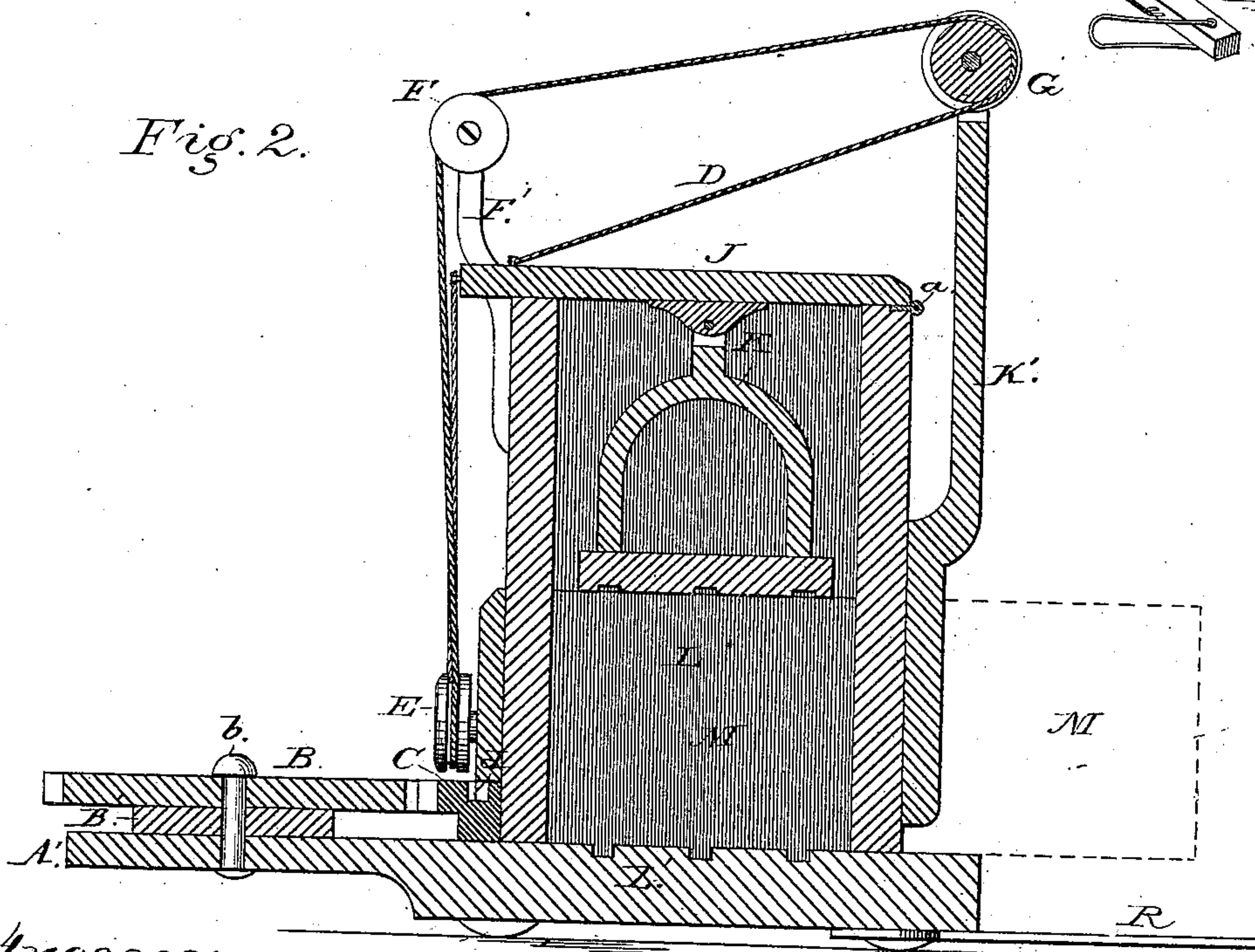
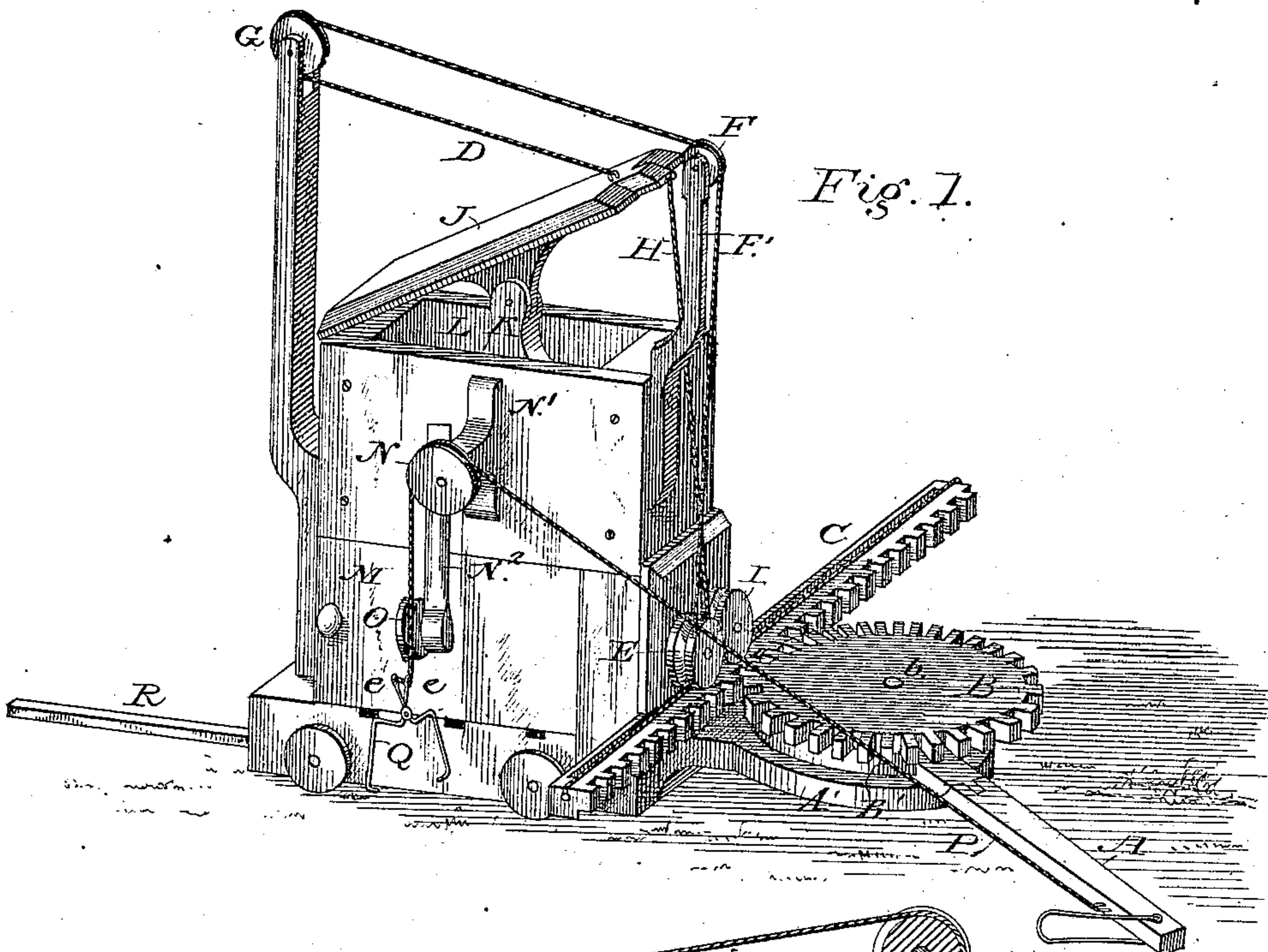


J. K. HAWKINS.  
Press for Cotton and Hay.

**No. 215,817.**

Patented May 27, 1879.



Witnesses:

Samuel L. Moore

J. J. Keel

Inventor:

Jno. R. Hawkins  
 Sonnet Co.  
 Ediths.



# UNITED STATES PATENT OFFICE.

JOHN K. HAWKINS, OF BULL'S GAP, TENNESSEE.

## IMPROVEMENT IN PRESSES FOR COTTON AND HAY.

Specification forming part of Letters Patent No. 215,817, dated May 27, 1879; application filed March 3, 1879.

*To all whom it may concern:*

Be it known that I, JNO. K. HAWKINS, of Bull's Gap, county of Hawkins, and State of Tennessee, have invented a new and useful Improvement in Machinery for Compressing Hay, Cotton, &c., of which the following is a specification.

My invention is an improvement in presses for cotton and hay.

It consists, first, in a system of cog-and-rack gearing arranged, in combination with certain pulleys and levers, to operate a press block or plunger moving in a box, forming a guide to it, and containing the hay or other materials to be pressed.

It consists, secondly, of a grapple of peculiar form arranged, in combination with certain levers and pulleys connected with the press, to withdraw the bales from the press-chamber after they are packed, as will be hereinafter fully set forth.

In my drawings, Figure 1 is a perspective view, showing the important parts of my device. Fig. 2 is a vertical longitudinal section taken through press-box and plunger.

Similar reference-letters indicate like parts in all of the figures.

Referring to drawings, L is the press-chamber, inclosed within the walls of a case or box, into which the hay or other material is thrown to be pressed. L' is the bottom of the press, forming the bed of the same. A plunger or press-block, K, is provided to fit loosely in the chamber L, and is hinged at its upper end to a lug fixed to the top J of the case. The top J is hinged to the upper edge of one of the sides of the case, and forms a lever, with its fulcrum at the axis of the hinge *a*.

Standards K' and F' are fixed, respectively, to the back and front of the case, and fashioned to receive the axes of anti-friction pulleys G and F, which, together with pulleys E and I, pivoted to the front of the case, serve as bearings to ropes or chains which connect the box cover or lever J to the extreme ends of a movable rack, C.

The base L' of the case is extended forward into a bracket, A', which serves as a support to a spur-wheel, B, set upon an interposing bearing, B'. A pin, *b*, passes through said bracket and bearing, and forms the axis of

motion for the said spur-wheel B. A lever-arm, A, extending outward from the interposing block, upon which the spur-wheel B rests, forms at its end the connecting-point for the applied power.

The rack C, which bears upon the base of the press, is provided with a groove, *d*, in its upper face, adapted to receive a tongue extending from a piece fixed to the front of the press-case, to guide said rack as it is moved laterally with the motion of the spur-wheel B. Ropes H and D are attached to opposite ends of the rack C, and bear, respectively, against pulleys E and I, and after crossing the one over the other, the rope D passes up and over pulleys F and G, and is attached to the upper side of lever J, while the one H passes directly up and is attached to the front edge of said lever.

To one side of the press-case an arm, N<sup>1</sup>, is fixed, to which is pivoted a pulley, N, which is connected to a second pulley, O, pivoted to an arm, N<sup>2</sup>, extending downward from said arm N<sup>1</sup>. A rope or chain, P, attached to the lever A near its end, passes over said pulleys N and O.

A hinged cross-legged grapple, Q, provided with hooks at its lower end, has attached to it the rope or chain P, which rope or chain passes through one of the loops *c*, and is secured to the other. The said grapple being thus held, when the rope or chain P is drawn, the loops *c* approach other, and the hooks of said grapple are clamped to their hold. The rope P, being attached to the lever A, is withdrawn to lift or draw the grapple simultaneously with the lifting of the plunger K to release the bale.

By the peculiar construction of the grapple and manner in which the rope is attached to it, the power applied to said rope has the effect to close the hooks, and, when applied, fasten them into the bale to hold it firmly while it is being withdrawn and lifted toward the pulley N.

The press is provided with wheels, on which it rests, and a tongue, R, by which it is drawn from place to place.

In using my press to prepare stock for the market, after filling the box or chamber L to a proper fullness, I apply a power to the lever A, to move the spur-wheel, and with it the rack C, into which it gears, to withdraw the rope or chain H, and bring down the lever J,



and with it the plunger K, upon said unpacked material.

By reversing the power after bands have been applied to the bale, the rack is moved in the reverse direction, and the rope or chain D withdrawn, to lift the lever and plunger. The same movement that releases the bale operates the grapple through the rope P, to withdraw it and lift said bale to the platform of a wagon near by.

The sliding door M is opened after the material has been pressed, and an easy access is afforded to the bale in the operation of banding and withdrawing it from the press.

The cover J, when the press is not in use, serves as a protection to the interior of the case against the weather.

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

1. In a press for baling hay, &c., the lever A, spur-wheel B, and reciprocating rack C, in combination with ropes D and H, the former of which passes over pulleys E, I, F, and G, fixed upon suitable journals and bearings attached to the case, the lever J, and plunger K, as and for the purpose specified.

2. The grapple Q, in combination with the lever A and rope P, passing over pulleys N and O, to withdraw the bale, as set forth.

JNO. K. HAWKINS.

Witnesses:

SAML. L. MOORE,  
J. J. KEELE.

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