May 1, 1928. 1,668,123

H. E. PAGE

PUFF IRON

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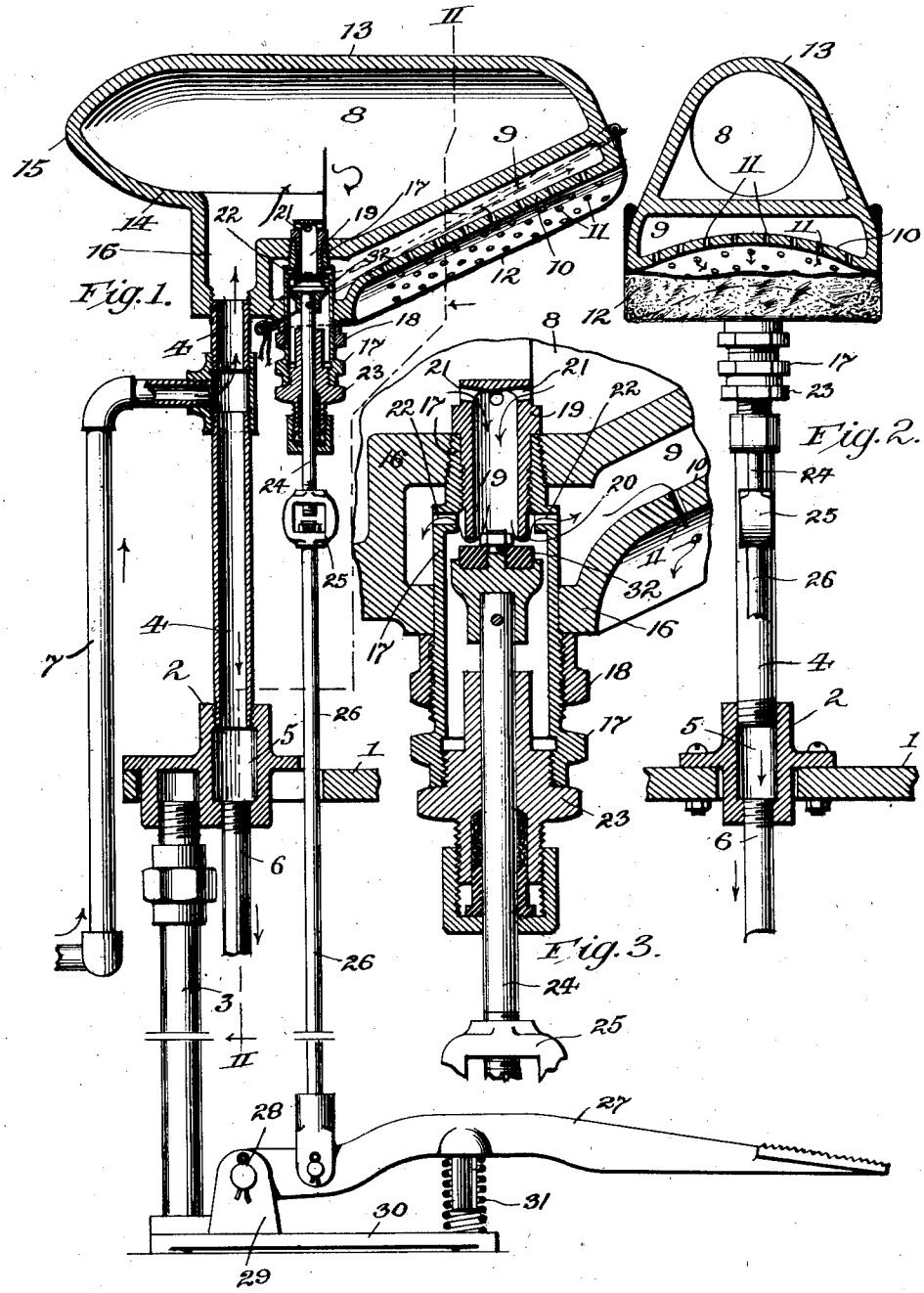

Fig. 1.

Fig. 2.

Fig. 3.

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Fig. 5.

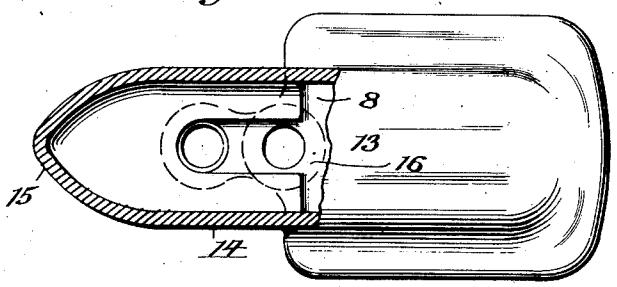
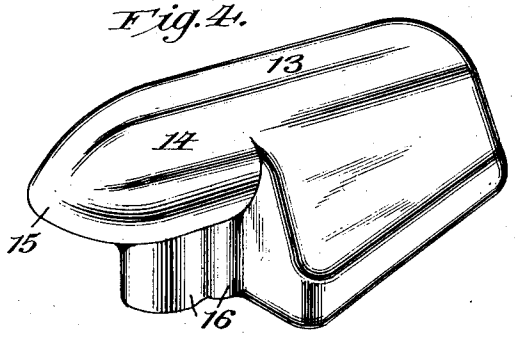


Fig. 4.



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Patented May 1, 1928. 1,668,123

UNITED STATES PATENT OFFICE.

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PUFF IRON.

Application filed December 13, 1926. Serial No. 154,613.

This invention pertains to puff irons which, as will be readily appreciated by those skilled in the art, are commonly employed in connection with garment pressing machines to condition the articles, or certain portions thereof, so that the final pressing operation of such portions may be readily effected. Thus, for instance, in the pressing of the shoulders of garments, and particularly where the padding is relatively thick, it becomes necessary to thoroughly steam such portion prior to the final shaping operation.

The present invention has for its main object the production of a puff iron which presents a perforate surface, preferably arcuate in cross section and upwardly inclined, against which the shoulder of the garment for instance, may be held for the purpose of steaming the same prior to the final shaping operation. The iron also presents at all times a heated surface so contoured that the shoulder thus steamed and softened, may be drawn thereon and dried out with the desired set imparted thereto. Again, the iron in another portion presents a wedge shaped section over which portions of a garment may be laid or drawn to effect finishing operations, the wedge shaped contour greatly facilitating the handling of the goods as they are drawn over the iron.

A preferred embodiment of the structure is shown in the annexed drawings wherein:

Figure 1 is a vertical longitudinal sectional view of the iron and the allied parts,

Figure 2 a transverse vertical section taken on the line II—II of Figure 1,

Figure 3 an enlarged detail sectional view of the valve which controls the passage of steam from the main body to the steaming chamber or that having the perforate wall,

Figure 4 a perspective view of the iron, and

Figure 5 a top plan view thereof with parts broken away.

Ordinarily the puff iron will be located adjacent one end of the table of a garment pressing machine and in the drawings, Figures 1 and 2, a portion of such table is shown at 1. Secured to the table is a casting 2 to the under face of which is secured a post or column 3 forming a support for the casting in addition to that of the table 1. A pipe 4 is mounted in the upper portion of the casting and is in communication through a chamber 5 with a return pipe 6 leading to the water space of a steam boiler (not shown). A steam supply pipe is indicated by 7 and is connected into the pipe 4 through a suitable fitting as best shown in Figure 1.

The puff iron is mounted upon, and supported by, the upper end of the pipe 4. Said iron is preferably formed as an integral casting and is likewise preferably formed from aluminum or some other non-corrosive metal capable of taking a high polish or finish. The iron is formed with two chambers 8 and 9, respectively, the former being the main steam chamber and the latter the spray chamber. The under, outer wall 10 of said latter chamber is concave, when viewed from the lower side, and is provided with a series of perforations 11. Said wall 10 inclines upwardly, toward the right hand end of the iron as viewed in Figure 1, so as to provide an inclined concave face against which the operator may readily press the shoulder of a garment when he desires to steam the same. Preferably such curved surface will be covered by a cloth 12 held in position by a draw-string passing around the upper marginal portion of the cover and tied as indicated in Figure 1.

The main body of the iron tapers toward the upper portion thereof, see Figures 2 and 4, and the extreme upper surface is rounded as at 13. That end of the iron which is opposite from the steaming face 10, or extends to the left of the wedge shaped main body portion, takes the form of an outwardly extending cylindrical portion 14 which tapers to a point or rounded nose 15 and it is over this portion that the shoulder of the garment may be drawn after it is steamed in order to effectually dry and shape the same.

Pipe 4 is screwed into a boss or downward extension 16 which boss is likewise tapped to receive the valve mechanism which controls the outflow of steam from the chamber 8 to the chamber 9 and hence through the openings 11 formed in the concave face 10. Said valve will be best understood upon reference to Figures 1 and 3. It may be said to comprise a valve body 17, the upper end of which extends through the lower end of the chamber 9 and is screwed into the upper wall of said chamber, a packing gland

or nut 18 being employed to effect a tight joint between the body of the valve and the under face of the boss 16.

Mounted in the upper end of the valve body 17 is a tubular member 19, the lower end of which forms a valve seat 20. The upper end of the member 19 is preferably provided with lateral openings 21 into and through which steam from the chamber 8 may pass. The valve body 17 is also provided with a series of openings 22 preferably located at a point above the valve seat, which openings allow the steam to pass into the chamber 9 when the valve is moved from its seat.

Extending through a guide or bonnet 23 mounted in the lower end of the valve body 17 is a valve stem 24, said stem being connected through a swivel yoke 25 to a draw rod 26 which latter in turn, at its lower end is connected to a foot lever 27 fulcrumed at 28 upon lugs 29 extending upwardly from a base plate 30 in which the lower end of the column 3 is likewise preferably secured. The lever 27 is normally held in its raised position by a spring 31 interposed between it and the base plate 30. The valve stem 24 carries at its upper end a valve disk 32 adapted, when the rod and stem are moved upwardly under the action of the spring 31, to contact the seat 20 and to close off the flow of steam through the member 19. As a consequence, steam will not pass through the member 19 into the spray chamber 9 except, and only, when the lever 27 is depressed.

The outer wall of the chamber 9 being formed as an integral portion of the iron body will at all times be hot inasmuch as steam under pressure constantly obtains within the chamber 8 by reason of the fact that the pipe 7 is connected with the steam space of the boiler while the pipe 6 is connected to the water space thereof. Moreover, the arrangement as shown tends at all times to drain the chamber 8 of any water of condensation.

Owing to the fact that the lateral openings 21 are elevated above the lower wall of the chamber 8, no water of condensation, in case there should be any within said chamber, will pass through the openings when the valve is opened and as a consequence only dry steam may enter the spray chamber 9,—hence there is no danger of water being ejected through the openings 11 during the action of spraying steam upon a garment.

While the cloth 12 may become slightly dampened through the action of the steam thereon, it will be almost immediately dried out by reason of the heat imparted thereto by the body of the iron which, as above noted, is hot at all times.

Assuming that it be desired to dampen and shape the shoulder of a coat, the operator taking a small pad or piece of cloth in his hand would pass the same into the shoulder, then press the shoulder of the garment against the cover 12 and depress the lever 27. This will steam and consequently soften the shoulder, besides heating it, so that the goods may be given the desired contour. The shoulder may then be drawn onto the laterally extending cylindrical portion 14 and partially over the top of the iron to the right of the cylindrical portion and there held until it is dried and conformed.

The wedge shaped formation of the body to the right of the tubular extension admits of the drawing of any portion of a garment thereover in case it be desired to dry the same. Again, the wedge shaped formation of the main body of the iron enables an operator to draw a piece of ribbon or a belt back and forth across the same and to maintain close contact between the cloth and the iron. The surface of the iron being polished or planished tends to smooth the goods while it is being drawn over or held against the same.

The upward inclination of the perforate and laterally curved steaming face or wall 10 is advantageous in operation as it readily enables the operator to pass the garment inwardly beneath the same and to apply pressure to the garment or, in other words, to force the garment directly toward the inclined face.

Having thus described the invention what is claimed is:

1. In a puff iron, the combination of a body the upper portion of one end whereof is rounded with sides inclining outwardly therefrom, the body adjacent its opposite end being cylindrical.

2. In a puff iron, the combination of a body the upper portion of one end whereof is rounded with sides inclining outwardly therefrom, the body at its opposite end being tapered and cylindrical intermediate its ends.

3. In a puff iron, the combination of a body having an outwardly extending substantially cylindrical portion terminating in a tapered end; and means for heating said body.

4. In a puff iron, the combination of a hollow body, said body at one end having a cylindrical portion terminating in a tapered end; a perforate wall forming the under portion of the body at that end remote from the cylindrical portion; means for introducing steam into said hollow body; and means under the control of the operator for allowing steam to pass from the body and through the openings in the perforate wall.

5. In a puff iron, the combination of a hollow body the upper surface whereof is curved and a portion of the body of which

is formed with outwardly inclined sides extending from said curved portion, said body having a bottom cross wall which inclines from the medial portion of the lower part of the body upwardly toward one end of the iron; a chamber in part bounded by said wall located beneath said body, the outer wall whereof is likewise inclined and perforate and in-curved transversely of the body; means for supplying steam to said body; and means under the control of the operator for allowing steam to pass from said body into the chamber aforesaid and outwardly through the perforations in the perforate wall.

6. In a puff iron, the combination of a body portion having two chambers formed therein, a main upper heating chamber and a lower spray chamber, the lower wall of said main chamber forming the upper wall of the spray chamber, the outer wall of said spray chamber being perforate; a valve housing extending through an opening formed in the lower portion of the spray chamber and into an opening formed in the lower wall of the main or uppermost chamber, said valve housing having lateral openings formed therein communicating with the spray chamber; a tubular member secured in the upper end of said valve housing, said member extending upwardly within the main or upper chamber and being provided with at least one opening in the upper portion thereof which lies above the level of the adjacent wall of the chamber; a valve adapted to seat against the lower end of said tubular member and to normally close the same; means under the control of the operator for moving said valve from its seat; and means for introducing steam into the main chamber.

In testimony whereof I have signed my name to this specification.

HERBERT E. PAGE.