Sheet 2, is a perspective view of the press with all the doors and covers thrown open. Fig. 4 is a cross-section of the shaft and ratchet and a longitudinal section of the pawl and pawl-lever; and Fig. 5 is a sectional plan of the follower, showing the pair of guide-rollers journaled at each end.

Like letters refer to like parts in each figure.

The nature of this invention relates to an improvement in the construction of presses for compressing and baling hay and other loose material, and to the mechanism employed for forcing up the follower in the press-box. The invention consists mainly in the arrangement of the several parts, as more fully hereinafter set forth.

In the drawing, A represents the foundation frame-work, on which is erected a press-box, B, in the upper part of which the two long sides are formed into drop-doors C, by having the batten C' at the lower edge of each pivoted in the projecting ends of the box-frames B'. When the doors are closed, they are held by a latch, a, at each end, the latches being pivoted to the top sides of the box. D is a grooved or slotted cover hinged to the front edge of the top of the box. On the top of the cover a pair of longitudinal beams, D', is secured thereto, with projecting ends. E is a roof in two parts, hinged together in such a manner that they may be folded to form a roof-covering for the press, as in Fig. 1, for protecting it from the weather, or a platform, as in Fig. 3, to hold the hay or other material to be baled, and from which the press-box may be filled; the rear edge of the cover is hinged to the rear upper edge of the press-box, and preferably it is constructed of overlapping curved or corru-

gated slats to shed rain water, which are bound together by battens E'. F is the follower, having the usual grooves transversely cut in its upper surface to receive the bale-ropes, and at each end has journaled thereto a pair of rollers, b b, which run between a pair of vertical guide-ribs, c, at each end of the interior of the press-box, and thus diminish the friction and insure the movement of the follower in a horizontal plane. G is a shaft, journaled in the frame A and transversely through the lower part of the press-box, carrying on its projecting or front end a ratchet, H. I is a pawl, pivoted at d to the frame underneath the ratchet. Its jaw is bifurcated to embrace the lower periphery of the ratchet, and carries a transverse pin, e, which drops behind each tooth of the ratchet, successively, and retains the ratchet; by raising the long arm of the pawl the hold of the pawl is released. J is a pawl-lever or a capstan-bar with a slotted end to embrace the ratchet, and concaved at the extremities to rest on the shaft. A clevis, f, is pivoted to the lower part on the upper edge of the bar to engage with the teeth of the ratchet, so that the shaft may be rotated by vibrating the bar. K K' are two iron stirrups, one of which is hooked over the projecting ends of the beams D' of the cover at each end thereof, and to their lower ends are pivoted the toggle-levers L L', each of which is jointed by a knuckle or rule joint, g, about the middle of its length. These joints bear against the under side of the follower, while their unpivoted ends project at opposite sides of the press-box frame. M M' are two chains, one end of each being secured to the shaft G, and the other ends to short plates h, pivoted in the out-board or projecting ends of the toggle-levers. To the other ends of said plates h are secured chains N N', which connect them to the lower ends of the stirrup or the outer ends of the toggle-levers pivoted thereto.

The follower being down, the roof thrown back, the cover opened, and the doors closed, the press-box may be filled with hay, the upper ends of the stirrups being hooked on the pins i at the top of the box to have them at hand when required; then the cover should be shut down and the stirrups hooked over the beams; an attendant then vibrates the

pawl-lever to wind the chains M M' around the shaft, drawing in the ends of the double compound toggle-levers, which enables him to exert an immense upward thrust on the follower, moving the latter rapidly upward at first, but slowly and with increased power as the pressing proceeds. When the bale is sufficiently pressed, the doors may be opened and the ropes tied around the bale. The pressure on the bale may be slacked by raising the pawl, when the bale may be discharged, and the process repeated.

Wheels or rollers may be provided under the bed-frame to facilitate the moving of the press from place to place.

The great power of the combined toggle-le-

vers enables this press to be operated with fewer hands than many others of the kind.

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

1. The arrangement of the stirrups K K', jointed toggle-levers L L', chains M M' N N', shaft G, ratchet H, pawl I, and levers J, for operating the follower of a baling-press, substantially as herein described and shown.

2. The roof E, constructed, as described, in parts, hinged together and to the press-box B, as and for the purpose set forth.

DANIEL AUGUST FANGHAENEL.

Witnesses:

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THEODOR STEINBACH.