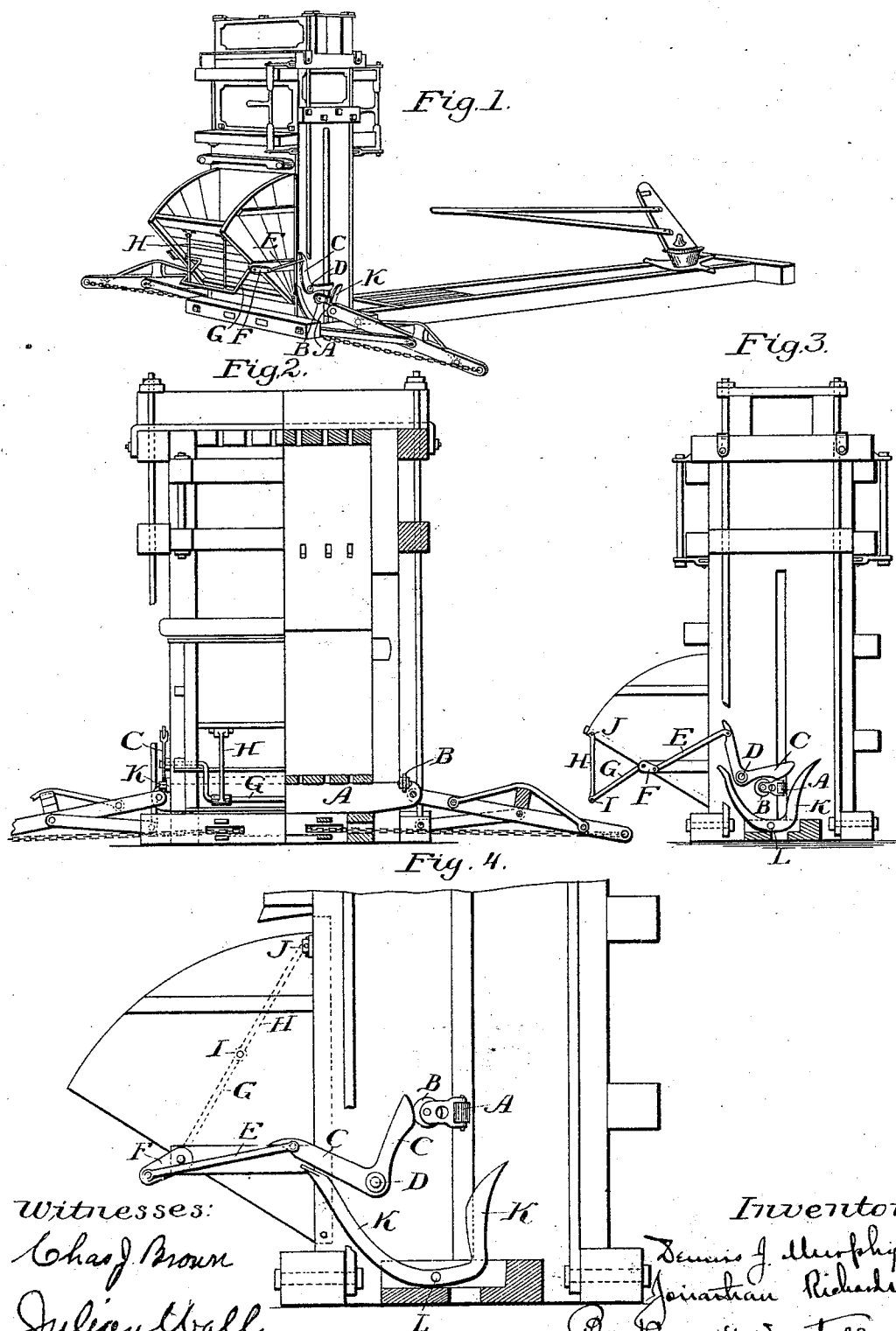


(No Model.)

D. J. MURPHY & J. RICHARDSON.
BALING PRESS.

No. 517,930.

Patented Apr. 10, 1894.



Witnesses:
Chas Brown
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UNITED STATES PATENT OFFICE.

DENNIS J. MURPHY AND JONATHAN RICHARDSON, OF MOUNTAIN VIEW,
CALIFORNIA.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 517,930, dated April 10, 1894.

Application filed September 2, 1891. Serial No. 404,569. (No model.)

To all whom it may concern:

Be it known that we, DENNIS J. MURPHY and JONATHAN RICHARDSON, of Mountain View, county of Santa Clara, State of California, have jointly invented an Improvement in Baling-Presses; and we hereby declare the following to be a full, clear, and exact description thereof.

Our invention relates to improvements in a baling press such as described in Patent No. 302,355.

It consists in a mechanism for automatically opening and closing the door of the feed throat or hopper by the movement and action of a follower, used in baling presses to compress the material baled.

It also consists of certain details of construction which will be more fully understood by reference to the accompanying drawings.

Figure 1, is a perspective of an upright baling press showing the door of the feed hopper open and the follower lowered. The bale is formed in the chamber at the top by a succession of charges which enter through the inclined feed throat or hopper at the bottom of the press, into which the material to be baled is placed, and the hopper is closed after each charge is received until it has been forced into the baling chamber by a vertically moving follower which is operated by horse power. The feed throat or hopper consists of two triangular stationary sides extending outward from the front of the press, parallel with each other and having a feed door which is hinged at the bottom so that its upper end may swing outward to form the front side of the hopper when the charge is to be introduced, and which may be closed and secured by a suitable latching device, so as to form the front of this portion of the press while the charge is being forced upward by the follower. Fig. 2, is a front view of the press, one half of which is cut away to show the interior and the position of follower while the press is being charged, and the other half, shows the mechanism for opening and closing feed door. Fig. 3, is an end view showing the feed door open and the roller on the central bar of the follower in position to act on the arm and the connections with latch so as to close the door. Fig. 4, is also an end view

with feed door closed and the central bar of the follower descending to strike the curved or U shaped lever and open the door.

A is the central iron bar of the follower to which a roller B with frame for its bearings is attached.

C is a rocker arm pivoted at D to the end of the press.

E is a connecting rod between the rocker arm and the crank arm F.

G is a crank and H H, are links or parts of a latching device for securing door when closed.

G is a double L shaped lever to which straps H are loosely connected at I and pivoted to upper part of door of feed-hopper at J. This character of latching device is generally used on upright presses.

K is a curved or U shaped lever pivoted to the end of the press at L.

The arrangement of arms and levers is the same on both ends of press.

After the charge is put into the hopper, the follower is forced upward and as it ascends the roller B comes in contact with rocker arm C raising the lower end and moving the upper end outwardly and through connecting rod E, gives the same motion and power to crank arm F which being fastened to the latching device causes levers G and straps H to raise until they form a straight line, when the door is closed and secured. After a charge has been pressed, the follower descends, the central iron bar on the side opposite the roller strikes the inner side of curved lever K, and moves it away from the follower bar sufficiently to cause the opposite end of the curved lever to strike the under side of the longer leg of the rocker arm C and through connecting rod E to draw crank arm F under, giving a reverse motion to the levers of the latching device and thereby opening the door of the feed throat.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a baling press, a baling chamber, a follower, a door, a roller attached to and moving with the follower, a bell crank lever pivoted to the end of the press and having one end projected into the path of movement of the

roller, a connecting rod pivotally attached to the other end of said bell crank lever, and, operating a crank arm, links pivoted at one end to the door, and loosely connected at the other
5 end to a crank lever operated by said crank arm, all combined and arranged as and for the purpose described.

2. In a baling press, a baling chamber provided with a door, a follower, a roller, attached
10 to and moving with said follower a bell crank lever pivoted to the end of the baling press, having one end adapted to be operated by the roller when the follower moves in one direction. Devices for opening and closing the
15 door operated by the other end of the said bell crank-lever, a second bell crank lever pivoted to the end of the press, and having one end projecting into the path of movement of a projecting portion of said follower when
20 it moves in a direction opposite to that in which it moves to operate said first mentioned bell-crank lever, the other end of said second named bell crank lever adapted and arranged to operate the outer end of said first men-

tioned lever; whereby on each reciprocation 25 of the plunger the door is opened and closed, substantially as described.

3. In a baling press a baling chamber a door, a follower, roller B carried thereby bell-crank-lever "C. and K." pivoted to the end of 30 the press, one end of each adapted to be operated by said follower. Connecting rod. E. pivoted to the other end of bell crank lever "C" crank arm F, and crank G. operated by said connecting rod, links H. pivoted to the 35 door and loosely connected to the crank. G. the other or free end of crank lever "K" adapted to operate the outer end of crank "C" all combined and operating as and for the purpose specified.

In witness whereof we have hereunto set
our hands. 40

DENNIS J. MURPHY.
JONATHAN RICHARDSON.

Witnesses:

CHAS. A. SULLIVAN,
JOHN B. LOUGHRAN.