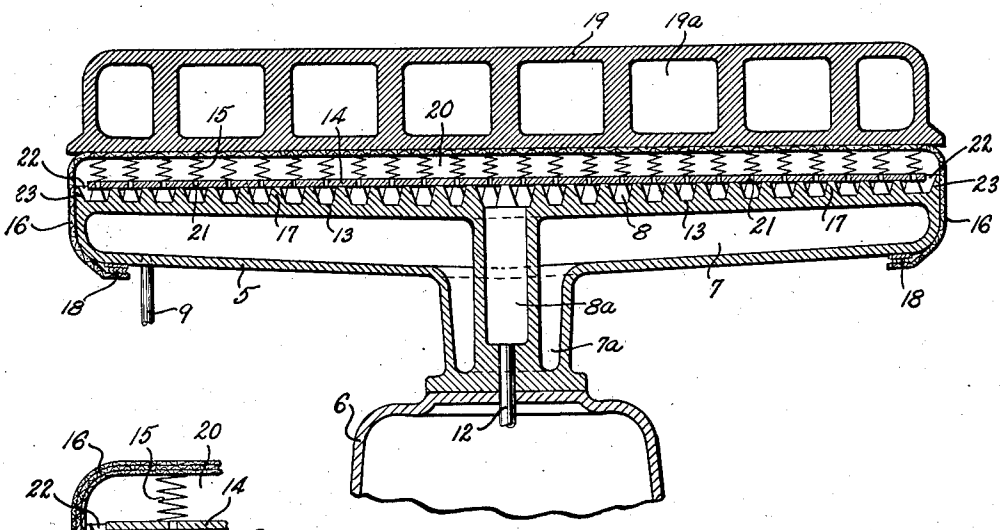
Dec. 31, 1935. G. W. JOHNSON 2,026,346

PRESSING ELEMENT

Filed Aug. 14, 1933

Fig. 1.



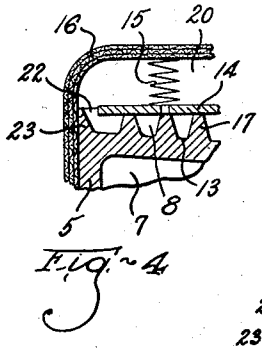


Fig. 4.

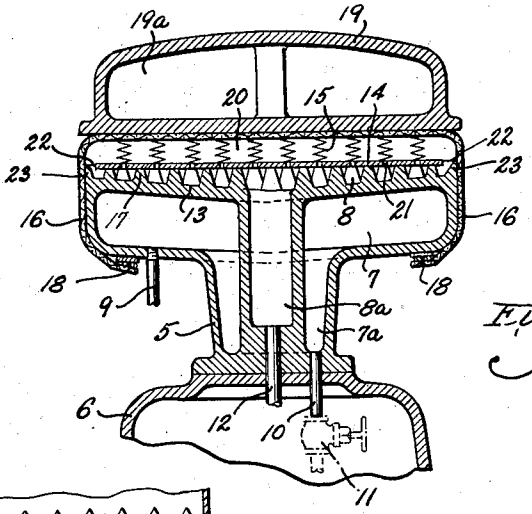


Fig. 2.

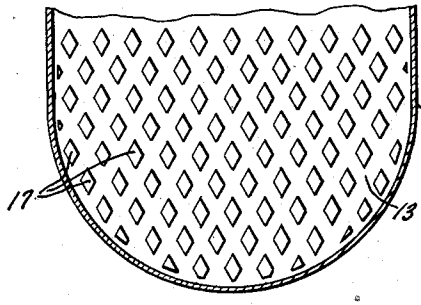


Fig. 3.

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PRESSING ELEMENT

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9 Claims. (Cl. 68—9)

This invention relates to a pressing machine element, particularly to a bed or platen such as is used in presses for garments and laundry work.

An object of the invention is to provide a cooled bed or buck adapted to condense steam formed or introduced into the buck during the pressing operation and to conduct the condensate away from the pressing surface so that the surface is maintained in a dry and satisfactory condition.

Another object of the invention is to arrange the various parts of a condensing pressing bed in a manner to efficiently conduct the moisture and condensate away from the pressing surface, with all attendant advantages.

In the drawing, Fig. 1 is a longitudinal sectional view of the bed and chest of a pressing machine; Fig. 2 is a transverse section of the bed and chest; Fig. 3 is a partial plan view showing one arrangement of the grilled surface of the bed casting; while Fig. 4 is an enlarged sectional detail of the bed casting and cover cloth.

In a press operation vapor is driven out of the article pressed by the heat of the coacting pressing members and passes through the cover cloth of the pressing members which saturates the cover cloth and padding unless provision is made for its removal. It is well known in the art that this vapor may be removed by suction means of various sorts, but this method has its disadvantages in that power of some sort must be consumed in providing the suction, and difficulties are encountered in arranging suitable air-tight connections in such vapor removal systems. I have invented a novel method and means for removing such vapor by providing a hollow buck having a condensing chamber and means for cooling the chamber. In the form illustrated, the bed or buck is separated into two compartments, one of which is arranged to receive vapor in a hollow space beneath the pressing surface, condense it and drain away the condensate, and the other of which is arranged to contain a cooling medium for the first compartment, thus providing a condensing action which reduces the vapor in the first named compartment to a liquid condition and enables it to be drained away.

The condensing compartment directly in communication with the space beneath the pressing surface is preferably arranged by providing a perforated plate or other spacing member mounted on ribs or projections so as to provide drainage passageways beneath the plate, and the parts are so arranged that all the condensate is conducted to a drain line in such a manner that none of the condensate comes in contact with the padding or cover cloth.

In the embodiment of my invention illustrated, I have shown a bed or buck casting 5 mounted in the usual manner on a frame member 6. The buck as shown in Figs. 1 and 2 is hollow, forming two compartments 7 and 8. The compartment 7 is provided with an inlet pipe 9 and at its center has a well 7a to which is connected an outlet pipe 10 for the circulation of any suitable cooling medium, such as water, either intermittently or by continuous flow through the compartment 7. If desired, pipe 10 may be provided with a valve 11, whereby the compartment may be filled with cooling liquid, which may be allowed to remain for a given period of time until the liquid becomes heated, whereupon the compartment may be drained and refilled with a fresh supply of the cooling medium. The bottom of compartment 8 is arranged to slope from all points toward one or more drainage points and in the form illustrated, slopes both longitudinally and transversely of the buck, to a central well 8a which is provided with a drain line 12.

For the support of the padding and cover cloth in a suitable manner to provide drainage therefrom, I provide a base plate 14 spaced from the sloping bottom of compartment 8 by means of spacing members 17. Any suitable form of spacing members would suffice, but for convenience of illustration I have indicated a grille work consisting of a repeated arrangement of spaced diamond-shaped projections 17 upon which rests the base plate 14 in position to support springs 15 and cover cloth and padding 16. The cover cloth may be secured in a familiar manner upon carding wire blocks 18 provided on the under side of the buck.

The base plate 14 is repeatedly perforated as at 21 between the spacing members 17 so as to provide drainage at various points over the surface of the plate. The base plate is also smaller in area than the interior of the buck to provide an opening or space 22 between the plate and the outer peripheral flange 23 of the buck casting so that moisture draining from the edges of the plate may not come in contact with the cover cloth or padding 16. Flange 23 also aids in protecting the padding and cloth about the periphery of the bed, by draining moisture from the edges of plate 14 toward the well of compartment 8. The chest 19 is shown engaging the buck in pressing relation in a conventional manner, and of course is suitably heated, as by steam supplied to its cavities 19a, as is usual.

During a pressing operation, vapor is driven from the work by the heated head through the cover cloth and padding 16 into the space 20 and thence through the perforations in base plate 14 or around the peripheral edges of said plate into the chamber 8 beneath plate 14 and thence along the sloping bottom of compartment 8 to drain line 12. The cooling medium in compartment 7 maintains compartment 8 including the bottom, grille work, side flanges, and to a certain extent the base plate 14, sufficiently cool to condense vapor which comes in contact with those parts.

It will thus be apparent that I have provided novel means for removing condensate from a hollow pressing member by condensing the vapor and thereafter draining away the condensate. Other arrangements for accomplishing the same result will readily occur to those skilled in the art, but I claim all constructions included within the terms of the appended claims.

What I claim is:

1. In a pressing element of the class described, the combination of a drainage surface, projections integral with said drainage surface and extending upwardly, a moisture pervious pressing surface supported upon said projections, and means for supplying cooling medium beneath and in heat absorbing relation with said drainage surface.

2. In a pressing element of the class described, the combination of a cold buck having an upper surface provided with an upstanding peripheral flange, a perforated base plate spaced above said surface, a moisture pervious cover above said base plate, the distance across said plate in one direction being less than the distance across said buck from flange to flange to provide a space between the flange and the edge of the plate, whereby moisture condensed on the base plate will drain to the upper surface of the buck.

3. In a pressing element of the class described, a buck having its upper surface inclined toward a drainage point, upwardly extending projections on said surface, a perforated plate on said projections, a moisture pervious pressing cover above said plate, and an upwardly extending peripheral flange on the upper surface of said buck, the dimensions of the plate being less than the dimensions inside said flange, whereby to leave a space between the edge of the plate and the inside of the flange.

4. In a pressing element of the class described, the combination of a hollow buck having two compartments with a partition therebetween, the compartment on one side of said partition having a vapor pervious pressing surface supported in spaced relation to the partition, and means for supplying cooling medium to the other compartment.

5. In a pressing element of the class described, the combination of a hollow buck having two compartments with an imperforate partition therebetween, the compartment on one side of said partition having a vapor pervious pressing surface supported in spaced relation to the partition, and means for supplying liquid cooling medium to the other compartment.

6. In a pressing element of the class described, the combination of a hollow buck having two compartments with a partition therebetween, the compartment on one side of said partition having a vapor pervious pressing surface supported in spaced relation to the partition, the partition being provided with projections extending into the said compartment, and means for supplying cooling medium to the other compartment and in heat-absorbing relation with said partition, whereby said projections function to increase the cooling surface in said first named compartment.

7. In a pressing element of the class described, the combination of a hollow buck having two compartments with a partition therebetween the compartment on one side of said partition having a vapor pervious pressing surface supported in spaced relation to the partition, and means for causing circulation of a cooling medium in the compartment on the other side of said partition.

8. A pressing element of the class described, comprising a hollow member having walls forming a drainage collecting chamber, one of said walls forming a vapor pervious pressing surface, and means for conducting cooling medium into heat absorbing relation with a wall of said member outside of said chamber.

9. A pressing element of the class described, comprising a member provided with contiguous upper and lower chambers, the upper chamber having a drainage receiving bottom wall and a vapor pervious top wall forming a pressing surface in spaced relation to and above said bottom wall, and means for conducting cooling medium to said lower chamber below and in heat absorbing relation with said bottom wall.

GEORGE W. JOHNSON.