

(No Model.)

2 Sheets—Sheet 1.

C. D. NEEB.
BALING PRESS.

No. 540,183.

Patented May 28, 1895.

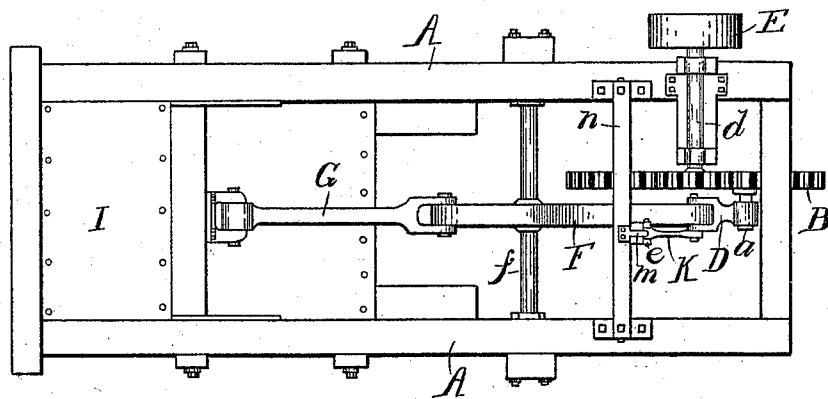


Fig. 1.

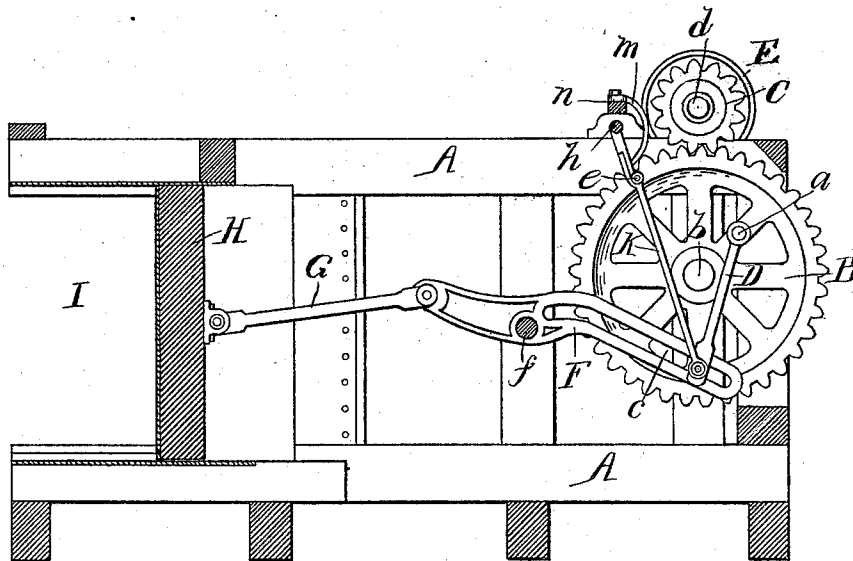


Fig. 2.

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Attorneys.

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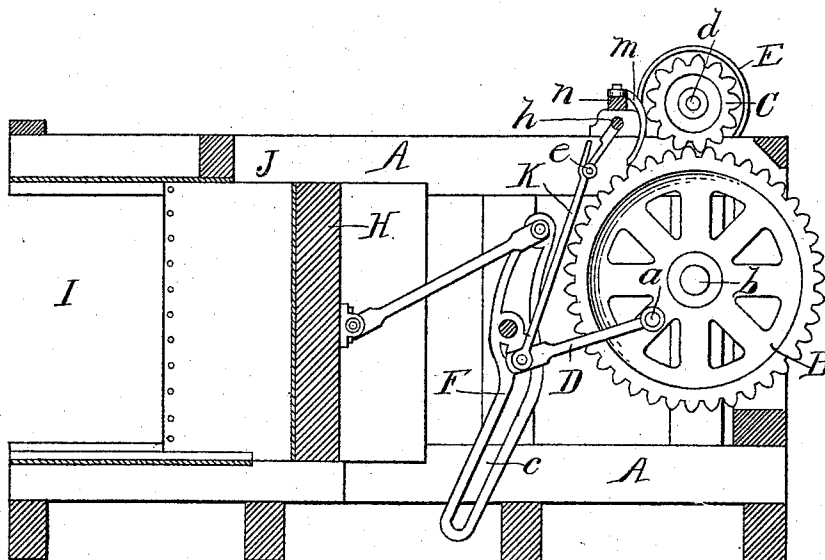


Fig. 3.

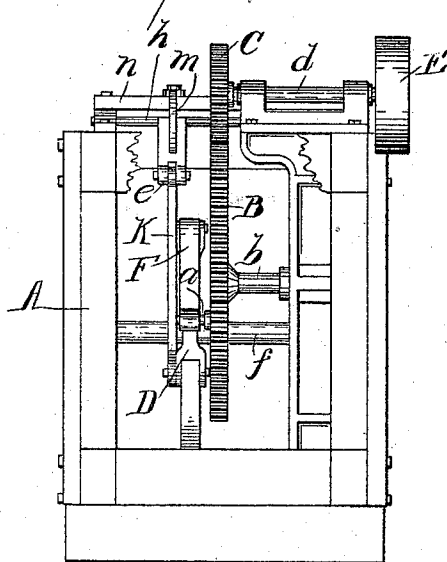


Fig. 4.

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UNITED STATES PATENT OFFICE.

CHARLES D. NEEB, OF ANN ARBOR, MICHIGAN.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 540,183, dated May 28, 1895.

Application filed August 13, 1894. Serial No. 520,125. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. NEEB, a citizen of the United States, residing at Ann Arbor, in the county of Washtenaw, State of Michigan, have invented certain new and useful Improvements in Baling-Presses; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in hay presses, and consists in the construction and arrangement of parts as fully hereinafter set forth, the essential features of which being pointed out particularly in the claims.

The object of the invention is to provide means for applying great leverage force to the plunger-head in the forward stroke, and for returning said head quickly after the completion of a stroke. This object is attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved device. Fig. 2 is a side elevation of the operative mechanism, the frame and plunger-head appearing in elevation. Fig. 3 is a like view showing the position of parts with the plunger withdrawn. Fig. 4 is a rear end elevation of same.

Referring to the letters of reference, A designates a suitable frame in which the mechanism is mounted. Journaled in said frame is a shaft *b*, carrying on its inner end a large gear wheel B, which is driven through a pinion C mounted on the upper shaft *d*, which shaft carries on its outer end a drive pulley E. Projecting from the face of the gear B is a wrist-pin *a* on which one end of the pitman D is journaled, the other end of said pitman carrying an anti-friction roller adapted to travel in a slot *c* in the lever F, which is fulcrumed on the shaft *f* extending transversely of the frame. To the opposite end of said lever is coupled a connecting rod G which is in turn attached to the reciprocal plunger head H, which plunger is adapted to reciprocate within the bale-chamber I.

K designates an arm depending from a transverse rock-shaft *h* and adapted to swing from said shaft. Said arm is provided with a self-locking hinge near its upper end, and its lower end is pivoted to the lower end of the pitman D. The office of this arm is to guide the lower end of the pitman in the slot in the lever F, to impart to said lever the requisite movement.

In the operation of the machine, the plunger being withdrawn, as shown in Fig. 3, the hay is fed into the bale-chamber in advance of the plunger, through the opening J. The revolution of the gear wheel B to the left, draws upon the pitman D, and swings the slotted end of the lever F rearward, causing a forward stroke of the plunger H. At the inception of the forward motion of the plunger, the point of engagement of the pitman D, with the lever F, is at the extremity of the slot *c*, near the fulcrum of said lever, at which time the leverage of the wheel B over said lever is at the minimum, but as the lever F swings to a horizontal position and the pitman travels rearward in the slot therein, this leverage gradually increases until the limit of the forward stroke is attained, as shown in Fig. 2, when the maximum force is applied at the time the resistance to the plunger is greatest. As the pitman travels rearward, the hinge in the arm K closes, and said arm swings from the shaft *h* until the limit of the forward stroke is reached, when the hinge of said arm is tripped by a curved finger *m* mounted on the bar *n*, and the upward motion of the pitman causes said arm to bend at said hinge and its lower end to draw forward and carry the lower end of the pitman forward in the slot of the lever, so that when the upper end of the pitman passes the vertical center of the wheel B, its lower end stands ahead of this point, and is carried rapidly forward guided by the arm K which swings in the arc of a circle concentric with the shaft *h*, thereby throwing the lever to a vertical position and quickly withdrawing the plunger H, in position for another stroke, as shown in Fig. 3; this result being attained through the employment of the guide arm K, and the slot in the lever F.

By curving the slot *c* at its forward end, as

shown, a great throw to the lever is attained, thereby withdrawing it farther from the chamber I.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with the driving mechanism, the slotted lever, the plunger coupled to one end thereof, the pitman attached to the gear wheel of the driving mechanism and engaging said lever through the slot therein, and the vibratory arm attached to said pitman.

2. The combination with the driving mechanism, the gear wheel, the slotted lever, the pitman attached at one end to said wheel, its other end adapted to travel in the slot in said lever, the hinged arm attached to said pitman, and the plunger coupled to said lever.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES D. NEEB.

Witnesses:

ARTHUR BROWN,
S. W. BEAKES.