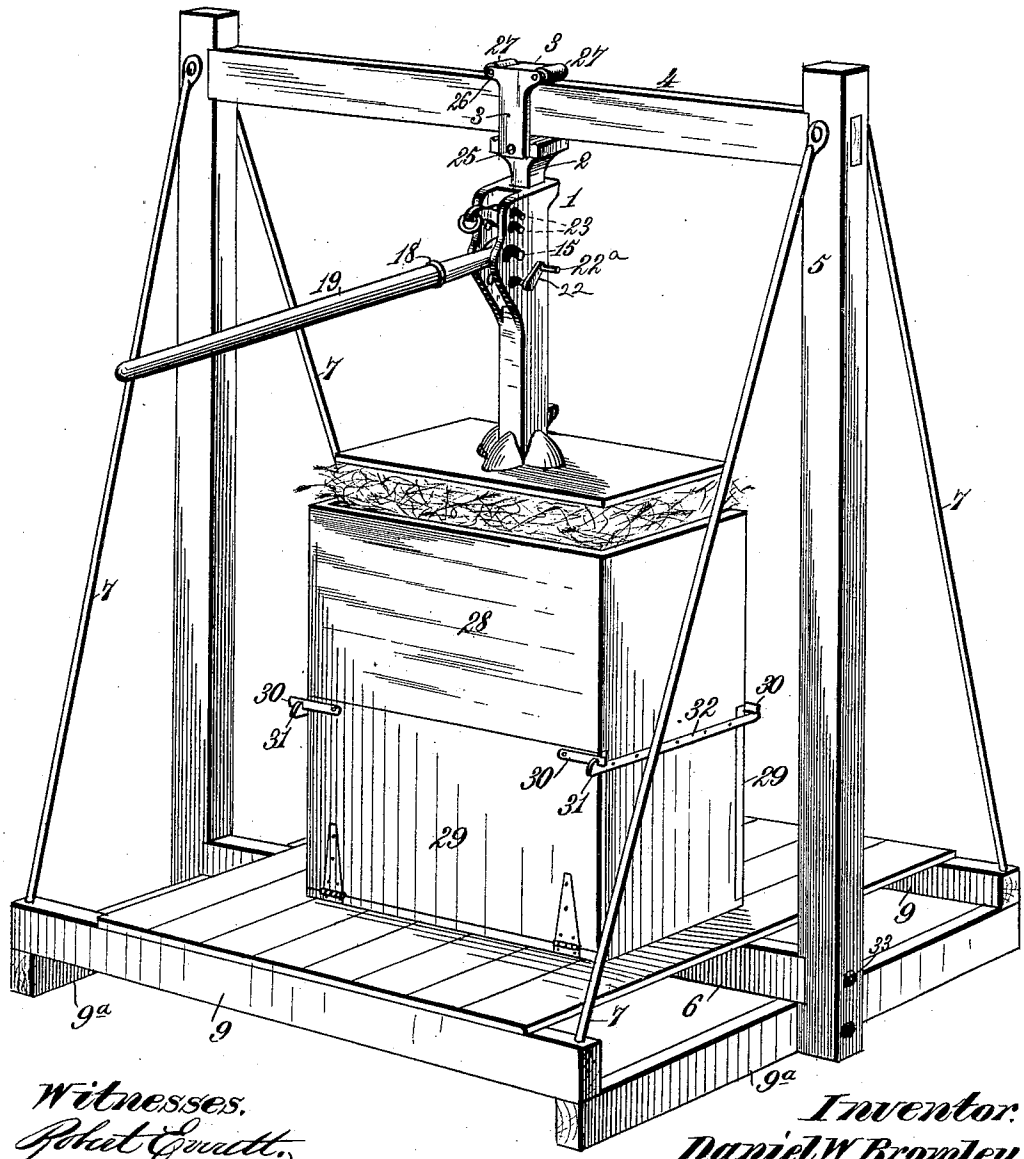
(No Model.) 2 Sheets—Sheet 1.

D. W. BROMLEY.

PRESS.

No. 486,662. Patented Nov. 22, 1892.

Fig. 1.



Witnesses.
Robert Ewatt.
Dennis Sumby.

Inventor.
Daniel W. Bromley.
By James L. Norris.
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

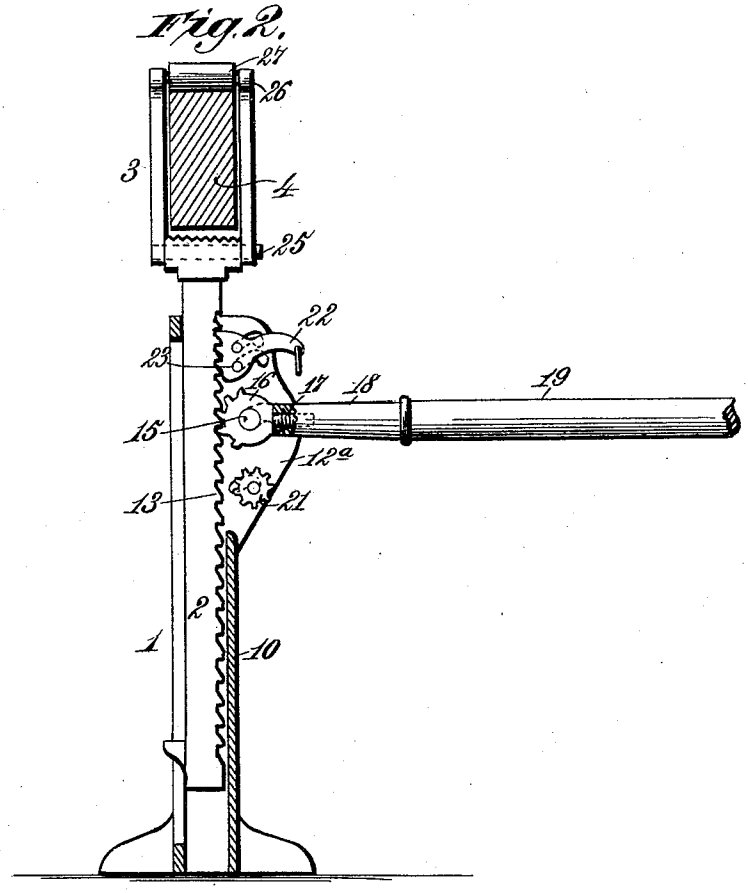


Fig. 4.

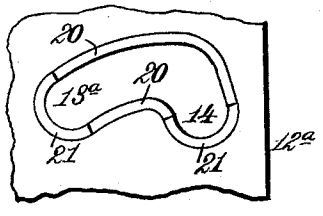
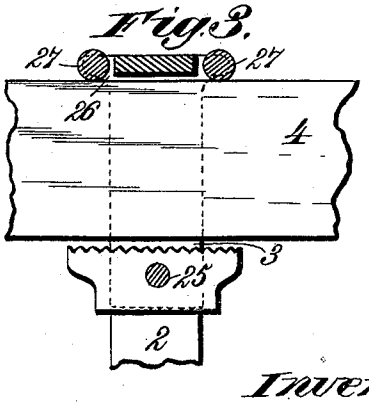


Fig. 3.



Witnesses.
Robert Gratt.
Dennis Sumby.

Inventor.
Daniel W. Bromley.
By James L. Norris.
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DANIEL W. BROMLEY, OF WINCHESTER, KENTUCKY, ASSIGNOR OF ONE-HALF TO MORGAN T. McELDOWNEY AND SMITH P. KERR, OF SAME PLACE.

PRESS.

SPECIFICATION forming part of Letters Patent No. 486,662, dated November 22, 1892.

Application filed April 26, 1892. Serial No. 430,701. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. BROMLEY, a citizen of the United States, residing at Winchester, in the county of Clark and State of Kentucky, have invented new and useful Improvements in Presses, of which the following is a specification.

This invention relates to improvements in the press for which Letters Patent No. 391,683 were issued to me October 23, 1888; and the invention consists in the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view showing the press-frame, the plunger having adjustable support thereon, and the press-platform having a hay-box thereon in position to receive the action of the press. Fig. 2 is a sectional elevation upon an enlarged scale, showing the plunger and one of the fulcrum-supports for the operating-lever. Fig. 3 is a detail view showing the construction of the press-head and plunger-supporting devices. Fig. 4 is a detail view showing one of the fulcrum-seats in the fulcrum-support.

In the said drawings the reference-numeral 1 indicates the press-head, consisting, substantially, of the yoke or housing frame, usually made of rectangular form, or nearly so. Within said housing is arranged a plunger-bar 2, having upon its upper end a yoke 3, which embraces and rests upon the horizontail cross-bar 4 of the press-frame and is horizontally adjustable thereon. The press-frame consists of suitable uprights or posts 5, supporting the horizontal bar 4 at a suitable height. From this horizontal cross-bar, which is located at or near the upper extremities of the posts 5, there is a clear space down to a lower parallel bar 6. To the posts 5 are attached rods 7, diverging upon opposite sides of said posts downward and connected at their lower ends to the angles of a rectangular frame composed of timbers 9, parallel with the lower bar 6 and in substantially the same horizontal plane. The ends of these bars are connected by the rods 7, which pass through the same to the ends of two parallel beams 9^a, which lie just beneath the lower cross-bar 5 and serve to support the bars 9, forming a solid platform for the support of the articles upon which the press-plunger acts.

The plunger is composed of a shell 10, of rectangular or other preferred form, which receives a solid bar 2, arranged to fit and move easily in said shell. Upon one face of this bar is formed a series of teeth, constituting a rack 13, those edges of said teeth which form a right angle, or practically so, with the axis of the bar being arranged to face downward. Upon each side of the shell 10 is a plate 12^a, Fig. 4, in which are formed a series of openings, each consisting of an elongated curved portion 13^a and a pocket 14. The elongated portions 13^a have a slight downward inclination toward the shell 10. In the larger or longer of these openings is arranged a rocking bearing 15, upon which is mounted a segment-gear 16, the teeth of which have mesh with the rack. Upon the segment-gear is a threaded neck 17, which screws into a tubular socket 18, which receives the end of a lever 19, of suitable length. The rocking support 15 is usually inserted in an opening in the segmental gear, its projecting ends being placed in the bearing-plates. As there is considerable friction at the points of bearing engagement, I line the bottom and lower sides of the pocket and elongated openings with steel or other suitable bearings 20 and 21, which will sustain the amount of thrust and friction to which they are subjected. These linings are usually formed in sections, to render them removable and replaceable. In the lower of the openings in the plates 10 is mounted a gear 21^a, which may be meshed with the rack 13 and rotated to raise or lower the plunger, the operation being performed by means of a crank 22^a on the shaft of the gear.

A holding-pawl 22 is provided with two supporting-pins 23, one above the other, each lying in one of the openings in the side plates, whereby the pawl is prevented from turning when meshed with the rack-bar. It will readily be seen that by simply retracting any of the parts supported in the side plates they

may be disengaged from the rack 13, while on the other hand when the trunnion-supports of any of said parts are brought into the elongated openings they will be drawn by gravity into mesh with the rack.

The shell composing part of the plunger is supported upon the horizontal bar of the press-frame by a yoke 3, having two perpendicular plates connected to the plunger-bar by a pivotal fastening 25. At the upper end of the yoke lugs 26 are formed in front and in rear, in which are journaled rolls 27, the surfaces of which drop a little below the connecting part of the yoke and rest on the horizontal bar of the frame, thereby giving stable antifriction support to the yoke.

The press is adapted for use in pressing tobacco, hay, or other material. When used as a hay-press, I employ a press-box 28, having drop-doors 29, fastened by latches 30, which engage the hooked ends 31 of catch-plates 32, mounted on the ends of the box, as shown in Fig. 1.

The press-frame is portable, being connected together by bolts 33, which are usually eight in number, though more or less may be used, as preferred.

What I claim is—

1. The combination, with the plunger consisting of a rack-bar, of a shell having side plates provided with openings and communicating pockets to receive the rocking supports of the segment-gear and the journal-supports of the spur-gear, said openings and pockets being provided with linings formed in sections, substantially as described.

2. In a press, the combination, with a horizontal bar forming part of the portable press-frame, of a plunger supported by a yoke consisting of two perpendicular plates pivotally connected to the head of a rack-bar inserted between said plates, the latter having a central uniting-plate, lugs being provided in front and rear thereof to support the journals of antifriction-rolls resting on the horizontal bar, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

DANIEL W. BROMLEY. [L. S.]

Witnesses:
J. L. WHITTINGTON,
WEBB JOHNSON.