F. F. Cornell, Jr.,

Hay Press,

No. 47,800, Patented May 23, 1865.

Fig. 1.

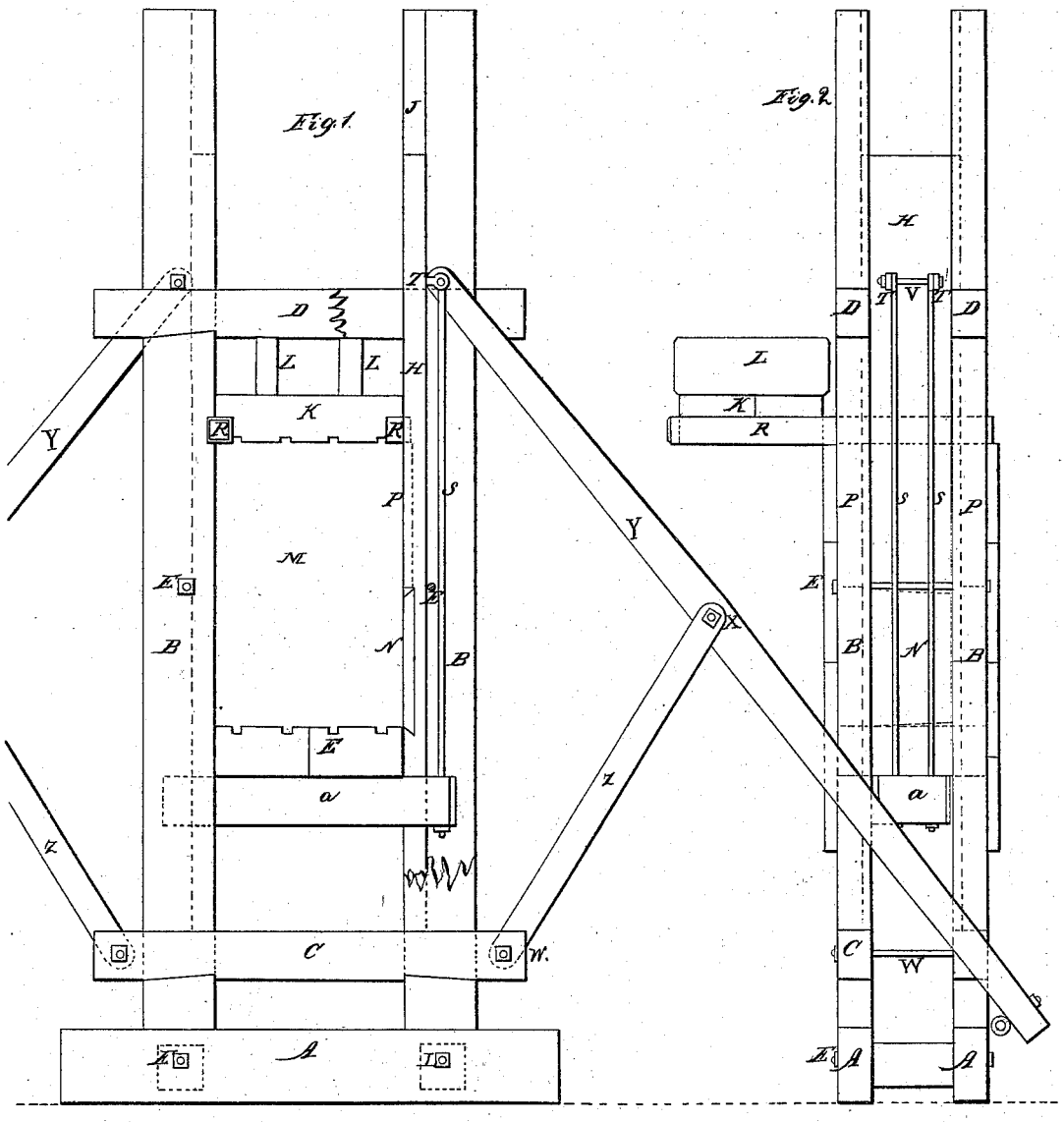
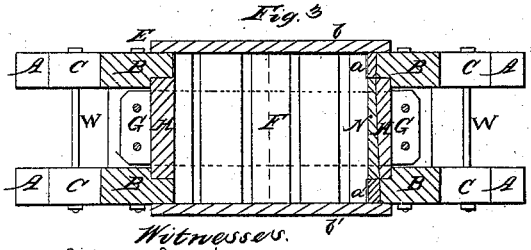


Fig. 2.

Fig. 3



Witnesses.

John Cochrane

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UNITED STATES PATENT OFFICE.

F. F. CORNELL, JR., OF NEW YORK, N. Y.

IMPROVEMENT IN BALING-PRESSES.

Specification forming part of Letters Patent No. **47,800**, dated May 23, 1865.

To all whom it may concern:

Be it known that I, FREDRICK F. CORNELL, Jr., of the city and county of New York, and State of New York, have invented a new and useful Improvement in the Construction of Baling-Presses for Packing Hay and other Analogous or Fibrous Substances; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters and figures marked thereon, and in which—

Figure 1 is a front elevation of the press, one of the front posts being removed to exhibit some of the parts of the press which are behind it; Fig. 2, a side elevation, and Fig. 3, a horizontal section through the chamber of the press.

The same letters are used to indicate the same parts in all the figures.

The nature of my invention consists, first, in constructing the chamber of the press with close sides, thereby avoiding the formation of loose parts or ears in the bale; and, secondly, in the method of relieving the finished bale from lateral pressure, so that it may be removed from the press with facility.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and mode of operation.

Upon the two horizontal and parallel sills A A, which I place upon the floor of the packing-house, I erect the four posts B B B B, Fig. 3, and B B, Figs. 1 and 2, connecting them therewith by means of tenons and mortises or otherwise, and also combining them together laterally by proper cross-framing, C and D, and through-bolts E.

Upon the inner corners of the posts B B, I make rabbets or bearings for the traveling sides H H of the chamber M, as shown in Fig. 3, and at J in Fig. 1. The traveling sides H H are of sufficient length to extend from the lowest position of the platen F to above the cope K, thereby filling up the space between the posts on both sides of the chamber, the front and back of the chamber being closed by doors *b* and *b'*, as usually employed in all such presses.

The platen F is constructed in the usual manner, with cross grooves in its upper face for the bale cords or bands, and is attached to or rests upon the lifting-beam G, to which also should be attached the traveling sides H H, so that the platen and sides of the chamber shall move up and down together.

The press thus constructed may be operated by the ordinary toggle-levers Y Y, as shown in Fig. 1, which are connected to the top parts of the traveling sides H H of the chamber M by the pin V, passing through the eyebolts T T, attached to the traveling sides; also connecting by the pin X, in the middle of the toggle-lever Y, with the stationary pin W, in the ends of the lower cross-framing, C, by means of the radius-bars Z, from the pins V; also, the hanger-bolts S S pass down through the lifting-beam G, where they are secured by nuts; or the press may be operated by any other convenient and suitable means.

The cope K is made in the usual manner, with cross-grooves in its under face corresponding to those in the platen, and for the same purpose. This cope is made to slide out on the carriers R R, so as to afford an open space at the top of the chamber M, through which the chamber may be conveniently filled from the loft above. The cope is then returned to its place, when the operation of pressing may be repeated. On the top of and attached to the cope K are two or more cross-bars, L L, which take or bed against the under side of the top framing, D D, between the posts, and thus form a reacting-basis for the operation of pressing.

In the lower part of one of the traveling sides H, I make a taper and dovetailed notch or gain across the interior face, as shown at N, Figs. 1 and 3, of about the length the finished bale is in height, and insert therein a movable stop, N, Figs. 1 and 3, which stop should be fitted so as to be easily put in or taken out. For this purpose also I make notches or gains in one or both the adjacent posts in the upper part of the chamber, or immediately under the cope K, so that the side stop, N, may pass through the post B when required to be put in or taken out, as shown by dotted lines at P, Figs. 1 and 2, the notches in the posts being filled up flush by pieces of corresponding size attached to the doors for that purpose, as shown at *a* and *a'*, Fig. 3, and thus pass out of or into these notches by the opening or closing of the doors *b* and *b'*.

I have described and illustrated the traveling sides of the chamber M as arranged between the posts of the press; but it is obvious that they may be made to cover the entire in-

ner face of the posts and as wide as the platen, and have substantially the same effect. I therefore do not limit myself to any particular manner of constructing the traveling sides, so long as they are capable of producing the contemplated effect.

The advantages of this mode of construction over those now in use are, first, the bale is packed in better shape and with an equal density throughout, and completely free from those projecting parts or ears which are so objectionable in commerce, because of the waste caused by such parts in handling and transportation, the chamber of the press being thoroughly inclosed on all its sides; secondly, greater facility in removing the finished bale from the press, by withdrawing the side slip, and thus relieving the bale from lateral pressure.

Having thus described the construction and operation of my improved press, what I claim therein as my own invention, and desire to secure by Letters Patent, is—

1. The formation of a close chamber in the press by means of the traveling sides of the chamber, substantially as described.

2. The side slip, N, in combination with the traveling sides of the press, for facilitating the removal of the finished bale from the press, substantially as described.

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Witnesses:

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