

(No Model.)

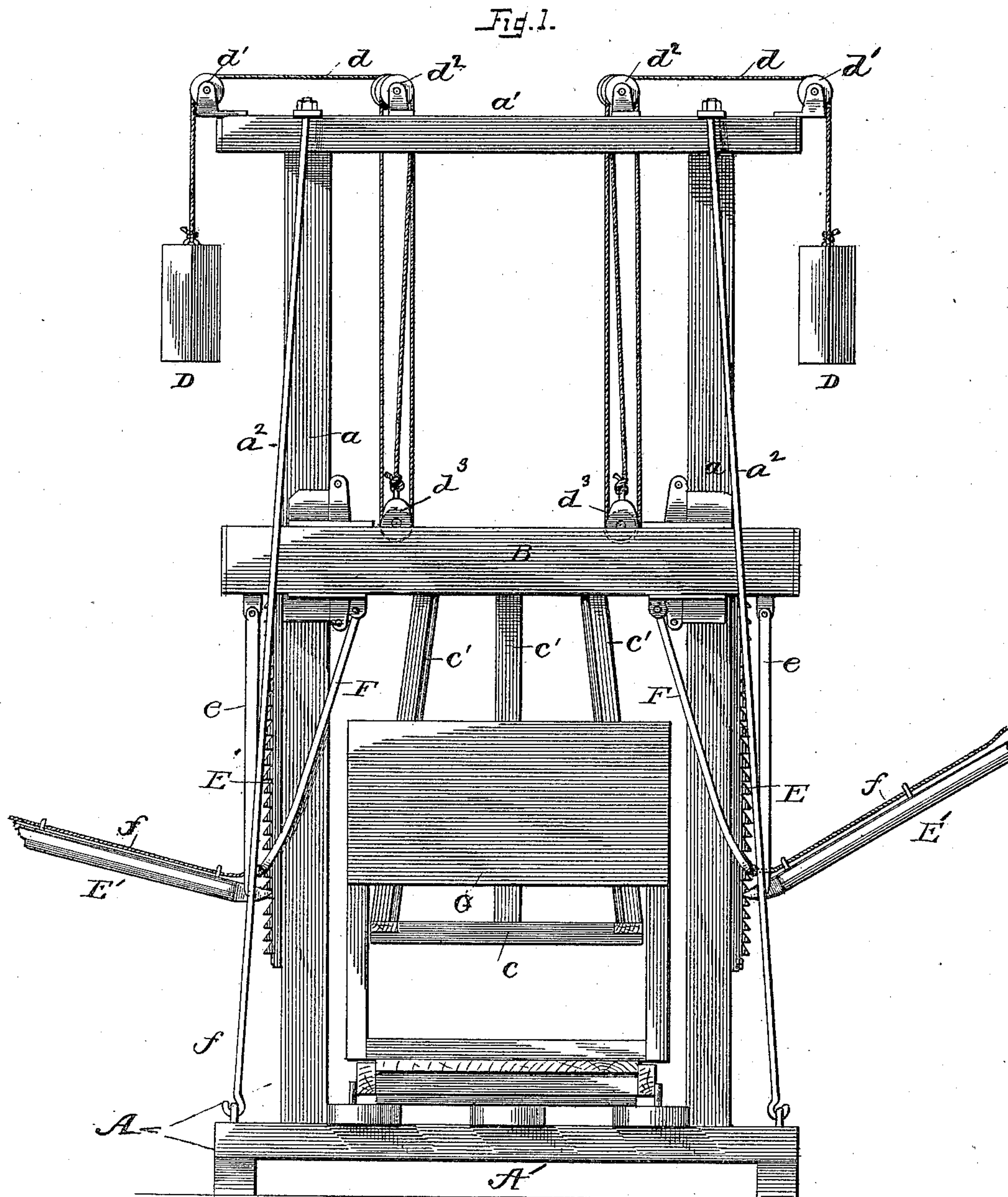
2 Sheets—Sheet 1.

D. BROMLEY.

BALING PRESS.

No. 369,582.

Patented Sept. 6, 1887.



Witnesses:

W. W. Mortimer,
David St. Mead.

Inventor :

by

D. Bromley,

Attorney.
his Attorney.

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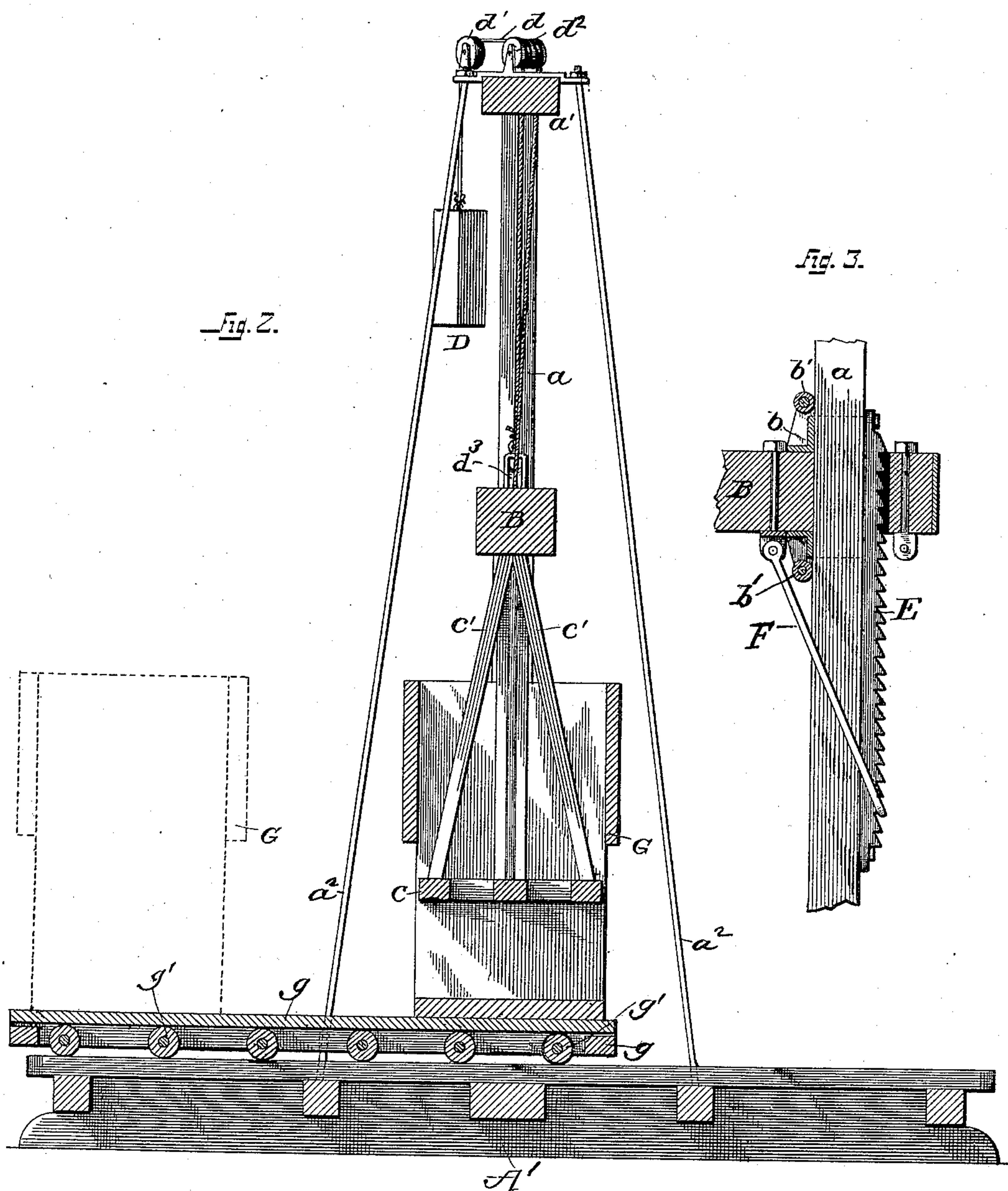
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R. E. Strengthen
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UNITED STATES PATENT OFFICE.

DANIEL BROMLEY, OF CARROLLTON, KENTUCKY.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 369,582, dated September 6, 1887.

Application filed October 7, 1886. Serial No. 215,598. (No model.)

To all whom it may concern:

Be it known that I, DANIEL BROMLEY, a citizen of the United States, residing at Carrollton, in the county of Carroll and State of Kentucky, have invented certain new and useful Improvements in Hay and other Presses; and I do hereby 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.

This invention relates to presses, especially to those adapted to bale hay or to prize tobacco; and its objects are to construct a light and compact press that can easily be manipulated and in which very great force with a given power may be brought to bear upon the material to be compressed.

A further object of the invention is to provide means whereby the follower may be automatically retained at the lowest point or other desired point of its descent, and may at any time after its descent be readily released so that it may ascend and release the compressed material.

The invention consists in the construction and novel arrangement of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings accompanying and forming part of this invention, Figure 1 represents a side elevation of my improved press. Fig. 2 represents a vertical longitudinal section of the same. Fig. 3 is a detail view, partly in section, showing the mechanism for retaining the follower at any desired point of its descent, and also the means to prevent the beam to which the follower is attached from binding on the frame of the press.

Referring to the drawings by letter, A, Fig. 1, designates the frame of a press composed of the base-frame, A', the similar opposite uprights or standards, *a a*, rising centrally from the base A' near the sides thereof, and the transverse top beam, *a'*, firmly secured to the upper ends of the standards. The standards and top beam are held firmly in place by the brace-rods *a²*, attached at their lower ends in any suitable manner to the base A' and bolted

at their upper ends to the transverse plates secured to the upper surface of the beam *a'*.

B designates a thick and heavy transverse beam, having vertical rectangular slots at equal distances from its ends, through which slots pass the standards *a*, the beam riding up and down on said standards.

b b are metal casings which partially surround the standards *a*, the upright portion of each casing bearing against the inner and side surfaces of the adjacent standard, and its horizontal portion being secured by a bolt or otherwise to the upper and lower surfaces of the beam B. These casings strengthen the said beam B at the points at which it is slotted, and also act as guides to the beam when moving on the standards, as shown in Fig. 3.

b' b', Fig. 3, are friction-rollers, the journals of which have bearings in ears or projections standing, respectively, upward and downward from the upper and lower surfaces of the casings *b*. These rollers cause the beam B to move easily, and tend to prevent one end of it from ascending or descending faster than the other in order to avoid binding upon the standards.

c is the follower, connected to the beam B by the depending bars *c'*, Figs. 1 and 2. The follower is situated centrally between the standards, and may be of any suitable construction, according to the work to be done. In prizing tobacco it would be a solid back or plate, and to bale hay it could be made of open framework, as seen in Fig. 2.

DD are counter-weights secured to the outer ends of the ropes *d*, each of which runs over a pulley, *d'*, journaled in the upright arms of a bracket secured to one end of the beam *a'* near one side thereof, the pulleys at each end being on opposite sides of the beam. The rope *d* runs from the pulley *d'* in and over one groove in a doubly-grooved pulley, *d²*, journaled in the upright arms of a bracket secured to the beam *a'* at a suitable distance from the pulley *d'*. Descending from the pulley *d²*, the rope passes under a pulley, *d³*, journaled in the arms of a bracket secured to the beam B, then ascends and passes over the unoccupied groove in the pulley *d²*, and, descending thence, is secured to a ring or staple rising from one of the bearing-

arms of the pulley d^3 . The weights D should a little more than equal the combined weights of the follower, the beam B, and their connecting-bars, so that when the beam is released it
 5 can rise or be moved up quickly and easily. The weights are placed at the sides, so that they will not strike the beam B as the latter rises and they are placed on opposite sides to distribute the weight equally in relation to the
 10 frame A.

E E are vertical racks, each of which is secured to the outer side of one of the standards a . The teeth of the racks have their inclined surfaces upward and their engaging surfaces
 15 downward.

E' E' are levers, each of which is pivoted very near its inner end at a point between the lower ends of the arms of a hanger or yoke, e , the upper end of which is pivoted to a bracket
 20 secured to the lower surface of the beam B near the end of the latter. The inner end of each lever is edged to engage between the teeth of the corresponding rack.

F F are long loops of metal rod, each of
 25 which has its ends pivoted to a bracket depending from the beam B to the inner side of the corresponding standard, a . The loop surrounds the said standard, and being inclined outward will, when free, fall against the teeth of the rack,
 30 and its bend will engage therewith. To release the rack a cord secured to the bend of the loop is pulled outward. This cord preferably runs through loops or rings secured to the lever to be within easy reach of the person operating
 35 the lever.

The follower is depressed by two persons, who operate the levers E simultaneously. The point of each lever is depressed, in order to disengage it from one tooth and engage it with
 40 the next lower tooth. The point is then elevated, drawing down the beam B, by means of the yoke e , the distance of one tooth. When the point of the lever is disengaged, the beam is prevented from rising by the loop F, the
 45 bend of which falls between successive teeth. When the follower has been thus moved down as far as desirable, the loops may be drawn outward by the means described. The follower is then free to rise.

50 G is the box in which the compression takes place when hay is being pressed and for which a hogshead is substituted when tobacco is being prized.

The box G rests upon a platform or car, g ,
 55 having the rollers g' journaled in its sides. The said rollers travel upon the base A' , and, to facilitate the work of pressing or prizing the platform is made long enough to receive two boxes upon it, one near each end, as seen
 60 in Fig. 2. Then, as one box is being packed, the other can be filled with material for packing.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. In a press, the combination, with the vertical racks secured to the main frame, the slotted transverse beam traveling on the standards of the main frame, and the levers, yokes, and loops, all constructed substantially as described, of the pulleys on the traveling beam and main frame, the ropes passing, as described, around said pulleys, and the counter-weights to lift the traveling beam when the levers and loops are disengaged from the racks,
 75 substantially as specified.

2. In a press, the combination, with the main frame, the slotted transverse beam traveling on the standards of the main frame, and the racks, levers, yokes, and loops, all constructed substantially as specified, of the ropes engaging the pulleys on the traveling beam and the top beam of the main frame, in the manner described, and the counter-weights attached to the outer depending ends of said
 85 ropes and situated on the sides of the main frame in such manner as not to strike the traveling beam when said beam ascends and on opposite sides of the main frame, in order properly to distribute the weight in relation
 90 thereto, substantially as specified.

3. In a press, the combination, with the main frame, racks, levers, and loops, traveling transverse beam, and follower secured thereto, all constructed substantially as described, of the platform or car provided with the transverse rollers g' , traveling on the base of the main frame and long enough to receive upon it two similar boxes, G, one of which
 95 can be packed, while the other, not under the follower, can be filled for packing, substantially as specified.

4. In a press, the combination of the counter-weights and ropes attaching the same to the traveling beam, substantially as described, with the main frame, the slotted traveling beam B, provided with the partial casings b , and friction-rollers b' , journaled upon said casings above and below said beam, the rack-bars secured to the outer surfaces of the standard
 105 a of the main frame, the metal loop F, pivoted to brackets on the beam B and engaging the corresponding racks, the levers E', the pivoted yokes e , and the cords f , passing through rings attached at suitable points of the levers
 115 to their outer ends, so that the persons using the lever can, when necessary, immediately detach the loops from the racks, substantially as specified.

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

DANIEL BROMLEY.

Witnesses:

S. K. TAYLOR,
 JAS. G. GOSLEE.