April 6, 1954 E. J. HOFFMAN 2,674,053

TWO-PLY PRESSING GRID PLATE FOR STEAM PRESSING MACHINES

Filed May 26, 1952

Fig. 1

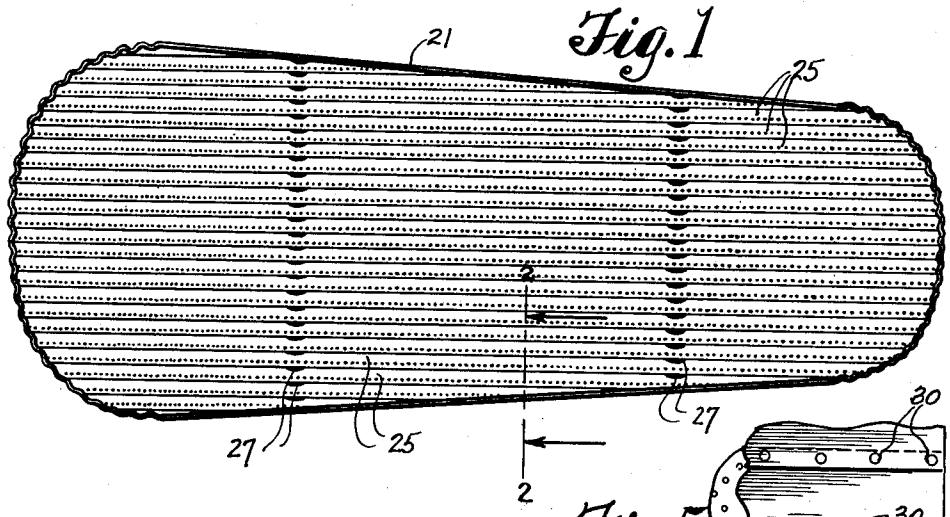
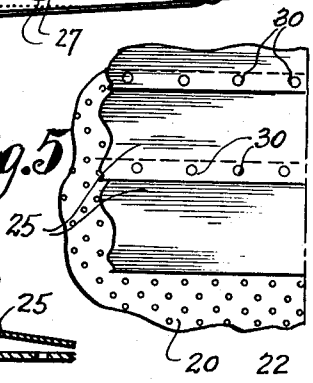


Fig. 5



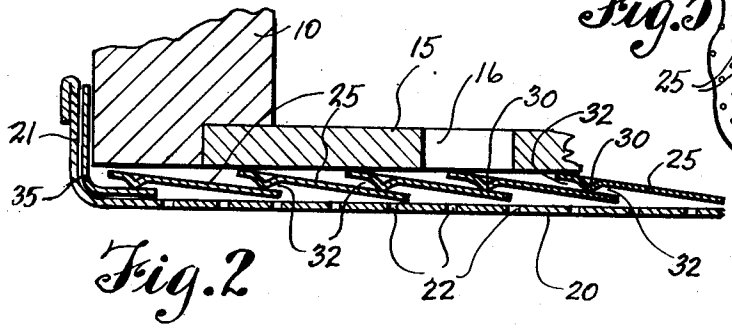


Fig. 2

Fig. 3

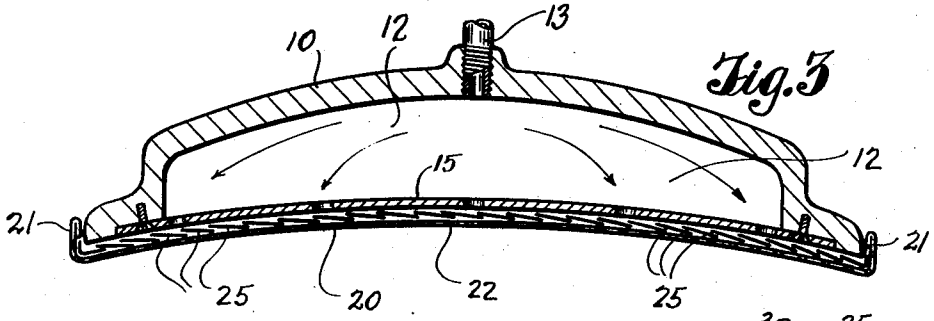


Fig. 6

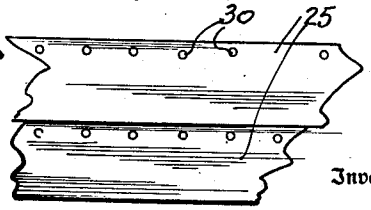
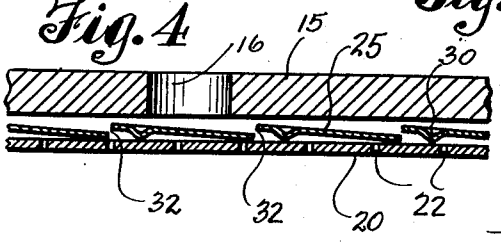


Fig. 4



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TWO-PLY PRESSING GRID PLATE FOR STEAM PRESSING MACHINES

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4 Claims. (Cl. 38—66)

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This invention relates to improvements in pressing machines and it has reference more particularly to the novel features and advantages residing in an improved form of baffle for use in association with the head buck of a steam heated pressing machine for accomplishing a more satisfactory distribution of steam, as supplied through openings in the head plate to the grid plate or pressing surface of the head buck.

It is usual in the construction of the common types of clothes pressing machines, to provide the head buck with a steam chamber, equipped with a closure plate on its underside, known as the "head plate," that is formed with a plurality of holes $\frac{1}{8}$ spaced over its area, for outflow of steam from the chamber to the pressing surface as formed by the grid plate.

The pressing surface, as formed by the grid plate, comprises a thin sheet of metal that is provided over its entire area with very small and closed spaced perforations for the discharge of steam to dampen the article that is being pressed.

Various means have heretofore been employed between the head plate and the grid plate that overlies it to equalize the distribution of steam but for various reasons have not proven entirely satisfactory.

It is the principal object of this invention to provide an improved form of baffle, for disposition between the head plate of the head buck and the finely perforated grid plate that forms the pressing surface, whereby a uniform distribution of steam over the entire pressing surface is better obtained and the usual marking of the pressed garments that occurs by reason of the much larger holes in the head plate, is avoided.

More specifically stated, the present invention resides in the provision of an improved form of steam distributing baffle, for disposition between the head plate and pressing surface of the head buck of a pressing machine, whereby the objectionable "nickle marks" on the pressed garment are avoided; whereby a uniform distribution of steam over all parts of the pressing surface are effected, and which baffle may be easily and readily applied to the head buck without requiring rebuilding or alteration thereof; the present baffle being characterized in its construction by a succession of parallel strips of thin, flexible sheet metal, or the like, disposed edge to edge or slightly overlapping, and each formed with a row of slight protuberances along one edge thereof whereby the adjacent edges of strips are caused to be slightly spaced, thus to provide narrow slits between them through which steam that is supplied through openings in the head plate and distributed over one side of the baffle, will be allowed to pass to the opposite side thereof in uniform distribution, for dissipation through the finely perforated grid plate that comprises the pressing surface.

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Further objects and advantages of the present invention reside in the details of construction of the various parts comprising the baffle, and in their relationship to each other and to the adjacent parts of the head buck, as will hereinafter be fully described.

In accomplishing these and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Fig. 1 is a plan view of a baffle, embodied by the present invention, as provided for application to the head buck of a common type of clothes pressing machine.

Fig. 2 is an enlarged, cross-sectional view of a part of the baffle and adjacent parts, taken on line 2—2 in Fig. 1.

Fig. 3 is a cross-sectional view of the head buck of a pressing machine, showing the application of the present baffle thereto.

Fig. 4 is an enlarged, cross-sectional detail of a part of a head buck as equipped with a baffle of alternative form.

Fig. 5 is an enlarged view, in plan, of a portion of the baffle of Fig. 1, showing the overlapped relationship of adjacent baffle strips and their relationship to the grid plate and head plate.

Fig. 6 is a similar view of parts comprised in the alternative form of baffle shown in Fig. 4.

Referring more in detail to the drawings—

In the drawings, Fig. 3 shows a typical cross-section of the head buck of an ordinary type of clothes pressing machine. The shape of the head buck, in plan, is indicated by the shape of the baffle as seen in Fig. 1. Usually the head buck of a pressing machine is about forty two inches long and about thirteen inches wide at its larger end. The head buck, as herein shown, comprises a head casting 10 which defines the shape and size of the buck and which casting forms the top side and end walls of a steam chamber 12 to which steam is supplied through a pipe 13 that enters the chamber at the top. The pipe 13 is equipped with a suitable valve, not herein shown, for the controlled admittance of steam to the chamber, as desired or required, by an operator.

The under side of the chamber 12 is closed with a transversely curved, rigid metal plate 15, known

as the "head plate," and this is formed, at spaced intervals over its surface with holes 16, as seen in Figs. 3 and 4, for discharge of steam from the chamber to the pressing surface.

The pressing surface of the head buck is formed by a thin metal plate 20, known as the "grid plate," that is shaped to the curvature of head plate 15, and which covers the entire area of the under side of the head buck. The plate 20 is formed entirely about its periphery with a short upturned flange 21 that fits to the peripheral edge of casting 10 as shown best in Fig. 3 for its proper securement. The plate 20 is formed over its entire surface with very small and closely spaced perforations 22, as seen in Figs. 3, 4 and 5. Located between the head plate 15 and the grid plate 20 that forms the pressing surface, is the baffle which is embodied by the present invention. The baffle, in its preferred form of construction, will now be described.

The present baffle is applied to the grid plate 20 which forms what has herein been referred to as the "pressing surface." The baffle is shown in Fig. 1 as comprising a succession of thin metal strips 25, disposed in parallel relationship, with edges slightly overlapping as best understood by reference to Figs. 2 and 5. These strips extend the full length of the plate 20, as shown in Fig. 1, and cover its entire inside surface up to the vertical flange that is formed at the periphery of the plate.

In a present preferred form of construction, the strips 25 are of brass, but obviously may be of aluminum, steel, plastic or any rust proof sheet material of a practical and satisfactory character. Preferably, the strips are from ¾" to 1" in width and preferably, but not necessarily, about .005" thick. The successive strips may be held in their parallel and slightly overlapped relationship by spot welding them together at spaced locations. In Fig. 1 I have indicated the points of welding at 27—27. In lieu of this, they might be welded to the plate 20 only at their ends.

Each of the metal strips 25 is formed in that longitudinal edge portion thereof that overlaps with the next adjacent strip, with a row of rather closely spaced downwardly formed protuberances 30, which serve, as has been illustrated best in Fig. 2, to hold the overlapping portions of the strips in slightly spaced relationship and thus provide a succession of slits 32, opening from the top side to the bottom side of the baffle, for an equalized distribution of steam to the perforations of the grid plate which constitutes the pressing surface.

It is shown in Fig. 2 that the underlapping longitudinal edge portions of the successive strips 25, rest upon the top surface of the grid plate 20, and the overlapping longitudinal edge portions are pressed against the under surface of the plate 15. Thus the spacing of the lapped portions of the strips can be accurately established and maintained in accordance with the downward extent of the protuberances. The intent is that the slits 32 shall be very narrow and that a steam head will be built up over the entire top surface of the baffle.

With the parts so constructed and assembled, it will be understood that the steam admitted under pressure into the chamber 12 from pipe 13 will be discharged through the holes 16 in the head plate to the top side of the baffle, and will be distributed over the entire top surface thereof, and will then be discharged through the longitudinal slits 32 to the under side of the baffle and will flow under pressure to the perforations of the grid plate 20 and be dissipated from the latter to the garment being pressed.

One of the results of the use of the present baffle is the avoidance of marking the pressed garment with the "nickel marks," so called only because they are about the size of a nickel, and which without the baffle, are formed directly in line with the holes 16 in the head plate. The main advantage of the use of the baffle is the uniform distribution of steam to all parts of the pressing surface, and the elimination of all marks that are caused by lack of uniformity in steam distribution.

The alternative form of baffle shown in Figs. 4 and 6 is like that above described except that the metal strips 25 which comprises the same are not overlapped, but are located in edge to edge spacing, and one longitudinal edge of each is held spaced slightly above the adjacent edge of the other by the protuberances 30 therein which rest upon the top surface of the grid plate. The mode of use and results obtained by this form of construction are like those previously described.

Such baffles may have the parallel strips thereof extended lengthwise of the buck, as shown in Fig. 1, or they may be diagonally or transversely directed and substantially the same results obtained therefrom. It is mainly a matter of choice.

Baffles of this kind have been found to be most satisfactory and are easy to apply, are durable and long lasting in use and relatively inexpensive.

As an additional feature, to be used with both the device of Fig. 3 and Fig. 4, I apply a bounding baffle of angular form, designated at 35 which is applied about the buck across the ends of the strips 25 and along the edges as a means for deflecting steam toward the center portion of the head. Also this baffle 35 serves to stabilize the ends of the strips 25. Its application is as shown in Fig. 2 or similar thereto.

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent, is:

1. In a pressing buck comprising a housing forming a steam chamber, a head plate closing one side of said chamber and formed with openings therethrough and uniformly distributed over its entire surface for outflow of steam from the chamber and a perforated grid plate applied over the head plate to form the pressing surface of the buck, the perforations of said grid plate being uniformly distributed over the entire surface of the plate and relatively small and is greatly increased in numbers over that of the head plate and a baffle disposed between the said head plate and the grid plate; said baffle comprising a succession of thin flat strips of flexible sheet material, with edges parallel and spaced to provide narrow slits between them and supported with their surfaces angularly disposed relative to the adjacent head plate and grid plate surfaces for the uniform distribution of steam received from the chamber above the baffle, over the surface of the said grid plate.

2. In a pressing buck comprising a housing forming a steam chamber, a head plate applied to the housing and closing one side of said chamber and formed with openings for discharge of steam from the chamber, and a perforated grid plate applied over the head plate to form the pressing surface of the buck, and a steam distributing baffle disposed between the head plate and grid plate; said baffle comprising a succes-

sion of flat strips of thin, flexible sheet material with edge portions overlapped, and one of the overlapped portions of adjacent strips having protuberances formed in spaced relationship thereon, and engaged against the other to establish a spaced relationship of the strips for flow of steam from above the baffle to the surface of the underlying grid plate.

3. In a pressing buck comprising a housing forming a steam chamber, a head plate applied to the housing and closing one side of said chamber and formed with openings for discharge of steam from the chamber, and a perforated grid plate applied over the head plate to form the pressing surface of the buck, and a steam distributing baffle disposed between the head plate and grid plate; said baffle comprising a succession of flat strips of thin, flexible sheet material with edge portions overlapped and one of the overlapped portions of adjacent strips having protuberances formed in spaced relationship thereon, and engaged against the other to establish a spaced relationship of the strips for flow of steam from above the baffle to the surface of the underlying grid plate, and means joining the strips together in parallel relationship.

4. In a pressing buck comprising a housing forming a steam chamber, a head plate applied

to the housing and closing one side of said chamber and formed with openings for discharge of steam from the chamber, and a perforated grid plate applied over the head plate to form the pressing surface of the buck, and a steam distributing baffle disposed between the head plate and grid plate, said baffle comprising a succession of flat strips of thin, flexible sheet material disposed in edge to edge relationship, each strip being formed along one end with protuberances adapted to support that edge of the strip from the grid plate and slightly above the level of the edge of the adjacent strip to provide a steam discharge slit between them.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,828,102	Davis	Oct. 20, 1931
2,123,751	Sigal	July 12, 1938
2,251,660	Chipley	Aug. 5, 1941
2,393,697	Lornitzo	Jan. 29, 1946

FOREIGN PATENTS

Number	Country	Date
20,210	Great Britain	Oct. 17, 1891