T. D. PALMER.

GARMENT PRESSING MACHINE.

APPLICATION FILED AUG. 10, 1908.

1,114,645. Patented Oct. 20, 1914.

Fig. 1.

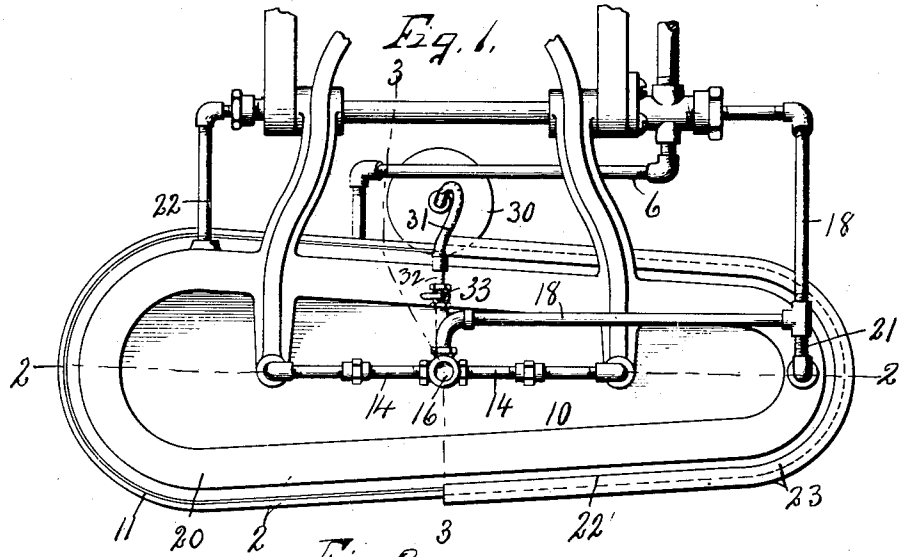


Fig. 2.

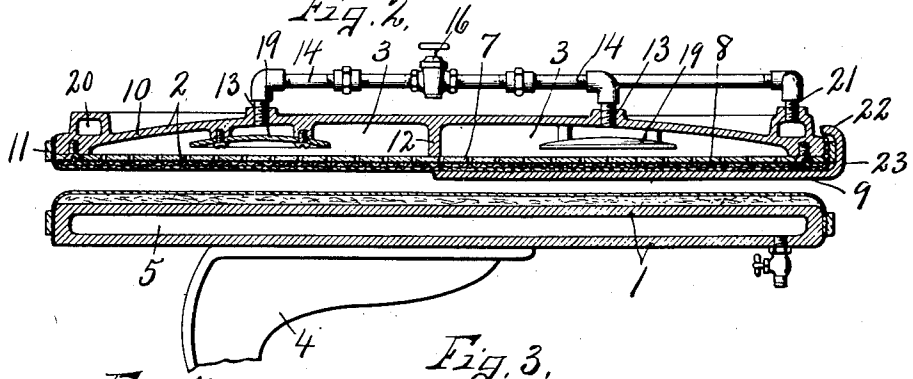


Fig. 3.

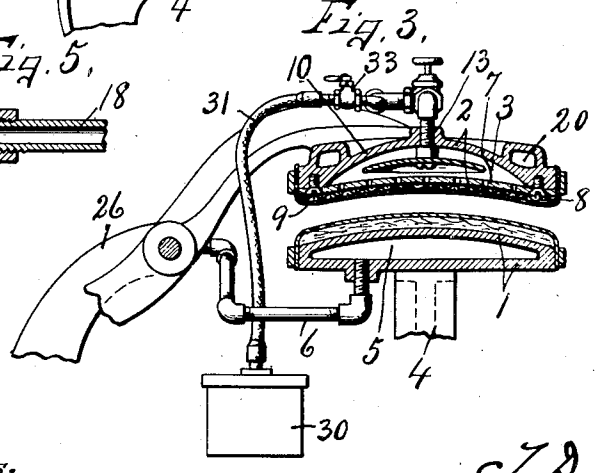


Fig. 5.

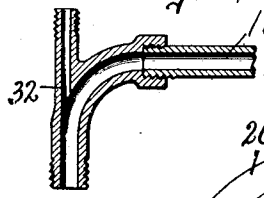
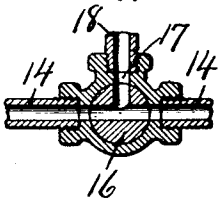


Fig. 4.



Witnesses.

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GARMENT-PRESSING MACHINE.

1,114,645. Specification of Letters Patent. Patented Oct. 20, 1914.

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To all whom it may concern:

Be it known that I, THEODORE D. PALMER, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Garment-Pressing Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in garment pressing machines, in which the primary object is to apply steam to the upper surface of the garment only while such garment is under direct mechanical pressure whereby the steam is temporarily held and impressed into the nap of the upper surface of the garment thereby softening the nap so that when the mechanical pressure is relieved, the rapidity of escape of the steam from such surface not only restores the nap but produces a rapid drying of the garment without saturating the underlying portions of such garment with moisture.

A further object is to prevent the accumulation of moisture of condensation at the edges of the press head by providing the latter with a marginal steam conduit running entirely around its marginal edge in close proximity thereto so as to maintain a practically uniform degree of heat throughout the area of the presser face and particularly along its marginal edges where it is most susceptible to cooling influences which also avoids any liability of overheating any part of the presser head as is some times the case with inexperienced hands where flame burners are employed to heat the head.

Another specific object is to divide the steam chamber into compartments and to provide means for supplying steam to both compartments simultaneously or to either of the compartments separately when it is desired to use only a portion of the presser head at one time as in pressing vests and other small garments.

A further object is to provide the presser head with an auxiliary presser plate adapted to be detachably interlocked therewith and provided with a smooth presser face covering a portion of the foraminous bottom so that the machine may be used to press the garment with either a dull or polished finish.

A further object is to provide means for introducing a sterilizing fluid or perfume upon the garment simultaneously with the application of steam thereto.

Other objects and uses will be brought out in the following description.

In the drawings—Figure 1 is a top plan of a portion of a garment press showing various features of my invention. Figs. 2 and 3 are vertical and longitudinal sectional views taken on lines 2—2 and 3—3, Fig. 1. Fig. 4 is an enlarged sectional view of a three-way valve for controlling the supply of steam to the steam chambers in the presser head. Fig. 5 is a sectional view of a portion of a supply pipe through which the steam and disinfecting fluid or perfume is introduced.

This garment press comprises a garment supporting bed or buck —1—, a superposed movable presser head —2— having a plurality of, in this instance two, non-communicating steam chambers —3— to which steam is supplied individually or simultaneously in a manner hereinafter described.

The buck —1— is stationary upon any suitable support —4— and is provided with a steam chamber —5— connected by a conduit —6— to any available source of steam supply, not shown, the chamber —5— being substantially coextensive with the upper face of the buck for heating said upper face to a uniform degree substantially equal to the temperature of the steam thereby obviating any liability of burning the garment which may rest thereon.

The presser head —2— is provided with a perforated concave bottom plate —7— substantially coextensive with the area of the upper face of the buck —1— and forms the bottom of the steam chambers —3— which have a combined area substantially equal to that of the perforated plate so as to distribute steam over practically the entire area of said plate.

The bottom of the perforated plate —7— is covered by foraminous laminæ —8— and —9—, the layer —8— consisting, in this instance, of a wire gauze or screen while the bottom layer or presser face —9— is preferably made of fabric thereby constituting the press cloth which comes in direct contact with the upper face of the garment and together with the foraminous layer —8— and perforated plate —7— affords an effective

means of distributing the steam evenly over the upper surface of the garment while the latter is under mechanical pressure of the head —2—.

The marginal edges of the perforated plate —7— is secured to the under side of the corresponding edges of the main body —10— in which the chambers —3— are formed while the marginal edges of the laminæ —8— and —9— are also secured to the outer edges of the main body —10— by a suitable clamp —11— of strap iron or other suitable material capable of being removed when necessary to replace the press cloth or other laminæ constituting the bottom of the presser head.

The chambers —3— are separated or divided from each other by a suitable partition —12—, which in this instance is formed integral with the main body —10— and abuts against the upper face of the press plate —7— thereby serving the double purpose of holding the central portion of the presser face from undue upward spring while the head is in its pressing position and also effectively separating the compartments one from the other when it is desired to use either one independent of the other.

Each chamber is provided with a separate inlet port —13— and these ports are connected by pipes —14— to a common valve casing having a three-way valve —16— as best seen in Fig. 4, said valve casing having an inlet —17— which is connected by a pipe —18— to the source of steam supply, not shown. This valve enables the steam to be diverted to either of the chambers —3— independently of the other when it is desired to press simple garments, not requiring the full area of the presser head or such steam may be simultaneously introduced into both chambers when it is desired to press larger garments.

Secured within each of the chambers —3— directly under the inlets are suitable distributer plates —19— which serve to distribute or deflect the inflowing steam throughout the area of the chamber in which it is secured in order to divert such steam to all parts of the bottom of the presser head, said deflector plates being spaced apart from the adjacent faces of the main body —10— and perforated plate —7— to permit the steam to pass entirely around the same.

The outer marginal edges of the presser head, which are somewhat remote from the steam walls are more or less susceptible to cooling influences especially during the operation of the presser head to and from the buck and in order to maintain a proper temperature at this portion of the presser head, I provide said head with a marginal steam conduit or chamber —20— running entirely around and preferably formed in the marginal edge of the main body —10—, the latter being usually made of cast metal. This marginal channel or conduit —20— is connected by a steam pipe —21— to the source of supply, not shown, and is also provided with a suitable drip conduit —22— for the return flow of any water of condensation, which may accumulate in the conduit —20—, the latter being separate from the steam chambers —3—. By the use of this marginal steam chamber —20—, I not only avoid the use of separate flame burners but also obviate any liability of overheating the presser head as is sometimes the case when the machine is used by inexperienced operators, where flame burners for heating the head are employed.

The use of the press cloth or foraminous presser face —9— gives a somewhat dull finish to the garment and in some instances it is desirable to give the whole or a portion of such garment a polished finish and in order that this may be speedily and economically accomplished I provide a portion of the head with a metal presser plate —23— slidably interlocked with the main body of the presser head and having its lower portion extending across and under a portion of the press cloth —9— and in close proximity thereto, thereby cutting off direct application of steam to a surface of the garment corresponding to the area of the auxiliary presser plate, the lower surface of said auxiliary presser plate being smooth so as to impart a polished finish to the upper face of the garment against which it may be pressed.

The entire presser head is movable vertically to and from the upper face of the buck —1— and is preferably hinged at the rear thereof to a suitable supporting frame —26— which holds the presser head against endwise movement. This presser head is usually made tapering from end to end and when it is desired to use the presser plate —23—, the latter is interlocked with the small end of the head in the manner previously described and for this purpose is provided with an inturned marginal flange —22'— extending around the small end and sides thereof and adapted to engage and interlock with the marginal edges of the main body of the presser head although other means of holding such auxiliary press plate on the presser head may be substituted without departing from the spirit of this invention. When it is desired to use the presser head without the auxiliary presser plate —23—, the latter may be withdrawn endwise therefrom and laid aside.

It is sometimes desirable to apply a disinfectant fluid or perfume to the upper surface of the garment simultaneously with the steam thereto and for this purpose I have provided a reservoir —30— which is connected by a flexible pipe —31— to a suitable

nozzle —32—, the latter in this instance entering the steam supply pipe near its junction with the valve —16— in such manner that the inflowing steam into the presser head will draw a small quantity of the contents of the receptacle —30— into the steam distributing chamber from which it is projected through the foraminous bottom on to the surface of the garment. The reservoir —30— may be disposed in any suitable plane and adapted to feed its contents independently of the steam or to be drawn into the steam chamber by suction produced by the passage of steam across the nozzle —32—, the flow of the fluid from the receptacle —30— to the presser head being controlled by a suitable valve —33—.

In operation, the presser head —7— is normally elevated or rocked upwardly some distance above the buck —1— to permit the garment to be readily placed on the latter and when properly positioned for pressing, the presser head is rocked downwardly by any well known means either by hand or foot power until its presser face is in firm contact with the upper face of the garment whereupon the valve —16— may be opened to admit steam to either one or both of the chambers. This steam is forced through the foraminous presser plate and against the upper surface of the garment while the latter is under pressure thereby softening and sterilizing the nap so that as soon as the mechanical pressure is removed by the upward movement of the presser head, the steam which is more or less in the matted nap will immediately escape upward thereby raising the nap and at the same time effectively drying the upper surface of the garment by reason of the rapid evaporation of the steam, it being understood that what little moisture there may be in the steam is applied only to the upper surface of the garment and in no case does it pass through the garment as in sponging machines.

The heat developed by the introduction of steam into the marginal channel or conduit —20— is conducted to the garment at practically the same temperature as the steam thereby obviating any liability of burning of the garment and at the same time aiding in expeditiously drying such garment as soon as the steam pressure is shut off and the mechanical pressure relieved.

What I claim is:

1. A steam clothes press comprising a buck and a press-head having a steam chamber provided with a foraminous bottom, said press-head being also provided with a steam conduit running around its marginal edge and cut off from communication with said steam chamber.

2. In a garment pressing machine, two permanently associated pressing elements disposed one above the other, the upper element being movable toward and from the lower element and provided with separate steam compartments, each having a foraminous bottom for the passage of steam therethrough to the upper surface of the garment while the latter is under pressure, means for controlling the passage of steam to said compartments and means for preventing the escape of steam from the perforations of one of said compartments.

3. In a garment pressing machine, two permanently associated presser elements disposed one above the other, the upper element being movable toward and from the lower element and provided with a steam chamber having a foraminous bottom, and an auxiliary imperforate presser plate detachably interlocked with the upper element and extending partially across the foraminous bottom.

4. In a garment pressing machine, a supporting bed for the garment having a steam chamber, and an imperforate top, a superposed presser head permanently associated with and movable toward and from the bed and also provided with a steam chamber having a foraminous bottom whereby steam may be applied to the upper surface of the garment, and an imperforate presser plate secured to the presser head and extending across the under side of the steam pervious bottom.

5. In a garment pressing machine, two permanently associated pressing elements disposed one above the other, the upper element being movable toward and from the lower element and provided with a steam chamber having a steam pervious bottom whereby steam is applied to the upper surface of the garment while the latter is under pressure, said head being provided with a steam conduit separate from the steam chamber, and steam pipes leading to said chamber and to the conduit.

6. In a garment pressing machine, a buck, a press-head having a steam chamber provided with a foraminous bottom, means for introducing steam into the chamber, and additional means for introducing a disinfecting fluid into the same chamber whereby both the steam and disinfecting fluid may be projected through the foraminous bottom and against the surface of the garment.

7. A steam clothes press, comprising two pressing elements one of which is provided with a steam chamber having a foraminous presser face, a steam supply pipe connected to said chamber and a supply pipe for a disinfectant connected to the steam pipe whereby steam and a disinfectant may be simultaneously introduced into the chamber.

8. In a garment pressing machine, two coacting pressing elements having press plates of substantially uniform size and

shape, one of said elements having non-communicating steam chambers, the upper wall of one chamber forming the bottom wall of the other chamber, and means for supplying steam to both chambers.

9. In a garment pressing machine, two coacting pressing elements, one of said elements having non-communicating steam chambers and a perforated press plate forming one side of one of the chambers, the opposite side of the latter chamber forming one side of the other chamber, and means for supplying steam to both of said chambers.

10. In a garment pressing machine, two coacting pressing elements, one of said elements having non-communicating steam chambers and a perforated press plate forming one side of one of the chambers, the opposite side of the latter chamber forming one side of the other chamber, and means for intermittingly supplying steam to the chamber having the perforated side irrespective of the other chamber.

In witness whereof I have hereunto set my hand this 4th day of July, 1908.

THEODORE D. PALMER.

Witnesses:
H. E. CHASE,
CAROLINE MCCORMACK.