W. WEST & D. K. WEST.

Improvement in Presses for Cotton and other Materials.

No. 129,636. Patented July 16, 1872.

Fig. 2.

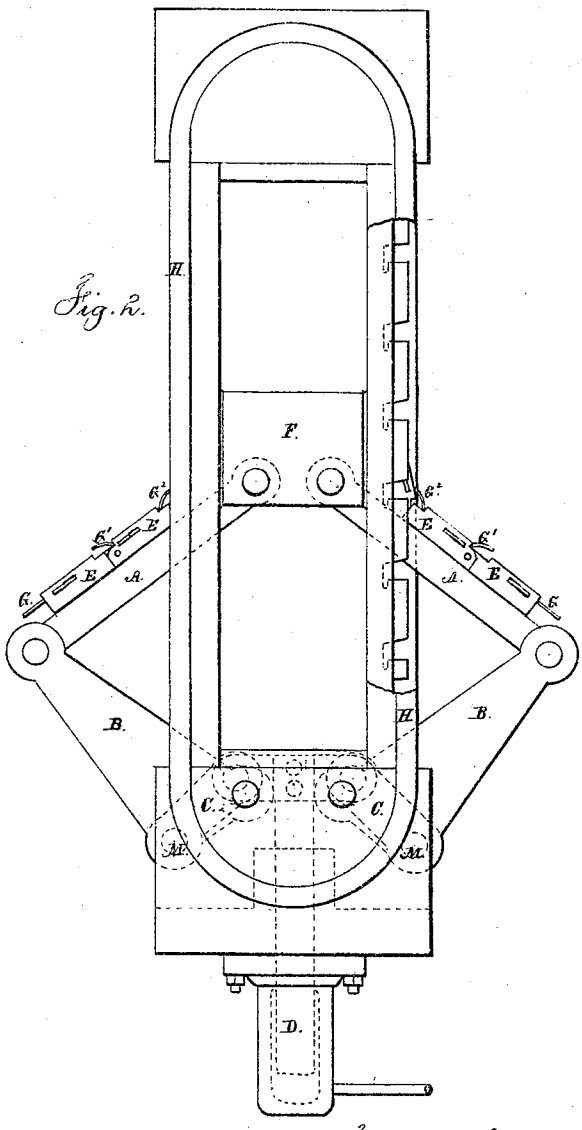


Fig. 1.

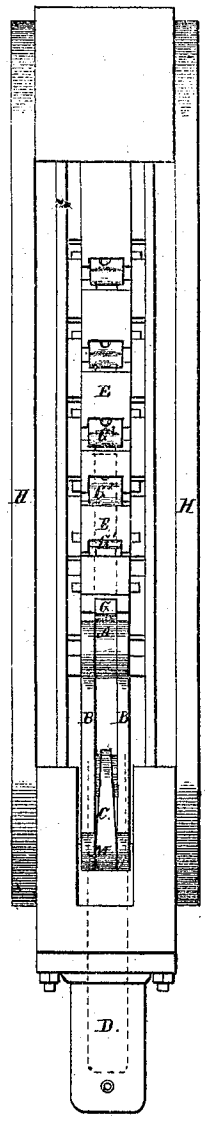


Fig. 3.

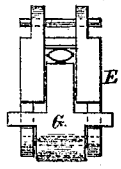
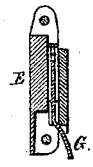


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

WALTER WEST AND DANIEL KEMP WEST, OF KENTISH TOWN, ENGLAND.

IMPROVEMENT IN PRESSES FOR COTTON AND OTHER MATERIAL.

Specification forming part of Letters Patent No. 129,636, dated July 16, 1872.

To all to whom it may concern:

Be it known that we, WALTER WEST and DANIEL KEMP WEST, both of Kentish Town, in the county of Middlesex, England, have invented or discovered certain new and useful "Improvements in Machinery for Pressing Cotton and other Materials;" and we do hereby declare that the following is a full and exact description thereof.

Our invention consists in a novel method of applying hydraulic power to a system of levers, by means of which a graduated power is obtained adapted to the variable resistance of the material to be compressed, and in the arrangement of the various parts of the press by which the result is effected. By this arrangement the ram or rams can be placed immediately under the follower of the press, so that all the thrusts are brought into one line. The top and bottom parts of the press are, by preference, tied together by means of hoops or links, all as hereafter described.

In the drawing, Figure 1 is a side view, and Fig. 2 is a front view of the press; and Figs. 3 and 4 show one of the hinged doors by elevation and section.

F represents the follower, to which are hinged the levers A A, connected with the levers B B at their lower extremities, these levers turning about the fixed axles M in the base of the press. The hydraulic ram D is connected with these levers B B by links C C; but instead of these connecting-links we may employ struts or rollers acting on suitably-shaped surfaces on the lower edges of the levers B B; but we prefer to use links, as the drawing indicates. The levers are allowed to enter the box or body of the press by means of flexible sides, which are opened as the follower ascends in the box by the action of the levers A on the follower. One method of carrying out this part of our invention is shown, and consists in making the sides in the form of doors E E, hinged or jointed the one to the other, the upper edge of each door being so attached to the lower edge of the door immediately above it, and the uppermost door on either side being hinged or jointed to the fixed frame of the press. When the follower is down all the doors are closed, and are so held by latches G G^1 G^2 G^3 engaging with lugs on the frame or box sides. As the follower rises these doors are opened by the levers A, and, swinging in succession, the movement of one operates the latch of the next above by lifting it, and each door at the moment of opening is not exposed to any pressure from the material being compressed. The press above described has a stroke of sufficient length to press loose cotton or such like material into a solidly-pressed bale. For other purposes—as, for example, to finish a bale already partially pressed—a lesser length of stroke is necessary than here shown. On the descent of the follower the doors fall back into their places, as shown, and may, if required, and for additional security, be further secured by means of a traveling-rod, the movement of which draws the latches down to their seats. These traveling-rods are not shown here. The proportion of the levers may be varied, and so a different gradation of pressure be obtained, in order to suit various purposes or materials. H H are the retaining-irons, which take the strain of the press. They are carried round the head and base or platens of the press in the form of a link or hoop, thereby removing the transverse strain from these castings and rendering them much lighter. The form of these links or loops depends on the construction and general dimensions of the press. For some purposes we find it convenient to make the ends of a semicircular or elliptical shape. These links are made either in one forging, or may be made up of separate lengths properly attached together. According to the width of the press, one or more of these links or hoops are used.

What we claim is—

1. The combination, with the ram or rams of a hydraulic press, of the links C, toggle-levers B A, and follower F, substantially as and for the purposes described.

2. The combination, with the press-box, of the flexible sides or doors, that are opened successively as the follower rises to make way for the levers, substantially as described.

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