

May 9, 1967

V. W. TUCKER
ELECTRICAL HEATING AND PADDING ASSEMBLY
FOR PRESSING MACHINE HEAD

3,319,045

Filed Jan. 15, 1965

2 Sheets-Sheet 1

FIG. 1.

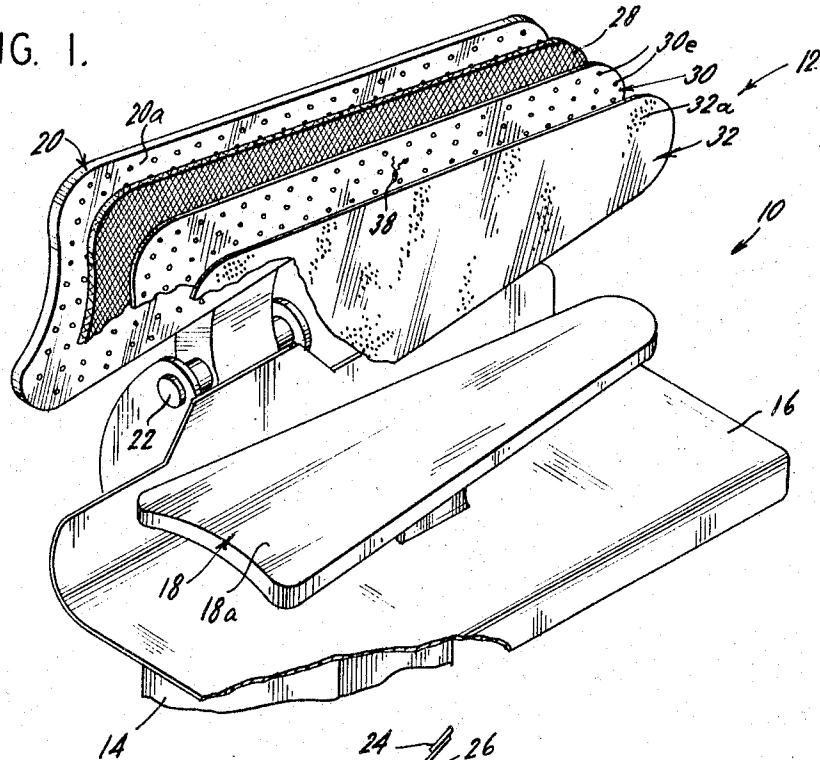
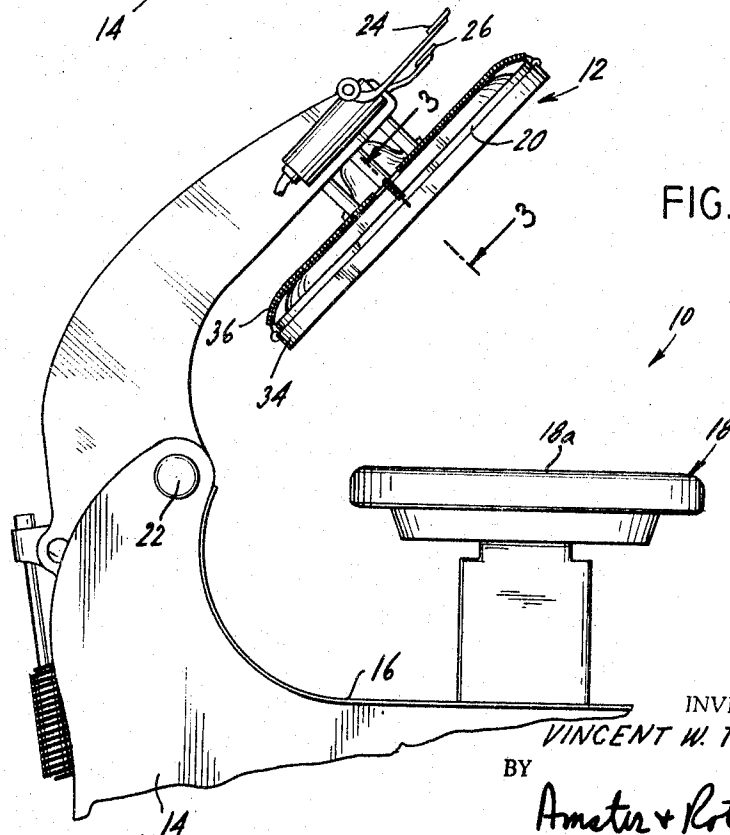


FIG. 2.



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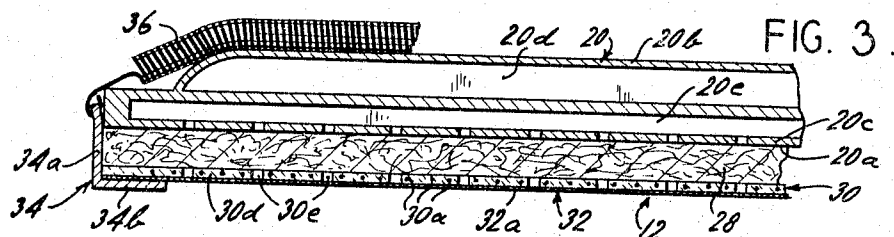


FIG. 3.

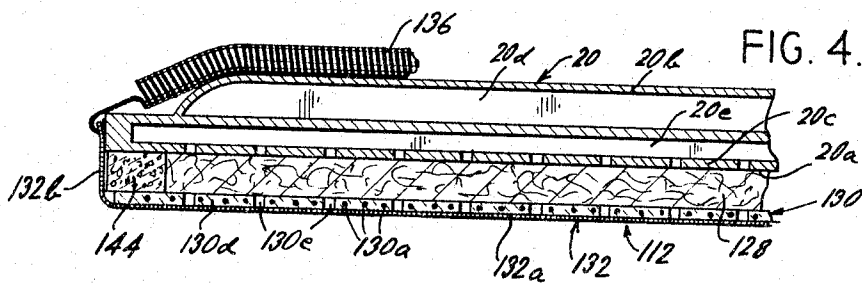


FIG. 4.

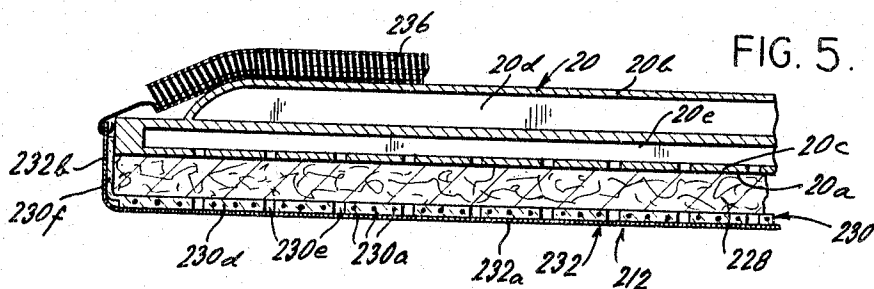


FIG. 5.

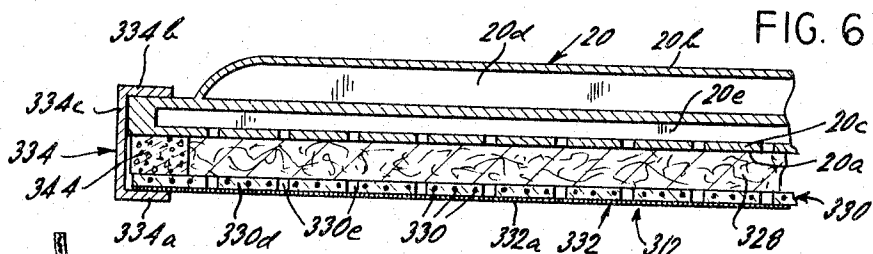


FIG. 6.

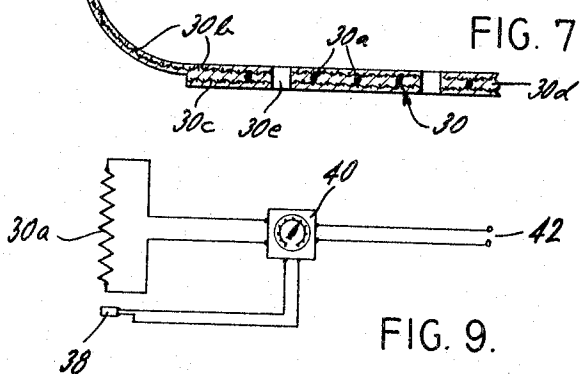


FIG. 7.

FIG. 9.

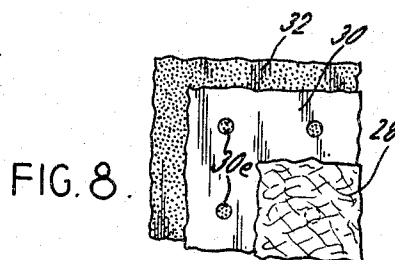


FIG. 8.

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ELECTRICAL HEATING AND PADDING ASSEMBLY FOR PRESSING MACHINE HEAD

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Filed Jan. 15, 1965, Ser. No. 425,862

14 Claims. (Cl. 219—243)

The present invention relates generally to pressing machines, and in particular to an electrical heating and padding assembly for the movable pressing heads of such pressing machines.

A conventional pressing machine includes a stationary buck having a pressing face and a movable pressing head having a pressing face which is brought into high pressure engagement with the stationary buck for pressing fabrics or garments interposed therebetween. As is generally understood, provision is made for introducing steam, usually at a pressure of approximately 80 lbs. per sq. inch, through both the stationary buck and the movable pressing head and for drawing a vacuum through the buck.

Of recent times the problem has been presented of permanently creasing various materials which are woven in whole or in part of synthetic or thermoplastic fibers or impregnated with appropriate thermoplastic resins. In the permanent creasing of such materials, it was thought that single-purpose equipment would have to be developed to meet the requirements of higher pressing pressures, higher operating temperatures and higher heat transfer rates to achieve permanent creasing in a reasonable operating cycle. To this end, it has been suggested that the need for higher pressing pressures would necessitate larger air cylinders and a corresponding increase in the operating capacity of the air supply; the demand for higher temperatures would require operating steam pressures of the order of 125 lbs. per sq. inch as opposed to the more conventional 80 lbs. per sq. inch; and the need for higher heat transfer rates would give rise to such expedients as eliminating the grid screen on the upper pressing head and using smooth polished surfaces in lieu thereof. The requirement for larger air cylinders and for higher operating temperatures suggests the need to design special purpose equipment, while the elimination of the grid screen and the use of smooth polished surfaces introduces the problem of fabric glazing, notwithstanding the increased heat transfer rate.

There exists a need for permanent creasing equipment which is seemingly standard in most material respects, yet provides the requisite pressures and operating temperatures, preferably operating at the presently standard steam pressures and utilizing available air supplies. Although there are many ramifications to the design of adequate equipment for permanent creasing, a particular problem resides in developing sufficiently high temperatures at the movable or upper pressing head for such creasing and in achieving rapid heat transfer to enable a relatively short processing cycle. Preferably, these objectives should be achieved in equipment which is modestly priced and by means which enable the conversion of existing pressing machines to handle the processing requirements for permanent creasing.

Broadly, it is an object of the present invention to provide an improved pressing machine which realizes one or more of the aforesaid objectives. Specifically, it is within the contemplation of the present invention to provide an improved electrical heating and padding assembly for the movable pressing head of a pressing machine which enables the development of relatively high processing temperatures for permanent creasing without adversely affecting the finish, appearance or character of the pressed fabric or garment.

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In accordance with an illustrative embodiment, demonstrating objects and features of the present invention, there is provided in a pressing machine including a pressing head having a pressing face, an electrical heating and padding assembly which is disposed in confronting relation to the pressing face for electrically heating and pressing the garment against which the pressing head is brought to bear. The assembly comprises a resilient pad confronting and abutting the pressing face and a perforated blanket of electrically insulating and steam-resistant material disposed against the pad and having electrical heating elements embedded therein and a perforated platen disposed against the blanket and providing a garment-contacting face. Advantageously, mounting means may be provided for engaging this assembly to the otherwise conventional pressing head of the pressing machine such that the assembly may be added to standard equipment in the field. The assembly is constructed such that steam from the pressing head may be applied through the assembly to the garment for conditioning the garment without the need for in any way altering the existing structure of the pressing machine.

The above brief description, as well as further objects, features and advantages of the present invention, will be more fully appreciated by reference to the following detailed description of presently preferred but nonetheless illustrative embodiments in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a fragmentary perspective view of a typical pressing machine having an electrical heating and padding assembly in accordance with the present invention, the assembly being shown exploded and in somewhat diagrammatic form;

FIG. 2 is a fragmentary elevational view of the pressing machine, showing the heating and padding assembly in position on the upper or movable pressing head of the machine;

FIG. 3 is a sectional view, on an enlarged scale, taken substantially along the line 3—3 of FIG. 2 and looking in the direction of the arrows, showing a first assembly demonstrating features of the present invention;

FIG. 4 is a sectional view similar to FIG. 3, showing an assembly demonstrating further features of the present invention;

FIG. 5 is a sectional view similar to FIG. 3 showing still further features of the present invention;

FIG. 6 is a sectional view similar to FIG. 3 showing still further features of a heating assembly in accordance with the present invention;

FIG. 7 is a fragmentary sectional view of a marginal portion of the perforated blanket incorporated in the embodiment illustrated in FIG. 5;

FIG. 8 is a fragmentary plan view, with parts broken away, which is typical of the illustrative assembly shown in FIGS. 3 to 6 inclusive, and in particular shows the relationship of the cushion, the perforated blanket and the perforated platen which are sandwiched together to make up the electrical heating and padding assembly; and,

FIG. 9 is a schematic diagram showing of the temperature control for the electrical heating elements incorporated in the assembly.

Referring now specifically to the drawings, and in particular to FIGS. 1 and 2, there is shown a typical pressing machine, generally designated by the reference numeral 10 which incorporates an electrical heating and padding assembly 12 demonstrating features and advantages of the present invention. The pressing machine, which is of conventional construction, includes a support or base 14 and a work-supporting table 16 which carries a horizontally-extending stationary buck 18 having a work-contacting or pressing face 18a. Disposed above the stationary

buck 18 is a movable or upper pressing head 20 which has a work-contacting or pressing face 20a. As is generally understood, the pressing head 20 is mounted on the support 14 for pivotal movement about a substantially horizontal pivot 22 for movement from the open or clearance position illustrated in FIGS. 1 and 2 to a pressure-applying position (not shown) wherein the movable pressing head 20 is brought into high pressure engagement with the stationary buck 18, with fabric or garment draped over the buck. The pressing machine is provided with the usual hand and foot controls, including a high pressure control 24 and a head steam control 26 mounted on the upper or movable pressing head 20. Since the instant invention finds application on various types of pressing machines and an understanding of the invention does not require any further detailed description of such pressing machines, further description will be dispensed with in the interests of brevity. For a detailed description of a typical pressing machine in which the instant invention finds application, reference may be made to copending application Ser. No. 353,359 filed Mar. 20, 1964 and entitled Pressing Machine and Control, now Patent No. 3,279,106, which application is assigned to the assignee of the instant application.

In accordance with the present invention, the electrical heating and padding assembly 12 is detachably mounted in co-extensive relation with the pressing face 20a of the movable pressing head 20, as is shown generally in FIG. 2 and as will be described in detail in conjunction with FIGS. 3 to 8 inclusive. In general, the assembly 12 includes a resilient cushion 28 in confronting and abutting relation to the pressing face 20a of the movable pressing head 20, a blanket 30 of electrically insulating and steam-resistant material disposed against the cushion 28 and having electrical heating elements embedded therein, and a platen 32 disposed against the blanket 30 and providing a work-contacting face 32a which corresponds in shape and extent to the pressing face 20a. Mounting means, generally designated by the reference numeral 34 in FIG. 2 and including a plurality of springs 36, engage the pressing head 20 and releasably secure the sandwiched components 28, 30, 32 on the pressing head 20. In applications wherein it is desirable or necessary to condition the fabric or garment prior to the permanent creasing thereof, the several components 28, 30, 32 of the assembly 12 are perforated to provide a through path for steam which emanates from the usual apertures provided in the pressing head. In those instances where top steam is not to be applied to the fabric or garment, there is no necessity of providing apertures or perforations in the several components of the heating and padding assembly 12. Reference will now be made to the detailed showings of FIGS. 3 to 8 inclusive for a description of typical constructions for the cushion 28, the blanket 30 and the platen 32 and for typical mounting means 34 for attaching the same to the pressing head 20.

Referring now to FIG. 3, the movable pressing head 20 is seen to include a head body 20b which terminates at its underside in a perforated face plate 20c providing the pressing face 20a and internal structure to define a steam pressure chamber 20d which, as is generally understood, is brought into selective communication with a steam distribution chamber 20e by appropriate internal valving (not shown) actuated by the head steam control 26.

The cushion 28 is constructed to distribute the steam emanating from the apertured face plate 20c of the pressing head 20 and in a typical construction is a mesh pad fabricated of loosely woven Monel ribbon or any similar non-ferrous alloy which is corrosion resistant and has the necessary resiliency to urge the work-contacting face 32a of the platen 32 against the work and the pressing face 18a of the buck 18.

The blanket 30 comprises a grid of electrical resistance heating elements or wires 30a which, as seen best in FIG. 7, are interposed between top and bottom layers 30b, 30c of a fabric, such as a glass cloth, with the wire and fabric layer embedded or encased within a body 30d of a steam-resistant electrical insulation, such as silicone rubber. The pattern, lengths and sizes of the resistance wires and other electrical parameters are selected to establish a substantially uniform heat distribution or intensity over the entire work-contacting face 32a. For the instant application, it is important that the layout of the heating elements or resistance wires 30a be such that through apertures or perforations may be formed in the insulating body 30d of the blanket 30 without disturbing the insulation surrounding the respective heating elements or resistance wires 30a.

The platen 32 which confronts and abuts the blanket 30 and provides the work-contacting face 32a is fabricated of a material which is capable of achieving rapid heat transfer from the blanket 30 to the work, such as aluminum or stainless steel, and may take the form of a perforated plate or a woven screen. Preferably, the platen 32 is bonded to the blanket 30 to assure that the electrical heating blank 30 is in intimate contact with the platen or screen 32 to assure overall uniformity in temperature. In a typical embodiment, the platen takes the form of a finely perforated sheet of aluminum which has a large number of perforations or holes such that many of such fine perforations will confront the somewhat larger holes 30e in the blanket 30 to assure that the requisite path will be established for steam emanating from the steam distribution chamber 20e to pass through the mesh pad 28 and the perforated blanket 30. For some applications, it may be desirable to face both sides of the heating blanket 30 with thin perforated platens or screens, with the added platen interposed between the resilient cushion 28 and the adjacent face of the blanket 30 serving to preclude abrasion of the latter incident to use. However, practical experience indicates that the added platen is not necessary since the elastomeric material employed in the blanket is sufficiently strong to withstand the abrasive effects of the pad 28.

The sandwiched assembly of the cushion 28, the blanket 30 and the platen 32 are held against the face plate 20c of the pressing head 20 by a mounting frame 34 which includes an upstanding flange 34a of an extent and shape to surround the margins of the electrical heating and padding assembly 12 and the corresponding margins of the pressing head 20 and an inwardly directed flange 34b extending at right angles to the upstanding flange 34a and of an extent to provide adequate support for the assembly 12 contiguous to the edges or margins thereof. Frame 34 is engaged by plural interconnected springs 36 of the type generally employed for securing paddings to the pressing head 20 and firmly seats the electrical heating assembly 12 against the pressing head 20.

Provision is made for controlling the heat produced by the embedded heating elements or resistance wires 30a to provide the desired working temperature at the work-contacting face 32a of the platen 32. In this illustrative embodiment, and as shown in FIG. 1, a heat-sensing element, such as a thermistor 38, is interposed at any convenient location between the heating blanket 30 and the platen 32. The heat-sensing element 38, which is conventional and requires no further description, is employed to feed information to a modulating type of electrical temperature control which can be set by the operator to any desired working temperature. The modulating temperature control increases and reduces the voltage fed to the heating elements or resistance wires 30a of the heating blanket 30 in accordance with the corresponding increases and decreases of working temperature. As seen in FIG. 9, the heating element or elements 30a may be connected to the modulating type of temperature con-

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trol 40 which in turn is connected to an alternating current power supply 42, with the temperature sensing element or thermistor 38 being connected to the control 40 to constantly modulate the voltage being applied from the power supply 42 to the elements 30a. A typical modulating type of electrical temperature control which may be employed in accordance with the present invention is commercially available from Syracuse Electronics Corp. of Syracuse, New York, and is designated as model TC-825. Since various types of temperature controls are commercially available for use in the instant application, further description is dispensed with in the interest of brevity.

Reference will now be made to FIG. 4 for a description of a somewhat different arrangement for mounting the electrical heating and padding assembly on the movable pressing head 20. Since the details of this assembly are substantially the same as previously described, corresponding reference numerals as part of a "100" series will be applied to this illustrative showing and the description will be confined to the new or added constructional features.

In this embodiment, the metallic platen 132 is provided with an integral marginal extension 132b which is of an extent such that it may be turned upwardly about the margins of the assembly 112 and into contact with the adjacent margins or rim of the pressing head 20 thereby functionally replacing the need for a separate mounting frame 34. The upstanding marginal extension 132b of the metallic platen 130, which in the first instance is fabricated of a relatively thin-gauge metal (such as aluminum sheet), can be readily bent to the desired right-angle position and is attached to the pressing head by the plural interconnecting springs 136 which are of generally known construction and arrangement. In this embodiment, a marginal portion of the resilient pad or cushion 128 is removed to provide a corresponding space for an elastomeric marginal seal 144, as of silicone foam, which is placed in compression between the blanket 130 and the face plate 20c of the pressing head 20 incident to engagement of the springs 136 over the pressing head 20. The presence of the compressed marginal seal 144 precludes steam leakage from the margins of the assembly 112 and assures that the steam from the pressing head 20 will be fed through the work-contacting face 132a of the platen 132 to the work.

Referring now specifically to FIG. 5, there is shown a still further embodiment of the present invention wherein like reference numerals again have been applied to like parts, but as part of a "200" series. In this embodiment, the platen 232 is provided with an integral marginal extension 232b similar in construction and purpose to the marginal extension 132b. However, in lieu of employing a separate marginal seal 144, an integral marginal extension 230f of the electrical heating blanket 230 is provided which is of reduced cross section as compared to the main portion of the blanket and is wrapped upwardly about the margins of the assembly 212 to provide a seal thereabout. The integral seal 230f is placed in compression against such margins and the corresponding margins or periphery of the pressing head 20 by the biasing effect exerted from the marginal extension 232b of the platen 232 and the springs 236. One practical construction for forming the integral sealing extension 230f is illustrated in FIG. 7 wherein there is shown an extension formed by cutting away one of the fabric layers and the corresponding half of the elastomeric body. This provides an integral extension which is sufficiently flexible to be bent into a right-angle position, as is illustrated in FIG. 5.

Referring now to FIG. 6, there is shown an embodiment demonstrating further features of the invention wherein like parts have been designated as part of a "300" series. In this embodiment, the resilient pad or cushion 328, the blanket 330 and the platen 332 are con-

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structed substantially in the same manner as illustrated in the previous embodiments, but there is provided a compressible marginal seal 344 of elastomeric material which surrounds the pad 328 (as did the seal 144 in the embodiment illustrated in FIG. 4). However, in lieu of employing the integral extension 132b of the platen 132 to attach the heating assembly 312 to the pressing head 20, there is provided a marginal mounting member or rim 334 of U-shaped cross section which includes opposed leg sections 334a, 334b interconnected by a bight section 334c. The leg section 334a underlies the heating and padding assembly 312, while the leg section 334b overlies the corresponding margin of the head 20, with the dimension of the bight section 334c being selected such as to place the elastomeric seal 344 in compression. The mounting member or rim 334 may be of a split construction to facilitate its attachment to the pressing head 20.

Finally, referring to FIG. 8, there is shown on a fragmentary and enlarged scale (with parts progressively broken away) the successive layers which make up each of the electrical heating and padding assemblies heretofore described. Accordingly, corresponding reference numerals have been applied in accordance with those employed in connection with the embodiment illustrated in FIG. 4. In this showing the relatively small size of the perforations in the metallic platen 32 are seen as compared to the perforations or apertures 30e in the blanket, it being appreciated that there are a large number of perforations in the platen 32 which fall within the outline of any one aperture 30e in the blanket 30.

In practice, it is possible to construct any one of the electrical heating and padding assemblies to be sufficiently thin to avoid superheating the top steam which passes from the pressing head 20 through the assembly to the work such that the desired conditioning and mellowing of the fabric or garment may be attained in the presence of the relatively high temperatures which are established and maintained for the purpose of permanently creasing the thermoplastic materials. The invention finds application in the permanent creasing of cotton, wool, synthetic fabrics and those constructed of various blends thereof, provided that the fabric in the first instance is either constructed in whole or in part of a thermoplastic material which is capable of being permanently creased or is treated with such thermoplastic material, as by impregnating an appropriate resin into the fabric. In a typical assembly, the resilient cushion or pad may be approximately 1/4 inch in thickness, the heating blanket of even lesser thickness and the metallic platen of even lesser thickness, as of the 26 gauge aluminum having as many as 700 apertures in each square inch of the working area thereof. The electrical heating and padding assembly, when applied as an accessory to a conventional pressing head, is capable of achieving operating temperatures for permanent creasing and the like in excess of 400° F. The mesh pad serves to fully distribute steam emitted from the perforated head, provides resiliency in the seam area to avoid impressions and glazing of the top surface of the garment (i.e. a pair of pants) and also provides a cushioning effect and assures complete contact of the heating blanket or matrix with the platen and with the work. The heating blanket or matrix serves to provide contact heat between the head and the garment with resulting temperatures in excess of 400° F. which can be accurately preset in accordance with the setting of the conventional thermostatic control. Due to the relatively short length of time that the saturated head steam comes into contact with the blanket there is no noticeable degree of superheating and therefore the steam supply remains suitable for the mellowing of the fabric or garment. Finally, the metallic platen or grid screen contributes to imparting the desired surface properties to the fabric or garment being pressed, without interfering with the requisite mellowing and heating of the fabric or garment.

In the illustrative embodiment, the upper pressing head 20 which is of relatively high mass and corresponding high thermal inertia provides a large reservoir or heat sink which is at an elevated head temperature determined in the first instance by the saturation temperature for the particular steam pressure supplied to the pressing machine. In a typical application, the elevated head temperature of the pressing head would be at approximately 290° F. at a steam pressure of 80 lbs. per square inch. The blanket 30 of the electrical heating assembly 12 is required to provide operating temperatures which are higher than the elevated head temperature, for example, of the order of 325° F. Normally and in the open position of the pressing head 20, the metallic mesh cushion 28 provides good thermal insulation between the blanket 30 and the pressing head 20 until compressed to effectively isolate the lower temperature heat reservoir afforded by the pressing head 20 from the higher temperature blanket 30. In the open position of the pressing machine, the blanket or matrix 30 is actually in an idle condition wherein the modulating temperature control 40 provides sufficient energy as determined by the temperature sensing element 38 to maintain the blanket or matrix 30 at the required operating temperature and make up for whatever heat loss occurs to the atmosphere from the work-contacting face 32. However, when the pressing head 20 closes upon the garment which is at a much lower temperature (i.e. as established by the pre-conditioning of the garment), the work-contacting surface 32a engages the relatively cold surface of the garment and almost instantaneously dissipates the relatively small amount of heat stored within the low mass and low thermal inertia matrix. The modulating temperature control 40 senses this instantaneous loss of heat and will react within a matter of milliseconds to increase the energy supply to the blanket or matrix 30 in order to commence the replenishment of the heat loss by the initial contact with the garment. However, at the same time that the garment is contacted, the cushion 28 (which due to its construction serves as a thermal insulator until compressed) is deformed to a much higher density incident to the high pressure contact between the pressing head 20d and the stationary buck 18. The compressed cushion becomes a much improved heat conductor (as compared to its heat conductivity in the open position of the pressing machine) and instantaneously brings the upper pressing head 20 into good heat exchange relation to the blanket. Thereafter, the pressing head 20 serves as a relatively large heat sink for the electric blanket. Accordingly, the electric blanket is not required to make up heat dissipation by the virtue of its contact with the garment within its own relatively limited response capability, but rather is required to provide sufficient heat to increase the operating temperature from the normal head temperature. In a practical application, with the normal head temperature being 290° F. and the electric blanket being required to maintain a temperature of the order of 325° F., it is only necessary for the blanket to make up the relatively small energy drain represented by the difference temperature of 35° F. Thus, this combination is capable of rapidly responding to the drain represented by physical contact with the pre-moistened or pre-conditioned work which may be at a temperature several hundred degrees lower. It would otherwise be difficult for the relatively low heat energy storage blanket to rapidly satisfy the command and energy drain represented by physical contact the relatively low temperature work, but for the presence of relatively large heat sink which is brought into heat exchange relation when required. Of course, the heat sink is maintained at an elevated temperature close to but otherwise not obtainable without the electric blanket.

The use of the electrical heating matrix which has a relatively low thermal inertia and high response affords precise temperature control as required for processing garments in accordance with the present invention, yet the combination exhibits the necessary heat capacity to

meet the rather drastic demands imposed upon the machine due to physical contact with work at a substantially lower temperature. Most pressing machines, if subjected to the extreme operating conditions herein, would exhibit a relatively long time lag to obtain the operating temperature and/or would overshoot such operating temperature. These shortcomings would render the equipment unsuitable for permanent creasing which should be attained with a relatively short operating cycle and precisely established operating temperature as dictated by the thermal setting properties of the material. The thermally isolated heating matrix satisfies the relatively low demand imposed thereon by temperature loss at the work-contacting surface thereof when in the open position and does not otherwise respond to the temperature demand that might be imposed by the lower temperature pressing head until the latter is required as a heat sink. Thus, in the open position of the pressing head 20, which corresponds to the idle condition of the matrix, there is relatively little heat loss and demand upon the system; but when operating conditions require, the electrical heating matrix 30 is capable of rapidly responding to reestablish the desired operating temperature. When the desired operating temperature is established with the pressing machine in the closed position, the temperature control 40 will modulate the current in direct relationship to the absorption rate of the garment against which the pressing head is contacted to achieve an exceptionally precise control that insures maximum repeatability, from garment to garment, irrespective of the production rate or the idle time between successive closures of the pressing machine.

Although the invention has been illustrated with the electric heating assembly or matrix in confronting relation to the upper or movable pressing head 20, it will be appreciated that the electrical heating assembly may be applied to the stationary or lower buck. For example, a shirt finishing machine appropriate for the permanent pressing of textured fabrics can be constructed wherein the blanket 30 of the electrical heating and padding assembly 12 is placed over the pressing face 18a of the lower buck 18, with nothing more than a fabric covering thereover to avoid the possibility of the worker touching the extremely hot surface. The movable pressing head of such shirt-finishing machine would be of a conventional design, preferably having a textured finish for the pressing surface 20a thereof. In this further embodiment, a controlled amount of superheated steam would be delivered through the shirt from the lower buck to condition the shirt material for the permanent pressing of the textured fabric thereof.

Based upon a consideration of the many advantages afforded by the instant heating and padding assembly, still further applications therefor will occur to those skilled in the art. For example, it may be desirable to combine a fusing step with the permanent creasing operation, as may be necessary in the construction of skirts having heat-sealable waistbands or trousers having cuffs which may be finished by the use of heat-sealable tapes. For such fusing operations, there is a need for exceptionally high temperatures in localized areas. This can be achieved by employing a shaped electrical heating assembly on the lower buck which could take the form of a band positioned and shaped to confront the waistband or top of the skirt, a strip positioned and shaped to confront the trouser cuff or the like. For such heat sealing operations, it would be possible to employ a perforated movable pressing head of conventional design as described and illustrated herein or to substitute in lieu thereof a textured or polished head of the type employed in a shirt-finishing machine.

Although the several illustrative embodiments described herein all contemplate the use of an electric blanket in confronting relation to the pressing surface and in position to make a substantially direct contact with the work, it is also within the contemplation of the invention to

embed the electrical heating assembly within multiple outer layers of padding. This would permit the operator to touch the padding without fear of being burned, yet would achieve the necessary high temperature with relatively low pressure steam if sufficient processing time were permitted for the steam to be saturated or brought to a low level of superheating and penetrated through the garment.

A latitude of modification, change and substitution is intended in the foregoing disclosure, and accordingly it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

What I claim is:

1. In a pressing machine, a stationary buck, a movable pressing head having a perforated pressing face and a steam chamber in communication therewith, a perforated cushion in confronting and abutting relation to said pressing face and constructed to distribute steam emanating from said pressing face, an electric heating assembly in confronting relation to said pressing face for electrically heating work interposed between said buck and pressing head during selective application of steam, and a perforated metallic platen disposed against said heating assembly and providing a work-contacting face, said perforated cushion being fabricated to urge said heating assembly and platen into heat exchange relation with said work.

2. In a pressing machine, a stationary buck, a movable pressing head having a perforated pressing face and a steam chamber in communication therewith, a perforated cushion in confronting and abutting relation to said pressing face and constructed to distribute steam emanating from said pressing face, an electric heating assembly in confronting relation to said pressing face for electrically heating work interposed between said buck and pressing head during selective application of steam, said heating assembly including a perforated blanket of steam resistant electrical insulation disposed against said pressing face and having electrically conductive heating elements embedded therein adapted to be connected to a source of electrical energy and a perforated metallic platen disposed against said blanket and providing a work-contacting face, said perforated cushion being fabricated of a resilient mesh and urging said heating assembly and platen into heat exchange relation with said work.

3. In a pressing machine including a pressing head having a pressing face, the improvement comprising an electrical heating and padding assembly in confronting relation to said pressing face for electrically heating and pressing a garment against which said pressing heat is brought to bear, said assembly comprising a resilient pad confronting and abutting said pressing face, a perforated blanket of electrically insulating and steam resistant material disposed against said pad and having electrical heating elements embedded therein and a perforated platen disposed against said blanket and providing a garment-contacting face, and mounting means engaging said assembly and including springs for releasably securing said assembly to said pressing head.

4. A pressing machine according to claim 3 wherein said mounting means includes a frame surrounding the margins of said assembly and said springs are operatively connected to said frame for urging said frame against said assembly to hold the same in contact with said pressing head.

5. A pressing machine according to claim 4 including a marginal seal extending about said pad to provide a steam seal thereabout.

6. A pressing machine according to claim 5 wherein said marginal seal is fabricated of a compressible elastomer which is interposed between said pressing face and said platen and compressed therebetween by the action of said springs.

7. In a pressing machine including a pressing head having a pressing face, the improvement comprising an electrical heating and padding assembly in confronting relation to said pressing face for electrically heating and pressing a garment against which said pressing head is brought to bear, said assembly comprising a resilient pad confronting and abutting said pressing face, a perforated blanket of electrically insulating and steam resistant material disposed against said pad and having electrical heating elements embedded therein and a perforated platen disposed against said blanket and providing a garment-contacting face, and mounting means engaging said assembly for releasably securing said assembly to said pressing head.

8. A pressing machine according to claim 7 wherein said mounting means includes a frame surrounding the margins of said assembly and springs operatively connected to said frame for urging said frame against said assembly to hold the same in contact with said pressing head.

9. A pressing machine according to claim 7 wherein said mounting means includes an integral marginal extension of said platen and springs operatively connected to said extension for urging said assembly into contact with said pressing head.

10. In a pressing machine, a stationary buck, a movable pressing head establishing a heat reservoir, a cushion in confronting and abutting relation to said pressing head, an electric heating assembly in confronting relation to said pressing head for electrically heating work interposed between said buck and pressing head, said cushion being fabricated of a resilient and compressible mesh providing thermal insulation between said pressing head and said heating assembly, said cushion being compressed in response to engagement of said pressing head with said buck to reduce said thermal insulation and correspondingly increase the heat exchange between said pressing head and said heating assembly.

11. In a pressing machine, a stationary buck, a movable pressing head of relatively large mass and high thermal inertia, an electric heating assembly in confronting relation to said pressing head of relatively low mass and low thermal inertia for electrically heating work interposed between said buck and pressing head and means interposed between said pressing head and said heating assembly providing thermal insulation therebetween which is substantially decreased when said pressing head is brought into engagement with said buck.

12. In a pressing machine, a stationary buck, a movable pressing head of relatively large mass and high thermal inertia, an electric heating assembly in confronting relation to said pressing head of relatively low mass and low thermal inertia for electrically heating work interposed between said buck and pressing head, means interposed between said pressing head and said heating assembly providing thermal insulation therebetween which is substantially decreased when said pressing head is brought into engagement with said buck, a power supply, temperature-sensing means arranged to sense the temperature of said heating assembly, and means controlled by said temperature-sensing means and in controlling relation to said power supply for regulating and controlling the working temperature of said heating assembly, said pressing head providing a heat reservoir which is brought into improved heat exchange relation with said heating assembly when the latter is brought into contact with the work.

13. In a pressing machine, a stationary buck, a movable pressing head providing a heat reservoir at an elevated temperature, an electric heating assembly in confronting relation to said pressing head for electrically heating work interposed between said buck and said pressing head, a cushion interposed between said assembly and said pressing head and constructed to provide thermal insulation between said assembly and pressing head until said

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cushion is deformed, a power supply, temperature-sensing means arranged to sense the temperature of said assembly and to establish an assembly temperature substantially independent of the elevated temperature of said heat reservoir, and means controlled by said temperature-sensing means and in controlling relation to said power supply for regulating and controlling said assembly temperature, said cushion being deformed when said pressing head is brought into contact with said stationary buck to reduce the thermal insulation afforded by said cushion such that said heat reservoir is in improved heat transfer relation to said assembly to aid in replenishing the heat dissipated by said assembly.

14. In a pressing machine, a stationary buck, a movable pressing head having a perforated pressing face and a steam chamber in communication therewith and providing a heat reservoir at an elevated temperature, an electric heating assembly in confronting relation to said pressing face for electrically heating work interposed between said buck and said pressing head during selective application of steam, said heating assembly including a perforated blanket of steam-resistant electrical insulation disposed against said pressing face and having electrically conductive heating elements embedded therein adapted to be connected to a power supply, a cushion interposed be-

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tween said blanket and said pressing head and constructed to provide thermal insulation between said blanket and pressing head until said cushion is compressed, a power supply connected to said heating elements, temperature-sensing means arranged to sense the temperature of said blanket and to establish a blanket temperature substantially independent of said heat reservoir, and means controlled by said temperature-sensing means and in controlling relation to said power supply for regulating and controlling said blanket temperature, said cushion being compressed when said pressing head is brought into contact with said stationary buck to reduce the thermal insulation afforded by said cushion such that said heat reservoir is in improved heat transfer relation to said blanket to aid in replenishing the heat dissipated by said blanket.

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