

No. 730,642.

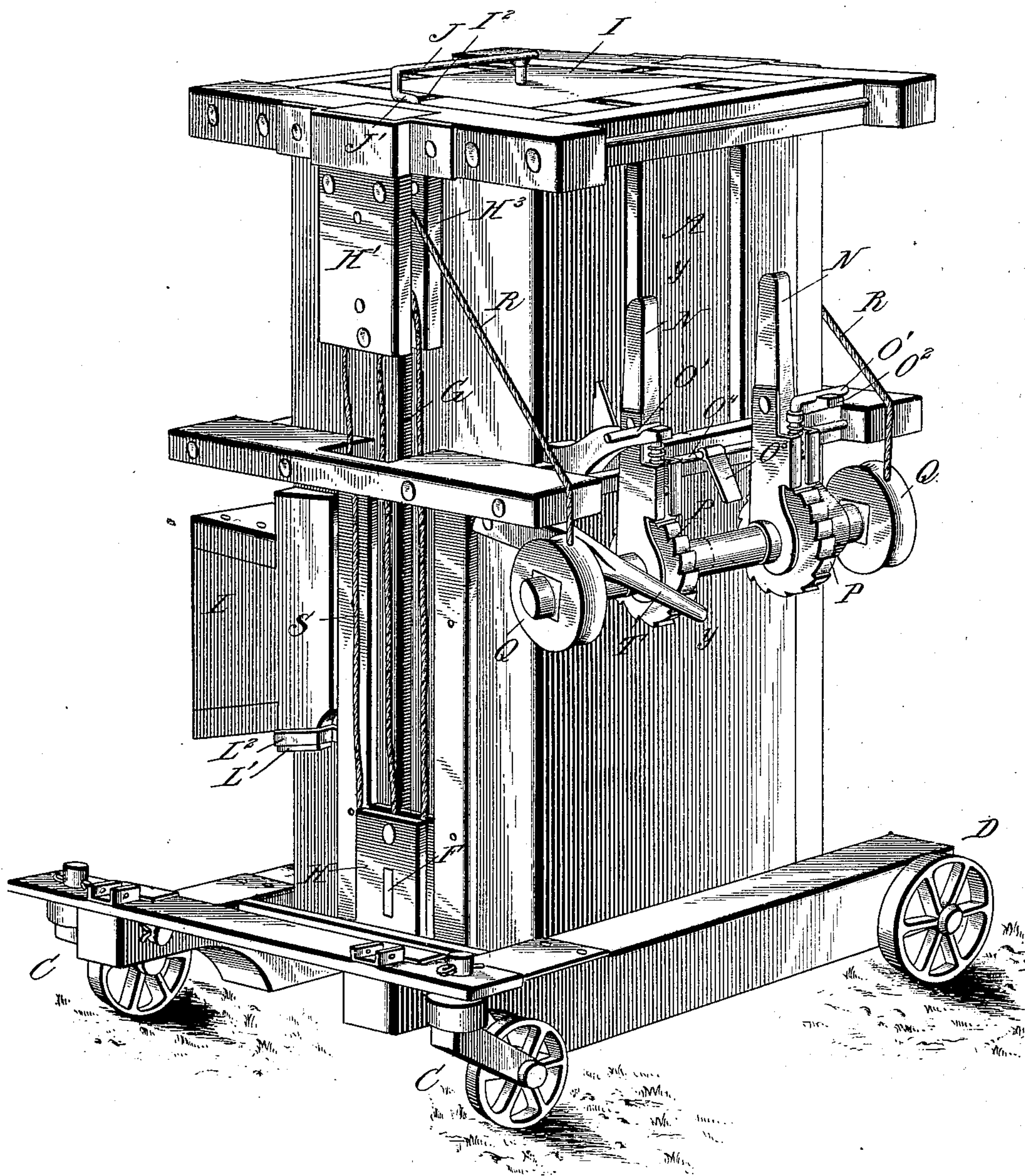
PATENTED JUNE 9, 1903.

R. HAMILTON.
HAY OR COTTON PRESS.
APPLICATION FILED JULY 8, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

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INVENTOR

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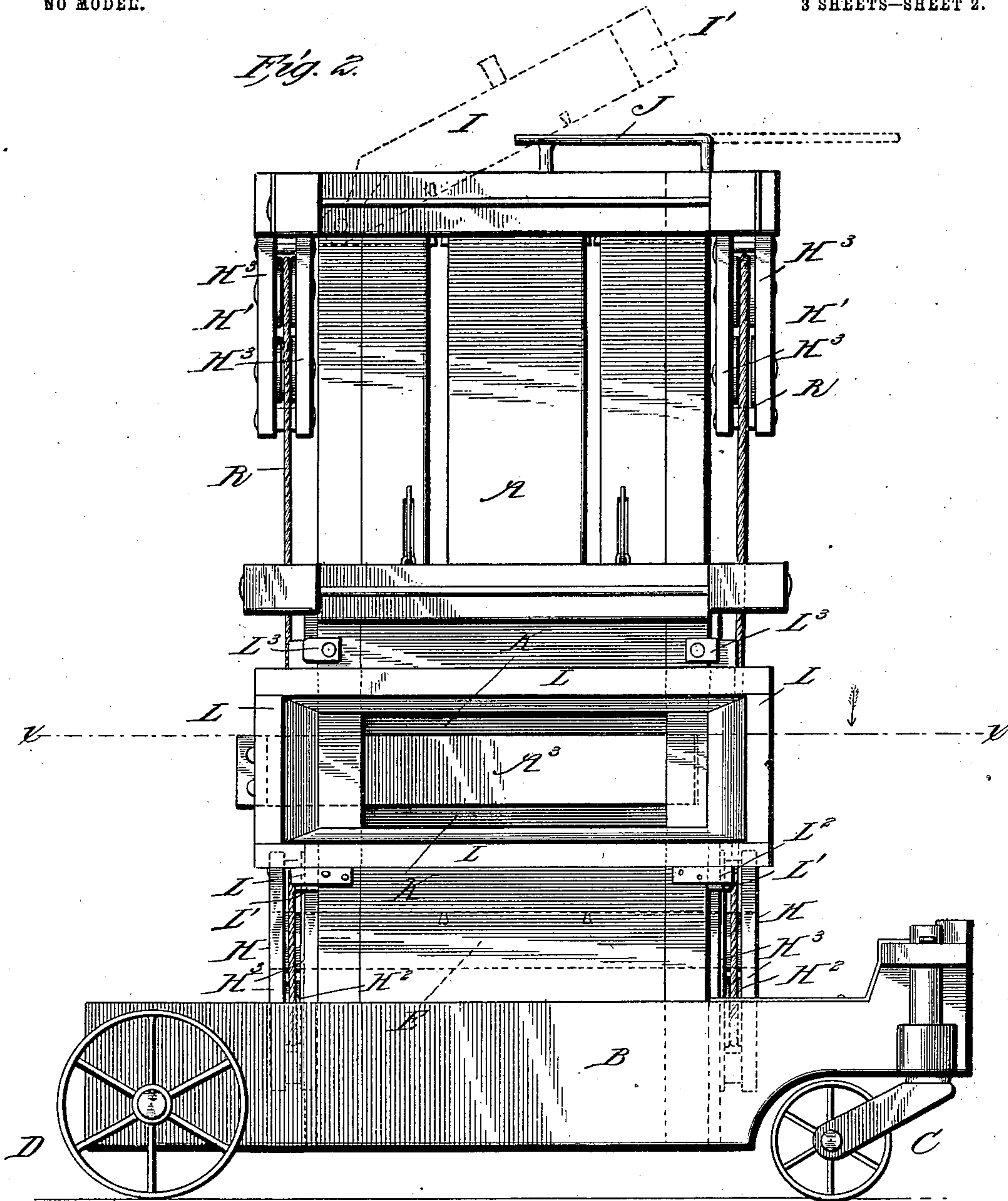
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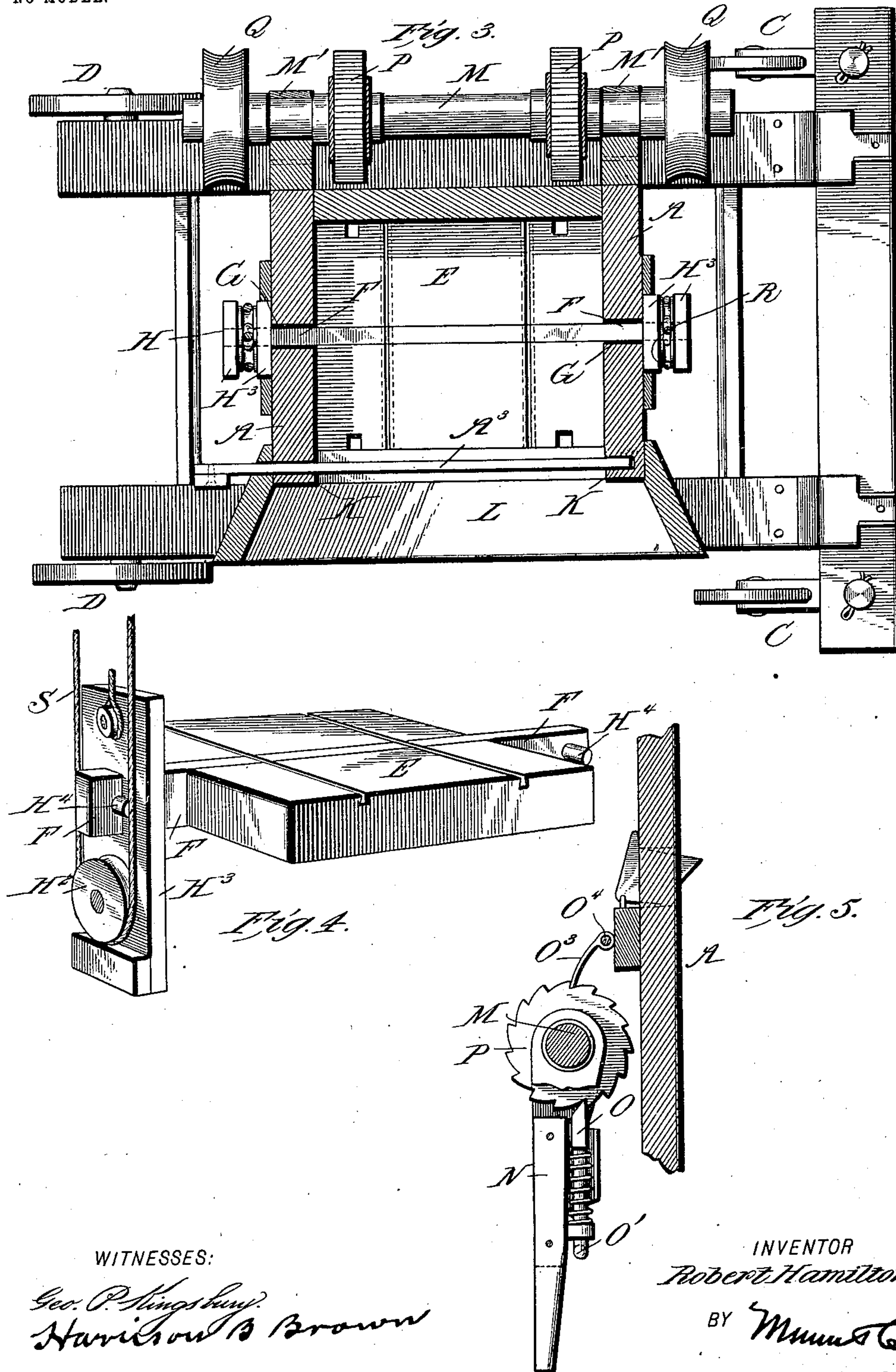
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

ROBERT HAMILTON, OF COMMERCE, TEXAS.

HAY OR COTTON PRESS.

SPECIFICATION forming part of Letters Patent No. 730,642, dated June 9, 1903.

Application filed July 8, 1902. Serial No. 114,761. (No model.)

To all whom it may concern:

Be it known that I, ROBERT HAMILTON, of Commerce, in the county of Hunt and State of Texas, have invented certain new and useful
 5 Improvements in Hay or Cotton Presses, of which the following is a specification.

My invention relates to hay or cotton presses in general, but more particularly to a peculiar press of such character.

10 The invention consists, broadly stated, in a press mounted on wheels, adapting it to be hauled along a windrow in position to receive hay picked up with a fork by a man walking on the windrow side of the press.

15 The invention consists, further, in peculiar operating means located on the other or opposite side of the press in position adapted to be worked by the driver.

20 The invention consists, further, in special details of construction and arrangement of parts, all as hereinafter fully described, with the novel features pointed out in the claims.

In order to enable others to make and use my invention, I will now proceed to describe
 25 it in detail, reference being had to the accompanying drawings, and the letters of reference thereon, which form a part of this specification, and in which—

30 Figure 1 is a perspective view showing the front and driver's side of the press. Fig. 2 is a view showing in elevation the windrow side of the press. Fig. 3 is a horizontal sectional view looking in direction of arrow and taken on line *xx* of Fig. 2. Fig. 4 is a detail
 35 view showing the follower and the lower pulley-block, the latter having its front plate detached, the view also illustrating my special means for connecting and securing the said block to the follower; and Fig. 5 is a detailed
 40 sectional view showing one lever for operating the windlass and the locking-pawl, the section being taken on line *yy* of Fig. 1 through the windlass-shaft and a part of the press-box.

45 In carrying out my invention I employ a press-box A, constructed in part similar to the press-box in Patent No. 686,607, granted to me November 12, 1901. In said patent the press-box rests upon horizontal base members
 50 or runners, which in my improved construction form side frames B, supported by caster-

wheels C in front and suitable axle with wheels D at the rear, whereby the press is adapted to be drawn by horse or other power for the purpose as will appear farther on. 55

Within the press-box A, I arrange a follower E, having side arms F, adapted to project through vertical slots or guideways G in the forward and rear sides of the press-box, (see Figs. 1, 2, and 3,) in position for supporting
 60 exterior pulley-blocks H, described in detail farther on. The upper end of the press-box is closed by a hinged cover I. (Shown closed in Fig. 1 and dotted to part-way-open position in Fig. 2.) The cover I has hinged con-
 65 nection with the rear upper side of the press-box and is adapted to be secured in closed position by a lever-locking device J, having pivotal movement on the upper forward side of the press-box. The lever J at its pivotal
 70 connection is formed with a shoulder J', which when the lever is in locking position (see Fig. 1) engages the upper side of a projection I' from the cover I. The said projection is de-
 75 signed to enter a recess I² (see Fig. 1) in the upper inner edge of the front of the press-box. The cover I may have any suitable stop, such as the projecting pin shown, to limit the
 80 throw of the lever J. It is apparent that when the said lever is moved to the dotted position (see Fig. 2) the shoulder J' will be turned out
 85 of engagement with the projection I', and thereby release the cover I, allowing it to be forced to open position on its hinge in the
 baling process, which latter will be described farther on.

One side of the press-box at suitable position above its lower end is provided with a feed-opening K, (see Figs. 2 and 3,) having a
 90 flaring detachable mouth L. While any desired means may be employed for connecting the said mouth L and securing it, as illustrating one means I provide the side members of
 the said mouth with projections L', adapted to enter keepers L², the latter fixed to the press-
 95 box, (see Figs. 1 and 2,) and I arrange over the mouth on the press-box turn-buttons L³ of construction adapted when turned in position bearing on the upper sides of the mouth
 100 to prevent vertical movement of the whole mouth structure and thus secure it in place.

A³ indicates a slide passing through a suit-

able slot in one side wall of the press-box and across the feed-opening into a suitable recess at the far side of the feed-opening.

On the opposite side of the press-box from the mouth L, I arrange operating mechanism for working the follower E consisting of a shaft M, supported in bearings M' M', fixed to the side walls of the press-box. N N indicate levers having pivotal movement on the said shaft M. Each lever is provided with a spring-acting dog O, operating for engagement with suitable teeth of ratchet-wheels P P, fixed on the shaft M. The upper end of each dog O above its support on the lever N is turned to horizontal position, forming arms O', adapted for engagement with catches O² projecting from the side walls of the press-box, (see Fig. 1,) and thereby serving to hold the levers in vertical position. Above the shaft M, I provide a pawl O³, having sliding support on a fixed bar or rod O⁴. The said pawl O³ obviously may be adjusted for engagement with either of the ratchet-wheels P, Fig. 5 showing it in locking position.

Q indicates winding - drums fixed to the shaft M. From the said drums Q pass ropes R or other suitable means extending to and through fixed and movable pulley-blocks, described as follows: I have hereinbefore referred to the pulley-block H, the same being supported on arms F, projecting from the follower E and moving therewith. It consequently constitutes the movable pulley-block. The fixed or upper pulley-block H' is suitably secured to the press-box at or near the upper end and is provided with two rollers, one above the other. (See Figs. 1 and 2.) The lower or movable pulley - block H has one roller H², (see Fig. 4,) and the rollers in the upper or fixed block are of similar form. Both blocks H' and H' consist of side members H³ H³, between which the rollers H² are supported. As means for connecting the pulley-blocks H, I slot their inner side members or plates adapted to receive the end of the arms F, and with the latter entering the said slot, (see Fig. 4,) the blocks may be secured by a pin H⁴, passing through the arm F between the said members or plates H³. In Fig. 4 of my drawings the outer side member or plate H³ is detached to not only show the features just described, but also that the pin or knob S may be seen, to which one end of the rope R is secured. The arrangement of the ropes R is clearly shown in Fig. 1 of the drawings as extending from the drums Q to and over the upper roller in the upper or fixed block, thence down under the roller in the movable block, (see Fig. 4,) thence up and over the lower roller in the fixed block, and then down to and secured to the knob S, as above described.

In connection with the windlass mechanism I employ a pivoted brake-arm T, adapted for engagement with either the shaft M or one of the drums Q, as may be desired. Its use is simply to check too-rapid unwinding of the

drums in returning the follower to the lower end of the press-box. The working of presses of this character being well understood it becomes necessary to here refer only to the particular advantages existing in my invention. 70

I have heretofore stated that my press is designed to be hauled along the windrow in a field. It is apparent that as the press is hauled along one man can pick up the hay and feed it through the flaring mouth L into the press. Obviously the slide A³ must be withdrawn in feeding the press and shoved in when compressing to position, as shown in Figs. 2 and 3. Another man walking along on the opposite side of the press can operate the windlass mechanism and at the same time drive the horse along the windrow. When sufficient hay has been fed into the press, the levers N are detached from the catches O² and one or both worked with effect to wind the ropes R on the drums Q, and thereby drawing up the follower and compressing the hay between it and the closed upper end of the press-box into a compact bale. Tying or binding of the bale being well understood, further reference thereto is here deemed unnecessary; but while so doing, in order to hold the hay compressed, the dog O³ is slid along into engagement with one of the ratchet-wheels P. Now when the first bale has been formed and tied the dog O³ is disengaged, when the expansive force stored in the bale now formed will loosen and start the follower downward. Thereafter its weight will carry it down with force sufficient to unwind the ropes R from the drums Q. Downward movement of the follower and too-rapid unwinding of the ropes can be checked by the brake-lever T, as hereinbefore described. The follower being now at its lowermost position, hay may again be fed into the press-box as the press is driven along the windrow. The second bale is compressed against the bale still within the press-box and tied as usual. In order to hold the second bale under pressure while it is being tied, the windlass is locked against unwinding action with the pawl O³, as before described. Now both bales being under pressure it is apparent that when the lever J is thrown to the dotted position (shown in Fig. 2) its shoulder J' will be turned out of engagement with the projection I' on the free end of the cover I. The two bales being under pressure, as before stated, obviously the cover I will be forced open on its hinge and the first or upper bale pushed out of the press-box, falling on the ground. The pushing power necessary to perform the ejecting operation, as just described, is stored up in the second bale formed and the compressing mechanism. 125

With a press such as I have invented the baling operation stated may be repeated as the press is hauled along from end to end of the windrow, and thereby saving time and expense necessary in hauling and stacking the hay. 130

My invention is designed to be constructed light enough and adapted to be hauled by one horse and at the same time providing a press of special utility and advantage to the small farmer. While I have referred only to baling hay, it is apparent that seed-cotton in the field may also be baled in the same way.

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

1. In combination with a vertical press-box, a hinged closure at its upper end, means for locking the said hinged closure, a follower within the press-box having vertical movement, front and rear projections on the follower, a frame at the lower end of the press-box supported by wheels, pulley-blocks fixed to the front and rear sides of the press-box, lower pulley-blocks fixed to the front and rear projections of the said follower, a windlass fixed to one side wall of the press-box, ropes in operative connection with the said pulley-blocks and the said windlass, and a feed-opening in the press-box on the far side thereof from the said windlass substantially as described.

2. In combination with a vertical press-box, a hinged closure at its upper end, means for locking the said hinged closure, pulley-blocks fixed to the front and rear side walls of the said press-box, a vertically-moving follower, front and rear projections on the follower, lower pulley-blocks fixed to the front and rear projections of the said follower, a windlass fixed to one side wall of the press-box, a feed-opening on the far side thereof, having a flaring detachable mouth, a slide for closing the said feed-opening, levers having pivotal support on the windlass-shaft and provided with spring-acting dogs, ratchet-wheels on the

windlass-shaft adapted to be engaged by the said spring-acting dogs, a pivoted dog arranged to be adjusted and thereby adapted for engagement with either ratchet-wheel on the windlass-shaft, and ropes extending from the said windlass in operative engagement with the fixed pulley-blocks and the said lower pulley-blocks fixed to the follower, substantially as described.

3. In combination with a press-box, of the character described having front and rear supporting-wheels, a vertically-moving follower, front and rear pulley-blocks fixed to the press-box, front and rear lower pulley-blocks fixed to the said follower, a horizontal shaft supported on one side wall of the press-box and having winding-drums at its ends, ropes extending from the said winding-drums to and in operative engagement with the said pulley-blocks, levers pivoted on the said shaft and having spring-acting dogs, ratchet-wheels fixed on the said shaft adapted for engagement with the said dogs, horizontally-disposed upper ends to the said dogs, projections from the side of the press-box adapted to hold the said spring-dogs out of engagement with the ratchet-wheels, means adapted for holding the said shaft and the drums at its ends against unwinding action, a feed-opening in the press-box located at the far side thereof from the windlass mechanism and provided with a detachable mouth, a slide adapted to close the said feed-opening, and a hinged closure at the upper end of the press-box having means adapted to lock it closed substantially as described.

ROBERT HAMILTON.

Witnesses:

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BEN D. BEERS.