

C. H. WESTON.
STEAM DEVICE FOR CLOTH PRESSING.

No. 87,994.

Patented Mar. 16, 1869.

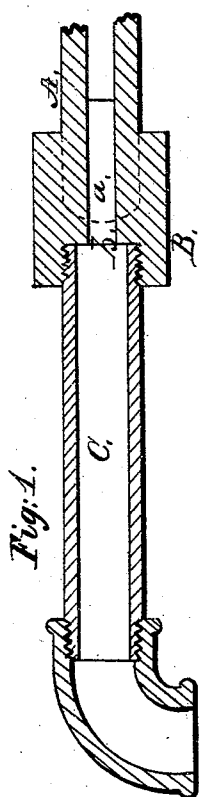


Fig. 2.

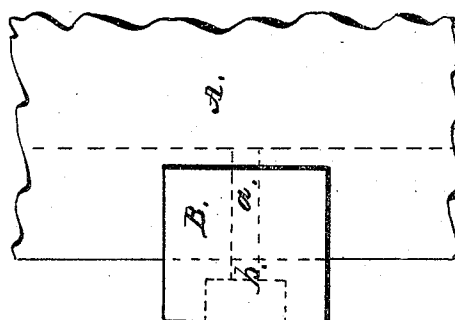
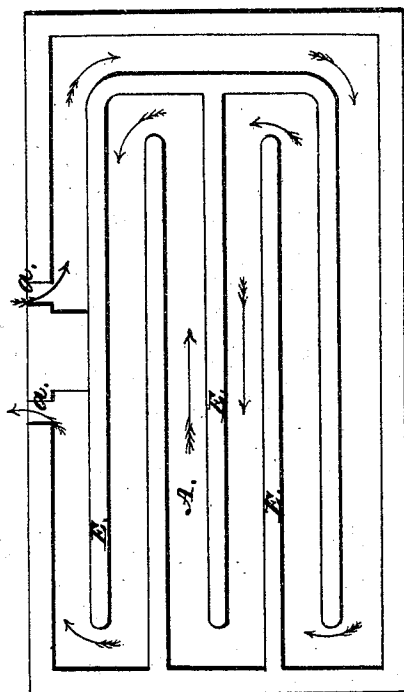


Fig. 3.



Witnesses.

Harry King,
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Inventor.

C. H. Weston
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Attys.

United States Patent Office.

C. H. WESTON, OF LOWELL, MASSACHUSETTS.

Letters Patent No. 87,994, dated March 16, 1869; antedated February 2, 1869.

IMPROVED STEAM-DEVICE FOR CLOTH-PRESSING.

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, C. H. WESTON, of Lowell, in the county of Middlesex, and in the State of Massachusetts, have invented certain new and useful Improvements in Steam Cloth-Press; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to the kind of hollow plates used in steam cloth-presses, and consists in the manner of uniting the arms of the steam-pipes to said plates, and also in the interior arrangement of the plates.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal vertical section of the steam-pipe connection;

Figure 2 is a plan view of the same; and

Figure 3 is an inside view of the plate, on a reduced scale.

In all steam cloth-presses, where hollow plates are used, steam is conducted from a steam-box into these plates; and heretofore, it has always been the practice to provide the arm of the steam-pipe with a clamp, which is riveted to the plate, which makes a very large joint to keep steam-tight around the edges of said clamp. This joint is generally about eleven inches in length, beside the two rivets, which also must be made steam-tight.

It is well known that these joints can never be made so steam-tight but that they will leak more or less, sometimes so much so as to cause serious loss, by spoiling the goods in the press.

All this is obviated by my invention, which consists in the construction of the clamp, and plate, and the steam-pipe arm, with screw-threads, so that it may be screwed into the clamp opposite to the opening or aperture in the plate.

A represents the hollow steam-press plate, with its opening, *a*, through which steam is introduced into the same.

B is the portion which I have called a clamp, and is welded on the edge of the plate, over the openings *a*. If the plate is cast, the clamp may be cast with it, or in any way so as to be in one piece with the plate.

The clamp B is provided with an opening, *b*, corresponding with the aperture *a* in the plate, said opening *b* being, at its outer end, enlarged, and provided with screw-threads on the inside.

C represents the arm of the steam-pipe, which is provided with screw-threads to fit into the clamp B.

The advantages of thus connecting the steam-pipe with the plate are obvious; there is much less joint to be made steam-tight and to keep in repair; it costs

less than the old style; there is no danger of breaking the steam-pipe arms in shipment, as these arms are not put on the plates until they arrive at the mill; there is no danger of leaking, and spoiling the goods in the press.

The interior arrangement of the plate A is different from that of any plates heretofore known or used. The plate is hollow, and a series of bars, *e e*, placed in the same, at right angles from the sides, forming one continuous channel for the steam to pass through. The steam enters through one of the apertures *a*, and passes around the outer edge of the plate first, then turns the rounded corners of the bars *e e*, and, after having heated the whole surface of the plate, passes out through the other aperture *a*.

In the old plates, heretofore used, the steam has invariably heated the centre first, and then the outer edges. In that case, the centre of the plate is expanded first, which causes a straining of the plate, and consequent leakage on the goods in the press.

This is entirely obviated by heating the outside or edges first, as then the expansion goes off the outer edge without straining the plate.

It has been found that, by allowing the steam in this manner to pass around the edge first, a considerably less number of bars is necessary to heat the plate to the required temperature, thus allowing the plate to be heated in half the time required in other plates, and it will require only about one-half the steam to heat the plates.

One of the advantages of this plate over others is, that the steam is sent around the outside of the plate first, consequently driving out all the dead air. Therefore the steam cannot cut off the dead air, and leave it in any part of the plate, which occurs very often in other plates, whereby it takes some hours to heat it equal on the surface.

Having thus fully described my invention,

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

1. The construction and arrangement of the steam-pipes of the steam-press, with the hollow plates, whereby the least possible number of joints is required, and much expense of construction avoided, substantially as herein set forth.

2. The hollow plate A, provided with bars *e e*, so arranged that the steam or water admitted into said plate may pass around the outer edge first, and then around said bars toward the centre, substantially as herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 30th day of January, 1869.

C. H. WESTON.

Witnesses:

J. W. REED,
JAMES S. HOWARD.