

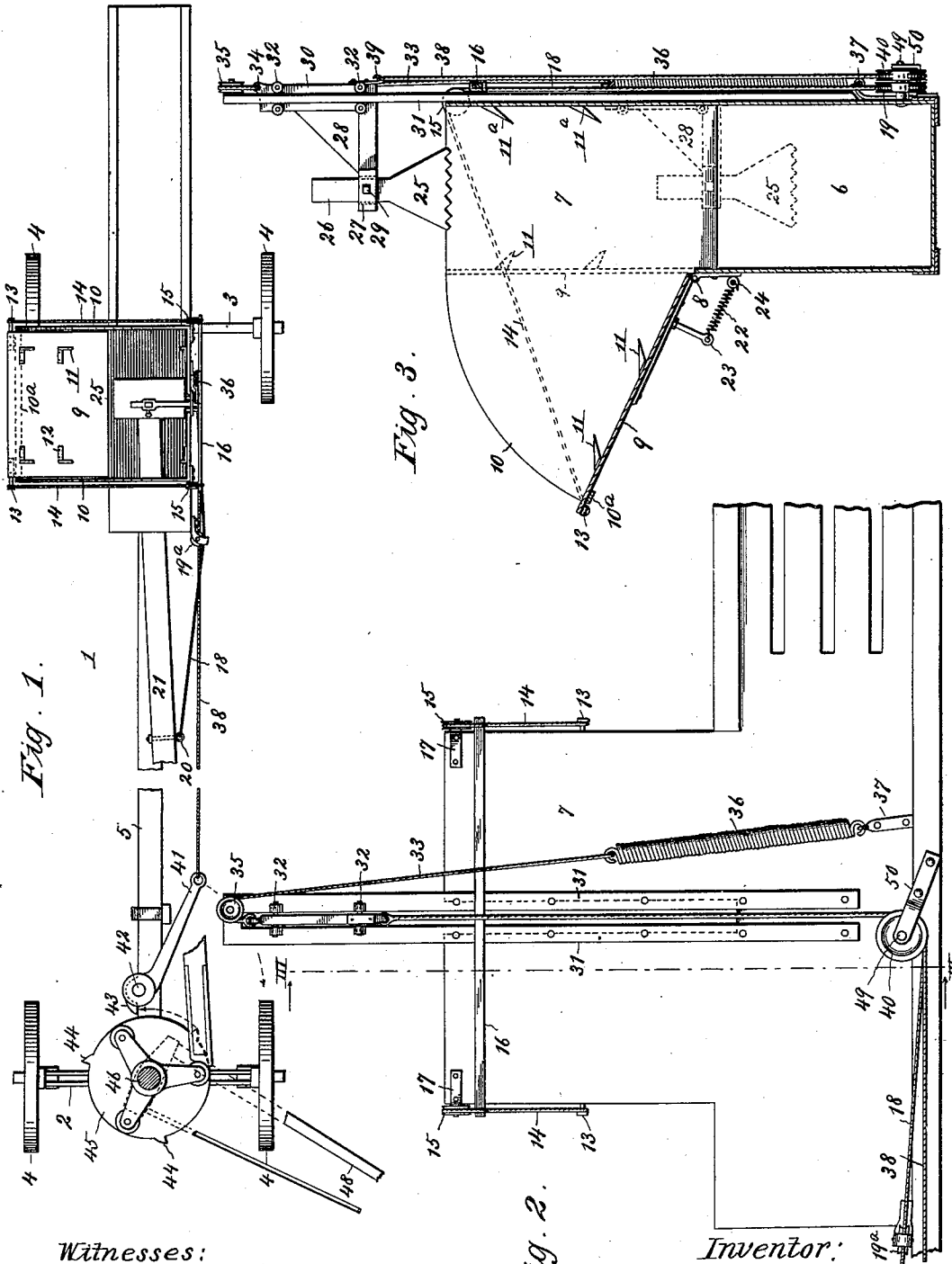
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Patented Feb. 5, 1901.

J. S. TUTTLE.
BALING PRESS.

(Application filed Mar. 15, 1900.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSIAH S. TUTTLE, OF KANSAS CITY, KANSAS, ASSIGNOR TO J. M. WILSON, OF SAME PLACE, AND J. W. LOWE AND E. P. ROSS, OF KANSAS CITY, MISSOURI.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 667,376, dated February 5, 1901.

Application filed March 15, 1900. Serial No. 8,708. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH S. TUTTLE, a citizen of the United States, residing at Kansas City, Wyandotte county, Kansas, have
5 invented a new and useful Baling-Press, of which the following is a specification.

My invention relates to improvements in baling-presses; and one object is to provide a self-feeder consisting of a hopper having four
10 vertical sides, one of which is hinged in order that it may be let down to a convenient position to form a feed-table, so that the operator standing on the ground may easily pitch the
15 hay or other material to be baled thereon, and thus avoid the necessity of handling the material the second time, now required where the usual stationary feed-table located on the hopper is employed.

Another object is to provide reliable means
20 for elevating the feed-table to a vertical position, so it will compress and deposit its charge into the hopper on the recoil of the pitman.

A further object is to provide a reciprocatory feed-head adapted to reliably force the
25 charge lodged in the hopper down into the baling-chamber in advance of the plungers and then rapidly return to its elevated position ready for another charge.

In order that the invention may be fully understood, reference will now be made to the accompanying drawings, in which—

Figure 1 represents a baling-press provided with my improvements. Fig. 2 is a side elevation of the baling-case with the adjacent
35 parts of my self-feeder. Fig. 3 is a vertical transverse section of same, taken on line III III.

In said drawings, 1 indicates a baling-press
40 having front and rear axles 2 and 3, provided with carrying-wheels 4.

5 indicates a bed-plate connecting the power end of the press to the baling-chamber 6, which receives its charge of material from a
45 hopper 7. Said hopper consists of four vertical walls, one of which is secured at its lower end to the upper portion of the baling-case by hinges 8 in order that its upper end may be let down to form a feed-table 9 for
50 the reception of the material to be baled.

As the material is deposited by the attendant upon the feed-table it is prevented from being blown off by the wind or otherwise accidentally displaced therefrom by the segmental
extensions 10, formed integral with the end
55 walls of the hopper and extending downwardly to the feed-table when the latter is at its lowest position. By thus practically inclosing the charge on four sides the annoyance of having it blown about by the wind,
60 which is now a common source of trouble where the ordinary feed-table on top of the hopper is employed, is obviated.

The inner surface of the feed-table is armed with a suitable number of retainers 11, rigidly
65 secured thereto by rivets 12, and these, together with similar retainers 11^a, secured to the inner opposite side of the hopper, prevent the hay from bulging out of the latter when
70 elevated by the feed-table.

13 13 indicate arms rigidly secured to the upper corners of the feed-table to receive the
ends of cables 14, which extend upwardly over sheaves 15 and are secured at their opposite
75 ends to the terminals of a transverse bar 16. Sheaves 15 are journaled on the outer cylindrical terminals of arms 17, riveted to the upper corners of the hopper.

18 indicates an operating-cable secured at its upper end to the central portion of trans-
80 verse bar 16, from whence it extends downwardly beneath a sheave-wheel 19, around one side of another sheave-wheel 19^a, secured to the baling-case, and is attached at its opposite end to an eyebolt 20, secured to the pit-
85 man 21, so that on the recoil of the latter the cables become taut and elevate the outer end of the feed-table to a vertical position, as shown by dotted lines, Fig. 3, and deposits its charge into the hopper. When the pitman
90 advances on its compression-stroke, the cables slack and permit the feed-table to descend to its former position for the reception of a fresh charge of material. In order to preclude any danger of the table remaining in a vertical
95 position after the pitman has advanced on its compression-stroke, I provide a retractile spring 22, secured at its opposite terminals to eyebolts 23 24, secured to the lower portion
100 of the table and upper portion of the adjacent

wall of the baling-chamber. The feed-table when occupying its lowest position is supported at its outer end, by a transverse bar 10^a, which unites and braces the outer terminals of the segmental end walls 10. After the charge has been deposited in the hopper it is thrust down into the baling-chamber by a reciprocating feed-head 25, serrated at its under side to increase its grip on the material, and tapering upwardly to a vertical shank portion 26, adjustably secured in an aperture 27 in the horizontal arm of an inverted bracket 28 by means of a set-screw 29. The vertical arm 30 of said bracket is interposed between two vertical rails 31, and is provided near its opposite ends with guide-rollers 32 for maintaining the bracket in position between said rails while traveling up and down. The bracket, together with the feed-head, is normally held in an elevated position by a cable 33, attached to an eye 34 in the upper portion of the bracket, and, passing upwardly over a sheave-wheel 35, extends downwardly and is attached at its opposite terminal to a retractile spring 36, the lower end of which is engaged by a hook 37, secured to the side of the baling-case. The bracket, together with the feed-head, is rapidly moved on its downward stroke by a cable 38, attached to a hook 39, secured to the lower end of the bracket, and, passing downwardly beneath a sheave-wheel 40, is attached at its opposite terminal to an oscillatory arm 41, pivotally secured at its other end to the bed-plate by a pin 42. The pivoted end of said arm is provided with an integral lug 43, arranged in the path of projections 44, formed integral with and equally dividing the periphery of cam-wheel 45 into three parts. Said cam-wheel is rigidly mounted upon a vertical power-shaft 46, which may be journaled in the ordinary manner, and is provided with a rigidly-mounted triple-arm trip-lever 47, arranged just above the cam-wheel and adapted to operate the pitman in the customary manner.

The power-shaft in this instance, is operated through the medium of a sweep 48, rigidly mounted upon the upper terminal thereof; but of course I reserve the right to employ either horse or steam power for its operation.

Sheave-wheels 19 and 40 are rotatably mounted upon a stub-shaft 49, rigidly secured at its inner end to the baling-case, and supported at its outer terminal by a bracket-bearing 50, rigidly secured to the baling-case and which also acts as a guard in retaining cables 18 38 in position on the sheave-wheels.

The operation is substantially as follows: The first charge of hay or material to be baled is deposited in the hopper and the trip-lever is rotated to advance the pitman on its compression-stroke. The rotation of the trip-lever, together with the cam-wheel, soon brings one of the projections on the latter in contact with the lug on lever 41, rapidly rotating it to the position indicated by dotted lines,

Fig. 1, and causing it, through the instrumentality of cable 38, to draw the feed-head down against the charge and force it into the baling-chamber in front of the advancing plunger. When the feed-head has reached the end of its downward stroke lever 41 is instantly released by the cam-wheel, permitting spring 36 to rapidly elevate the feed-head out of the path of the plunger and return lever 41 to its former position. As the pitman advances on its compression-stroke cable 18 becomes slack and permits the feed-table to drop down onto its supporting-bar to receive another charge of material, which it elevates to the hopper on the recoil of the pitman. Ample time is afforded the operator to charge the feed-table, because it attains the limit of its downward movement by the time the pitman has completed two-thirds of its advance stroke and remains at rest while the pitman is traversing the last third or slowest portion of said stroke. When the feed-table elevates the charge to the hopper, it is prevented from bulging therefrom by the oppositely-disposed retainers 11 11^a until the feed-head, arranged to start downwardly at this time, forces it down into the baling-chamber in front of the advancing pitman. Upon the recoil of the pitman the feed-table is again let down to receive another charge of material.

From the foregoing description it will be understood that I have produced a self-feeder that is practical in operation, simple in construction, and thoroughly effective for the purpose intended.

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

1. In a baling-press, a hopper having one of its sides hinged at its lower end, cables attached to the upper corners thereof, sheaves located at the opposite corners of the hopper, a transverse bar to which the opposite ends of the cables are attached, another cable attached at its upper end to the central portion of the transverse bar, and at its opposite terminal to the pitman, and means for forcing the material from the hopper down into the baling-chamber, substantially as described.

2. In a baling-press, a hopper having three vertical sides, a feed-table hinged to close the open side thereof, cables secured to the upper corners of the feed-table, sheaves journaled at the opposite corners of the hopper over which said cables operate, a transverse bar to which the opposite ends of the cables are attached, another cable attached at its upper end to the central portion of the bar and at its opposite terminal to the pitman for raising the feed-table, a retractile spring secured at its opposite ends to the baling-case and the feed-table for lowering the latter, and means for forcing the material from the hopper down into the baling-chamber, substantially as described.

3. In a baling-press, a hopper having three sides, a feed-table hinged to close the open

side thereof, retainers secured to the feed-table and opposite side of the hopper, cables fastened to the upper corners of the feed-table, sheaves journaled at the opposite corners of the hopper to guide the cables, a cross-bar to which the opposite ends of the cables are secured, another cable secured at its upper terminal to the central portion of the cross-bar and at its opposite end to the pitman, and suitable means for forcing the material from the hopper down into the baling-chamber, substantially as described.

4. In a baling-press, a hopper to receive the charge, a vertical track secured to one side thereof, an inverted bracket mounted upon the track, friction-rollers journaled on the bracket to maintain it on the track, a feed-head adjustably secured to the horizontal arm

of the bracket, a sheave-wheel journaled at the upper end of the track, a cable operating over the same and attached at its upper end to the feed-head, a retractile spring connected at its terminals to the lower end of the cable and the baling-case, an oscillatory arm pivotally secured to the bed-plate, a cable attached at its opposite terminals to the feed-head and said arm, a sheave-wheel to guide the cable, a lug secured to the arm, and a rotary cam-wheel adapted to engage said lug at regular intervals, for the purpose described.

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

JOSIAH S. TUTTLE.

Witnesses:

H. C. RODGERS,
G. Y. THORPE.