(No Model.)

L. WRIGHT.

BALING PRESS.

No. 369,149. Patented Aug. 30, 1887.

Fig. 1.

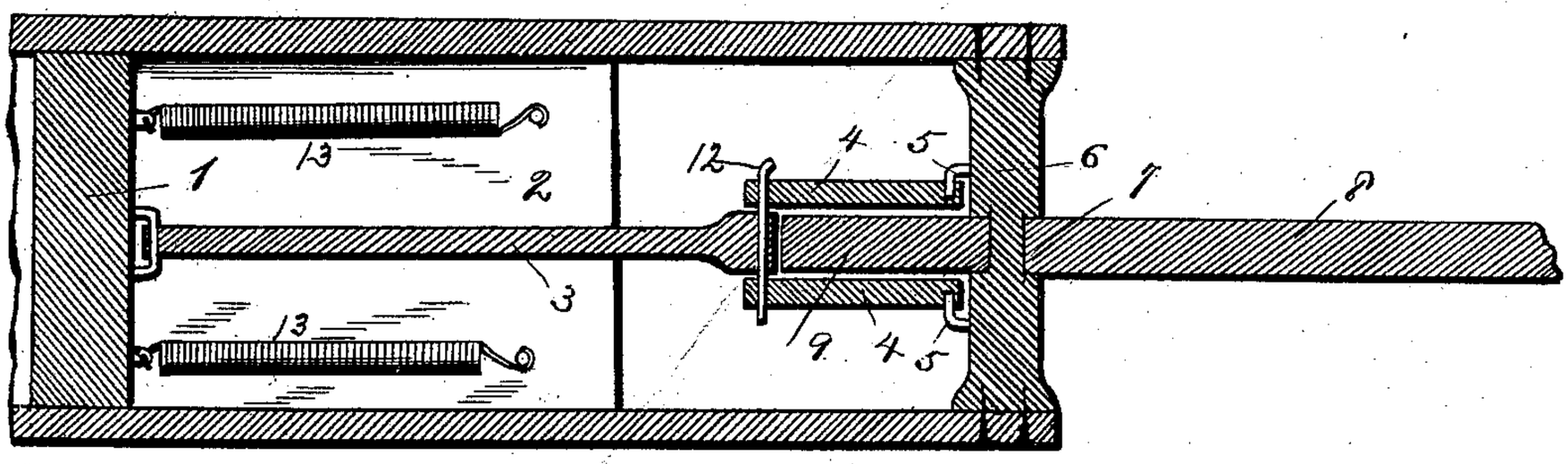


Fig. 2.

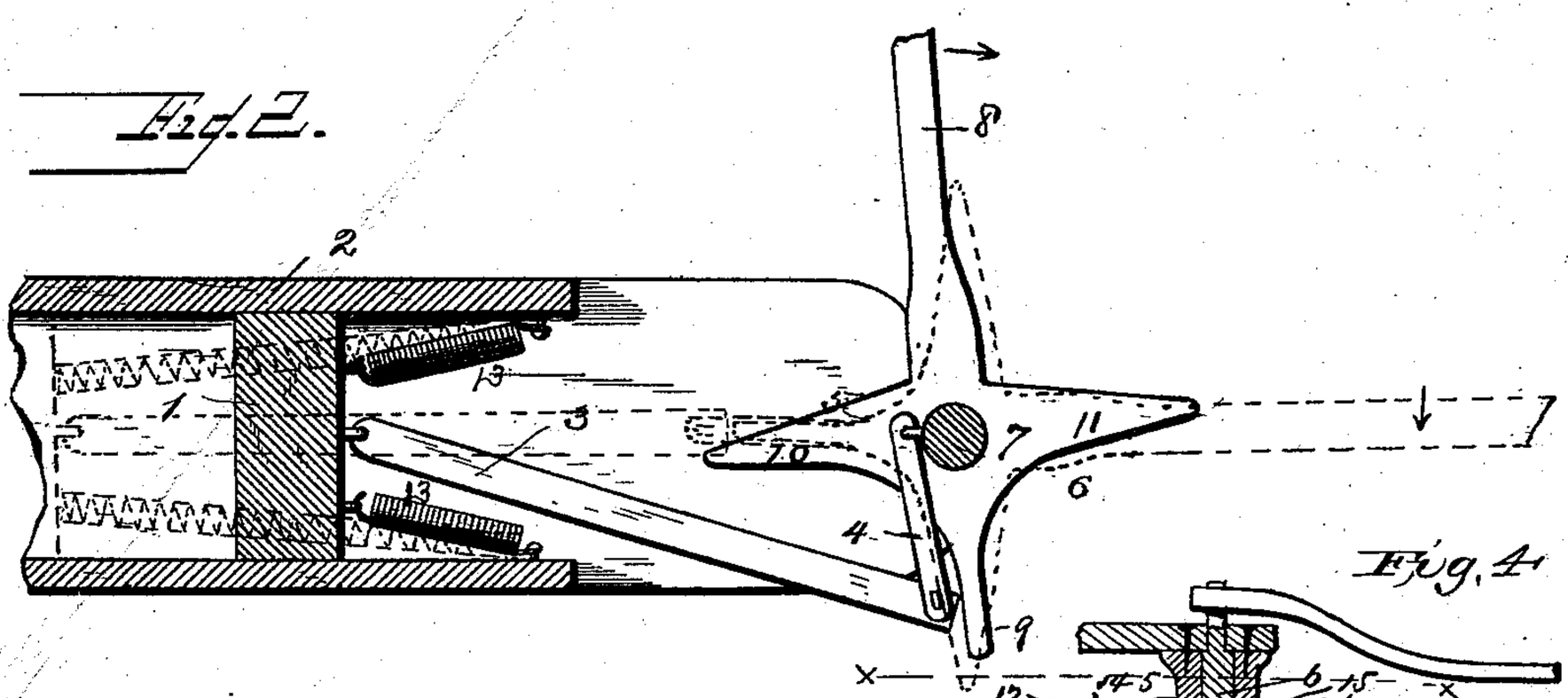


Fig. 4.

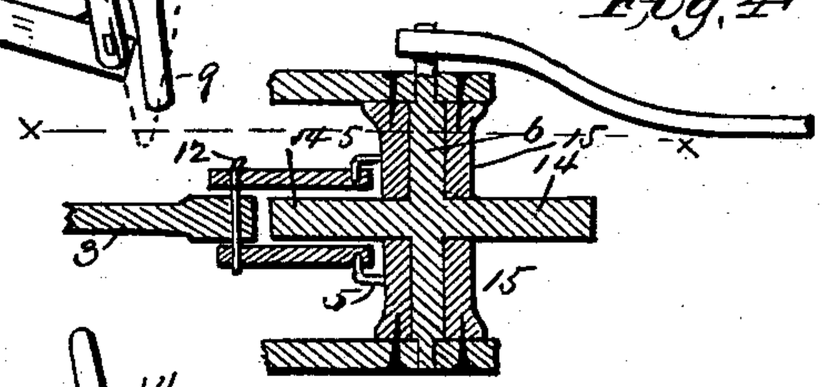
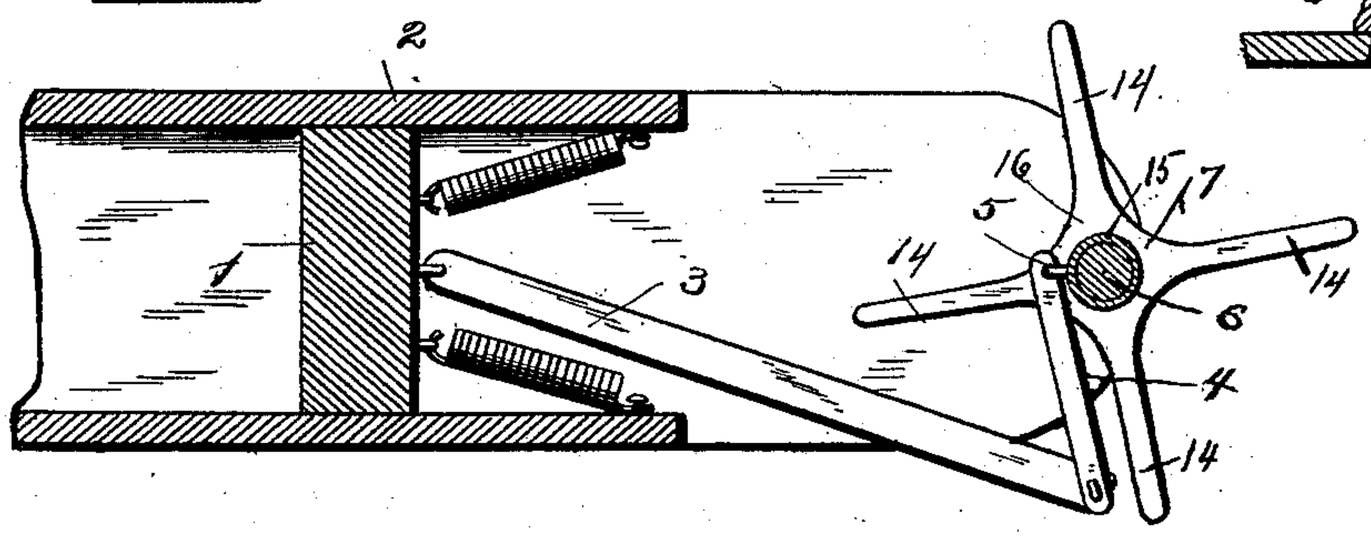


Fig. 3.



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UNITED STATES PATENT OFFICE.

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BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 369,149, dated August 30, 1887.

Application filed April 18, 1887. Serial No. 235,196. (No model.)

To all whom it may concern:

Be it known that I, LORIN WRIGHT, a citizen of the United States, and a resident of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Baling-Presses; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal vertical sectional view of one end of a baling-press embodying my invention. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a similar view of a modified form of the same, taken on the line *x x* of Fig. 4; and Fig. 4 is a vertical sectional view of Fig. 3, showing the arms in the same position as shown in Fig. 1.

In baling-presses in which the material is compressed within one end of the press by means of a reciprocating plunger, which is forced against it by means of a rotary power at the other, which is usually done by means of horse-power, the team must travel in a circle, which is often impracticable, or it must travel in a half-circle and be turned at the end of its journey and travel in the opposite direction for every bale that is made.

My invention has for its object to obviate these objections as much as possible; and it consists in the improved construction and combination of parts of such a press, as will be hereinafter more fully described and claimed.

In the accompanying drawings, in which the same numerals of reference indicate corresponding parts in all of the figures, 2 represents a portion of the frame or casing within which the plunger 1 moves back and forth, the portion of the casing within which the material is compressed not being shown, as it forms no part of my invention, and can be made of any desirable construction or size. At the opposite end of this casing, within which the material is compressed, an upright post, 6, is secured, upon the middle portion of which a hub, 7, is loosely secured. This hub is provided with a sweep, 8, for operating it, and with three arms, 9, 10, and 11, one of which, 9, is shorter than the others and in a line with the sweep, while the other two arms are in a line with each other and at right angles to the sweep and the shorter arm. Secured to the post upon the side nearest the plunger and upon each side of the hub are two pivots or pintles, 5 5. Two links, 4 4, are pivotally secured, each at one end to these pintles, and at the other end to the pitman 3 by means of a pin or bolt, 12, the opposite end of the pitman being pivotally secured to the plunger 1 in any suitable manner. This construction permits of the links 4, and with them one end of the pitman 3, to extend laterally to either side of the post, so that the pitman can be forced inward by pressure applied from either side of the press, as when the sweep is moved in either direction.

In operation the sweep is turned around until it stands at right angles to the press, as shown in Fig. 2, and the plunger is drawn back as far as possible, preferably by means of the springs 13, secured at one end to the sides of the casing and at the other to the plunger, although any other suitable means can be used for this purpose. This causes the links to extend laterally from the post, so that the end of the pitman between the ends of the links will bear against one side of the short arm 9. This arm is of a less length than the distance from the center of the post to the end of the pitman when in a line with each other; but owing to the fact that the links are pivotally secured at one end at a point between the post and the plunger when they (the links) extend laterally from the post, the end of the pitman, which is secured at the other end of the links, is not as far away from the post as the end of the short arm 9. After a sufficient charge or quantity of material has been fed into the press to form a bale the sweep is drawn around by the team in the direction indicated by the arrow in Fig. 2, which causes the short arm 9 to force the pitman and plunger longitudinally of the casing as far as it will go, thereby compressing the first bale, which is then secured in the usual manner. Now, as soon as the sweep has been brought around to the position indicated by dotted lines in Fig. 2 the arm 9, the links 4, and the pitman 3 are in a line, or nearly so, and by forcing the sweep a little past this point the end of the arm 9 slips

past the end of the pitman, when the springs 13, together with the slight rebound given to the plunger by the compressed material in the bale, force the pitman and links back into their original position, with the end of the pitman bearing against one of the longer arms, 10, which now occupies the place occupied by the short arm at the beginning of the stroke. The sweep and arms are now permitted to remain stationary until another charge has been put in the press, when the pitman and plunger are again driven in by the longer arm and the end of the sweep brought around as far as it will go to the opposite side of the press from where it started. Instead of the pitman slipping past the end of this longer arm, it is carried past the central line of the press, or a line drawn from the center of the post to the point upon the plunger to which the pitman is pivoted. As soon as this occurs, the links 4 are forced to the opposite side of the press by the action of the springs upon the plunger and the end of the pitman is brought to bear against the opposite side of the short arm 9 from that which it occupied originally, that arm now occupying the position originally occupied by the sweep. The team is now turned and made to travel in the opposite direction, when the same operation will be repeated as above described. As this construction permits of two bales being formed for each time the direction of the team is reversed, it is very desirable, as it saves time and also is easier upon the team.

The same principle of operating the plunger can be embodied in a press in which the direction of the power is always the same by means of the construction shown in Fig. 3. In this form the construction and operation of the plunger, pitman, links, and pintles are the same as above described; but instead of loosely securing the hub upon the post 6, it is rigidly secured thereto, and the post is journaled in bearings in the ends of the casing, with the upper end projecting through the top of the casing and provided with an ordinary sweep, as shown in dotted lines in Fig. 1. Instead of the hub having a sweep and its two longer arms, it is provided with four arms, 14, all of the same length as the shorter arm, 9, in the other construction, and, instead of the pintles 5 being secured to the post 6, they are secured to sleeves 15 around the post, which are rigidly secured at one end each to the top and bottom of the casing. When one of the arms 14 has forced the plunger in as far as it will go, it slides past the end of the pitman in the same way and for the same reason as in the first-described press, and flies back and is engaged by the following arm; but as each of the arms is of the same length, none of them will force it past the central line, and consequently it will always fly back to the same side, so that the press can be operated by continuously turning the power in the same direction. To permit the horses passing over the end of the casing within which the pitman operates, it can be made of a less height than with the other style of press, and a slightly-inclined platform of the ordinary construction can be used to enable the team to pass over it in turning the sweep entirely around.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a baling-press, the combination of a frame or casing, a plunger, an upright post at one end, links pivotally secured at one end at a point between said post and the plunger, a pitman pivotally secured at one end to the opposite ends of said links and at its opposite end to the plunger, a hub having means, substantially as described, of a less length than the distance from the center of said upright to the end of the pitman when in a straight line between the hub and the plunger for operating said pitman, whereby said means will slide past the end of the pitman, and a sweep for operating said hub.

2. In a baling-press, the combination of a frame or casing, a plunger, an upright at one end of said frame or casing, a hub loosely secured upon said upright, having a sweep and three arms, one of which arms is shorter than the others, said shorter arm being in a line with the sweep and at right angles to the longer arms, links pivotally secured at one end upon the side of the upright nearest the plunger, one upon each side of said hub, a pitman pivotally secured to said plunger and to the opposite ends of said links, and means, substantially as described, for operating said hub.

3. In a baling-press, the combination of a frame or casing, a plunger, an upright secured at one end of said frame or casing, a hub loosely secured upon said upright, having a sweep and three arms, one of said arms being shorter than the others, pintles upon the side of the upright nearest the plunger, one upon each side of the hub, links pivotally secured at one end upon said pintles, a pin at the other end of said links, a pitman pivotally secured upon said pin at one end and pivotally connected to the plunger at the other, and a series of springs secured at one end to the plunger and at their other ends to the sides of the casing.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

LORIN WRIGHT.

Witnesses:
FRED W. GEBHART,
WM. H. YOUNG.