

United States Patent Office.

GEORGE DUNCAN, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO HIMSELF AND WILLIAM BLACKMORE.

Letters Patent No. 108,772, dated November 1, 1870.

IMPROVEMENT IN BALING-PRESSES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE DUNCAN, of San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Baling-Presses; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to certain improvements in that class of baling-presses that have the top side hinged in such a manner as to open and receive the material to be compressed, and in which the follower moves in a horizontal direction, the object of which is to provide a greater tramping-surface and a more simple and reliable baling-machine than those heretofore used.

This invention consists of an improved lever arrangement for working the follower, and an improved device for working the cover, the details of the construction and operation of which are more fully described hereinafter.

In the drawing—

Figure 1 is a longitudinal vertical section of a baling-press having my improvements.

Figure 2 is a plan of the same, with certain parts removed.

Like letters refer to like parts in all of the figures.

A is the space in which the bale is compressed, and is inclosed at the top by the cover B, hinged at C, and is contracted or enlarged by the movements of the follower D.

The follower D is moved by means of the lever E, and is guided in a right line by the casing or frame F and the guide-rod G.

The guide-rod G is attached to the follower and slides through suitable mortises.

One extremity of the lever E is hinged to the follower at H.

The other extremity to which the power is applied is provided with a roller or wheel, I, that may run, when the machine is in operation, upon the floor or other horizontal plane surface prepared for it, to avoid friction on the frame-work between which the lever operates.

A fulcrum is provided for lever E by means of the pin J, having friction-rollers K working between the transverse guides L.

In the drawing the lever E is in a longitudinal position with reference to the press.

The follower D is at that extremity of its stroke at which the space A is the most contracted, and a stop, M, is provided to prevent the lever E from being moved in that direction; but the lever may be moved around through an angle of ninety degrees until it

becomes parallel with the guides L, and the pin J moving along in the direction of the arrow, the follower will be drawn back toward the guides L, enlarging the space A.

When the press is to be filled the lever E is drawn into this last-mentioned position and the cover B raised by means of the rope N and windlass O, and a proper quantity of the material to be baled is placed in the space A. The cover B is then allowed to descend until it rests upon the top of the material, and is then brought down to the position shown in the drawing by means of the purchase-plate R, link S, and hand-bar T.

The purchase-plate R is provided with sockets, U, shown in dotted lines in the drawing, for receiving the bar T.

The purchase-plate R being hinged to the frame E, as shown, and the link S being hinged to that plate, as shown, and catching or working in the hook V, the pressure on the under side of the cover B, however great, can never change the position of those parts from that shown in the drawing, and to release the hook V from the link S, the purchase-plate must be turned on its hinge by means of the hand-bar, causing the lower end of the link to cross the line of the hook and hinge, and continue turning until the link is raised sufficiently high to allow of its being released from the hook.

W are grooves or recesses for the bale-ropes.

After the space A has been filled and the cover B brought down to the position shown in the drawing, the follower may be forced in to compress the bale, and the bale then bound in the usual manner and removed through the doorway X.

It is evident that in either bringing down the cover A or in forcing in the follower, a uniform and constant power applied to move the ends of either the hand-bar T or the lever E, will steadily overcome the constantly-increasing resistance of the material in the space A undergoing compression.

The position and arrangement of the parts giving a large horizontal opening through which the space A can be filled, evidently offers greater facility in baling than would either a smaller opening or a vertical opening of the same size.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. The purchase-plate R, worked by a hand-bar, T, hinged as described, and provided with a link, S, working in a hook, V, arranged and operating substantially as described, to overcome the pressure on the inside of, and to securely close or release, the door B.

2. The lever E, hinged to the follower D, and pro-

vided with a movable fulcrum by means of pin J, friction-roller K, working in guides L, all constructed and arranged as shown, and for the purpose set forth.

3. The combination, in a baling-press, of the follower D when operated by the lever E, with the cover B when operated by the rope N, windlass O, purchase-plate R, and link S, all constructed and arranged as described, and for the purpose set forth.

In witness whereof, I have hereunto set my hand and seal.

GEORGE DUNCAN. [L. S.]

Witnesses:

C. W. M. SMITH,

H. S. TIBBEY.