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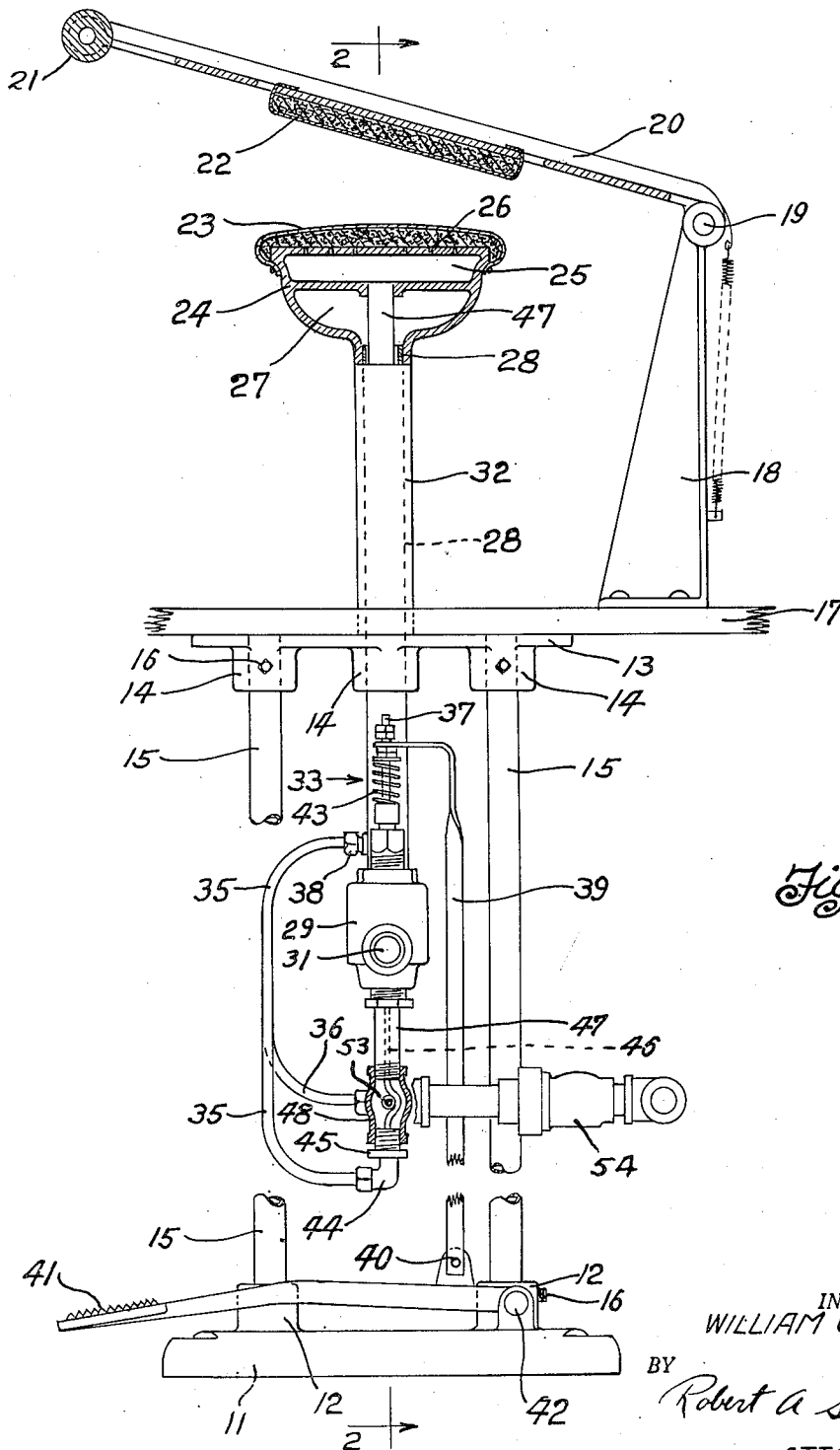
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FABRIC HEAD STEAM AND VACUUM PUFF IRON

Filed Oct. 7, 1944

2 Sheets-Sheet 1



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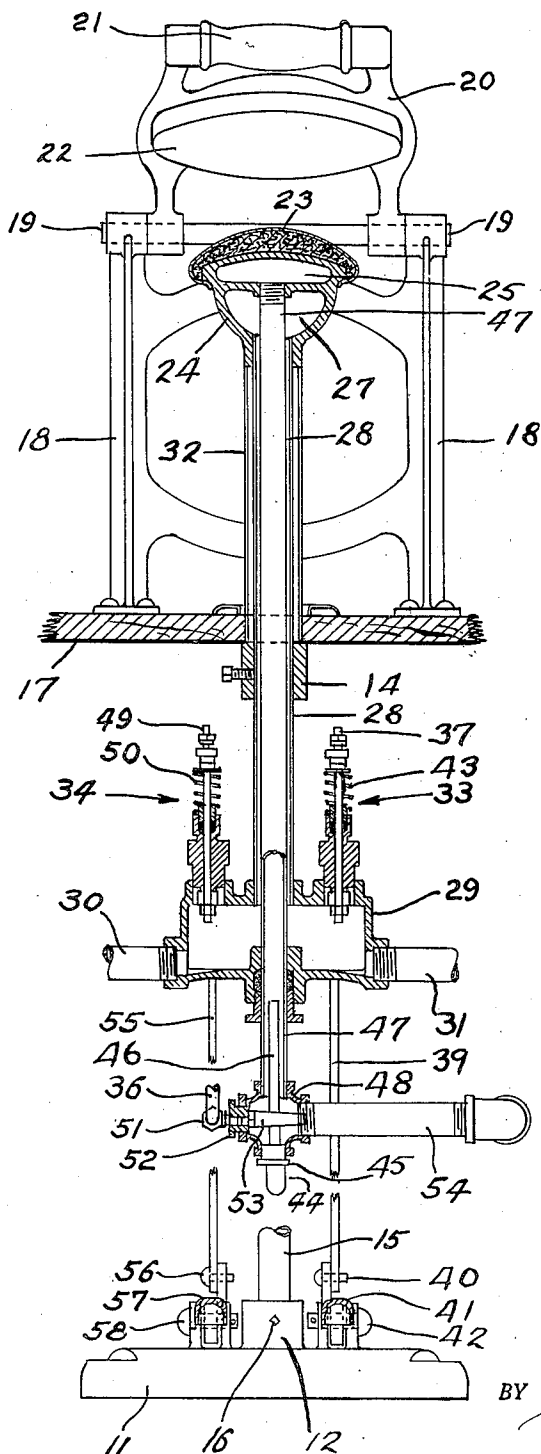


Fig. 2.

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FABRIC HEAD STEAM AND VACUUM PUFF
IRON

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5 Claims. (Cl. 38—15)

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This invention relates to steam and vacuum puff iron units, and more particularly to clothes finishing incorporating the use of vacuum as well as steam.

It is the object of this invention to provide a steam unit together with means forming a part thereof for producing a vacuum source.

It is the object of this invention to provide in combination with the steam puffer unit, means actuated by the steam source for inducing a vacuum as and when desired.

The invention relates to the various elements and their combinations hereafter described in the specification in conjunction with the appended drawing of which—

Fig. 1 is a right side elevational view of the finishing unit partly in section; and

Fig. 2 is a front elevational partial section on line 2—2 of Fig. 1.

It will be understood that the above drawing illustrates merely a preferable embodiment of the invention; and that other embodiments are contemplated within the scope of the claims hereafter set out.

In the drawing, the steam and vacuum clothes finishing unit comprises preferably a cast iron base 11 with a pair of hollow upwardly projecting retainers 12 thereon. Table support 13 with hollow downwardly projecting retainers 14 corresponding to retainers 12 is maintained in spaced relation to base 11 by supporting pipes 15.

The respective ends of spacer pipes 15 are provisioned within retainers 12 and 14 and secured by set screws 16. Wood table 17 suitably carried by support 13, itself supports spaced columns 18, between the upper ends of which is pivoted at 19 a manually operable finishing head 20 with handle 21.

Resilient fabric head 22 carried by yoke 20 is adapted for cooperative compressive engagement with corresponding padding 23 covering hollow puff iron 24, the garment sought to be finished being interposed between fabric head 22 and padding 23. Puff iron 24 contains a steam and vacuum chamber 25 with a plurality of outlet perforations 26 in its top portion.

A second heating chamber 27 is sealed within puff iron 24 separate from chamber 25, with steam being supplied thereto through pipe 28, the upper end of which extends into chamber 27 of iron 24. Pipe 29 extends downwardly through table 17 and through the hollow projection 14 forming a part of support 13.

Pipe 28 extends further downwardly and is joined to hollow stem separator or reservoir 29,

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to which is joined steam inlet and outlet conduits 30 and 31. Steam is thus supplied to chamber 27 of puff iron 24 for constantly maintaining the same at the desired heat. A tube shield 32 surrounds steam pipe 28 in spaced relation and is interposed between finishing iron 24 and table 17.

Steam valve assemblies 33 and 34 extend upwardly from separator 29 in communication therewith, for supplying steam under pressure out through conduits 35 and 36 respectively. Valve stem 37 of valve assembly 33 is projected downwardly for releasing steam through valve outlet 38 and conduit 35.

Valve operating bar 39 joined at its upper end to valve stem 37, is pivotally connected at 40 to actuating foot pedal 41 which is itself pivotally carried at 42 by base member 11. Coiled spring 43 normally maintaining valve assembly 33 closed, is compressed on downward actuation of pedal 41, and promptly closes said valve assembly and returns the pedal to inoperative elevated position as soon as the pedal is released.

Steam thus supplied to conduit 35 enters compression elbow 44, bushing 45, and connecting steam tube 46 which extends up into hollow pipe 47 centrally provisioned within and through steam pipe 28.

Bushing 45 is threaded into hollow fitting 48 at its bottom, while steam pipe 47 is threaded into the top portion thereof. Steam tube 46 joining elbow 44 extends up through bushing 45, through hollow fitting 48 and up into steam pipe 47. Steam may thus be supplied into chamber 25 for use in conjunction with the pre-heated finishing iron 24.

A secondary supply of steam under pressure from reservoir 29 may be delivered at will through valve assembly 34, including valve stem 49 and coiled spring 50. The valve outlet corresponding to valve outlet 38, joins steam tube 36, the lower end of which joins elbow 51 and bushing 52. Bushing 52 threaded into hollow fitting 48 is joined within said fitting to Venturi nipple 53 which extends centrally through said fitting and into steam exhausting pipe 54.

Valve operating bar 55 joined at its upper end to valve stem 49, is pivotally connected at 56 to actuating foot pedal 57 which is itself pivotally carried at 58 by cast base member 11. Coiled spring 59 normally maintaining valve assembly 34 closed by holding valve stem 49 in an elevated position, is compressed on downward actuation of foot pedal 57, and promptly closes said valve assembly and returns the pedal to its inoperative

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elevated position as soon as the pedal is released.

Actuation of foot pedal 57 thus releases steam from separator 29 and valve assembly 34 conducting the same through steam tube 36 and through the constricted opening in Venturi nipple 53. Said constricted opening produces a high steam velocity as the steam passes into exhaust pipe 54, with the result that the space within hollow fitting is evacuated and a relatively high vacuum created therein.

Vacuum communication is thus established within connecting pipe 47 for producing a controlled vacuum condition within chamber 25 of finishing iron 24. The vacuum established thus creates a flow of air through the garment to be finished, through finishing pad 23 and perforations 26, into chamber 25. Thus flow of air opposite to the flow of steam is useful in the finishing of clothes particularly in counteracting the upward effect upon the nap of the garment when steam is first used, and drying said garment.

Thus by actuating foot pedal 41 steam is supplied from separator 39 directly to the garment which is placed upon the pad 23 and finishing iron 24.

On the other hand with pedal 41 released, actuating foot pedal 57 produced a vacuum condition within chamber 25 for drawing air at high velocity through the garment.

I claim:

1. In a pressing machine, a steam separator having a pair of outlet ports, a control valve with a steam outlet mounted in each port, a hollow perforated puff iron, a chambered member in spaced relation to said separator, a steam pipe interconnecting the interiors of said chambered member and said puff iron, a second steam pipe joined at one end to one of said valve outlets with its other end projecting into and through said chambered member and substantially up into said first steam pipe, Venturi means in said chambered member for creating a vacuum therein, and a third steam pipe interconnecting the other valve outlet and said Venturi means.

2. In a pressing machine, a steam separator having a pair of outlet ports, a control valve with a steam outlet mounted in each port, a hollow perforated puff iron, a chambered member in spaced relation to said separator, a steam pipe interconnecting the interiors of said chambered member and said puff iron, a second steam pipe joined at one end to one of said valve outlets with its other end projecting into and through said chambered member and substantially up into said first steam pipe, Venturi means in said chambered member for creating a vacuum therein, a third steam pipe interconnecting the other valve outlet and said Venturi means, and separately operable manual controls joined to each control valve.

3. In a pressing machine, a steam separator having a pair of outlet ports, a control valve with a steam outlet mounted in each port, a hollow perforated puff iron, a chambered member in

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spaced relation to said separator, a steam pipe projecting through said separator and interconnecting the interiors of said chambered member and said puff iron, a second steam pipe joined at one end to one of said valve outlets with its other end projecting into and through said chambered member and substantially up into said first steam pipe, Venturi means in said chambered member for creating a vacuum therein, and a third steam pipe interconnecting the other valve outlet and said Venturi means.

4. In a pressing machine, a steam separator having a pair of outlet ports, a control valve with a steam outlet mounted in each port, a perforated puff iron having a preheating chamber and a steam delivery chamber, a chambered member in spaced relation to said separator, a steam pipe interconnecting the interior of said chambered member and said delivery chamber, a second steam pipe joined at one end to one of said valve outlets with its other end projecting into and through said chambered member and substantially up into said first steam pipe, Venturi means in said chambered member for creating a vacuum therein, a third steam pipe interconnecting the other valve outlet and said Venturi means, and a fourth steam pipe concentrically mounted over said first steam pipe and interconnecting the interior of said separator and said preheating chamber.

5. In a pressing machine, a steam separator having a pair of outlet ports, a control valve with a steam outlet mounted in each port, a hollow perforated puff iron, a chambered member in spaced relation to said separator and having a supply and an exhaust port, a steam pipe interconnecting said supply port and said puff iron, a second steam pipe joined at one end to one of said valve outlets with its other end projecting into and through said chambered member and substantially up into said first steam pipe, Venturi means in said chambered member for projecting steam through said exhaust port to create a vacuum within said chambered member, and a third steam pipe interconnecting the other valve outlet and said Venturi means.

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