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PADDING

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FIG. 1

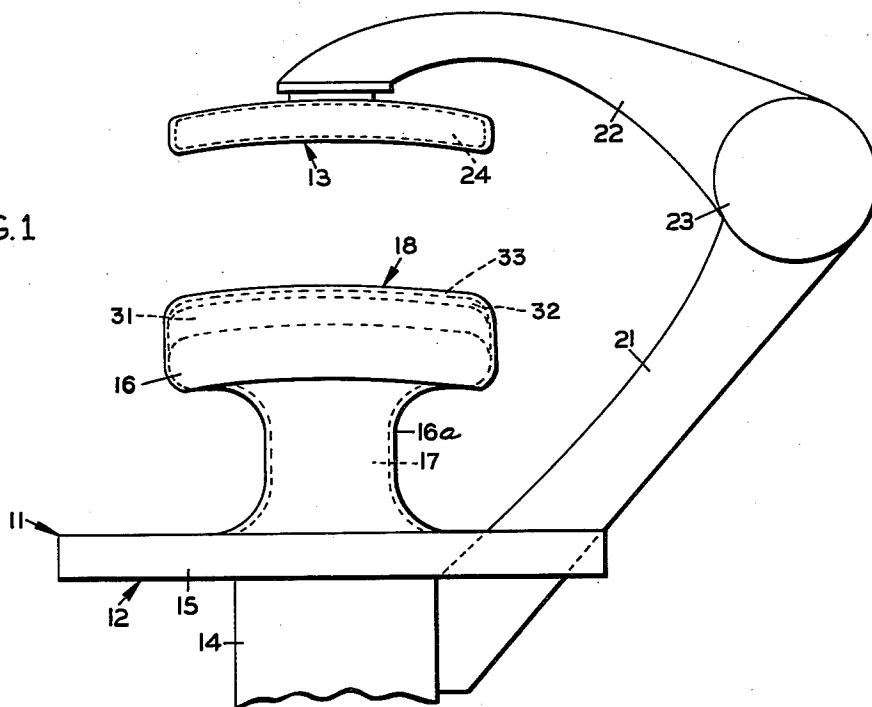
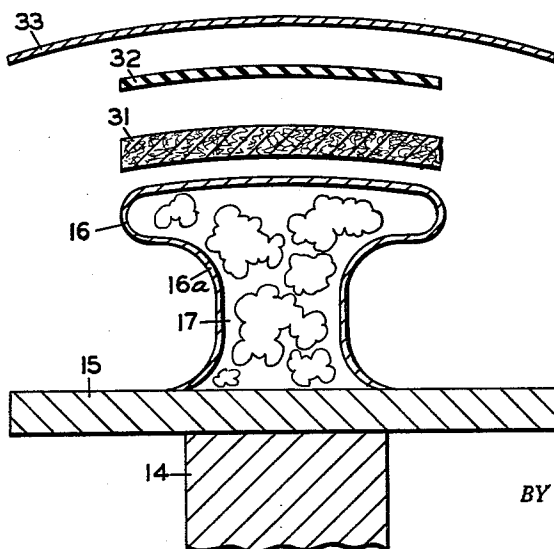


FIG. 2



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1

3,105,313
PADDING

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The invention disclosed and claimed in this application relates to laundry pressing machines for pressing garments and other kinds of fabric and to pressing pads therefor.

Such pressing machines have usually been constructed consisting of a bottom table or ironing board which is covered with a padding material and is commonly known as a "buck" and a clamping head designed in form and size to conform to the buck when clamped down on the fabric to be pressed. Assuming that the fabric is already moist as is usually the condition of laundered fabrics no steam is supplied to the garments. Therefore, both the head and buck are imperforate. Both are usually hollow and filled with heated vapor or gas such as steam to heat such head and buck in order to aid in the drying and pressing process. Sometimes, however, the head is heated electrically. Both head and buck are usually heated to a temperature of 328° F.

The buck of such machines is covered with a resilient pad in order to supply an even, firm pressure to the fabric or material being pressed, to prevent the breaking of buttons, zippers or other metal or similar attachments thereto, to prevent shine, to prevent cutting of the fabric, and to insure an even pressing operation where the material is irregular in thickness.

In the past, various materials such as cotton, asbestos, metal wool, glass wool, rubber and sundry synthetic fibers have been used to form such pads. Such materials may be used alone or used in combination with springs. All of these materials have some merit, but each also has definite limitations. Cotton burns up or deteriorates very, very quickly. Pads of nylon or other synthetics last longer than cotton, but nevertheless deteriorate in a relatively short time. Asbestos packs down rapidly. Glass wool breaks and powders. Metal wool needs a special covering to provide a surface smooth enough so that an imprint will not be left in the finished garment. Rubber (both sheet and sponge) was formerly suggested for such padding, but it was found that rubber of ordinary types is quickly deteriorated by the high temperatures used in such machines. It will be readily realized that the ideal padding would possess the following characteristics not combined in any of the materials mentioned above:

A. The ability to withstand 328° F. or more for long periods of time without deterioration.

B. The ability to withstand repeated compression without breaking or crumbling or substantial loss of thickness.

C. The ability to hold the heat which it receives from the buck and/or the head, to thus resist the effect of room air as it cools the padding between pressing operations.

My invention pertains to a padding made of a rubber-like material, to be used alone or in combination with other long-lasting materials to possess these desirable characteristics. This rubber-like material for instance, withstands high temperatures for long periods of time. It withstands repeated compression without injury. It holds heat for relatively long periods. This ability to hold heat is of advantage in many ways. It aids in the customary operation of conventional pressing machines. It also enables me to use unconventional combinations. For instance, assuming for discussion that in the case of a given machine the head is provided with heat supplied

2

by steam conducted to the inside of said head (or is heated electrically) and that the buck is supplied with my improved padding but is not provided directly with heat, it is clear that before operation the padding remains cool. However, during the pressing operation the heat from the head is inevitably quickly transferred by conduction through the fabric being pressed to the buck and to the padding therefor. The retained heat of the padding supplies heat to the article being pressed on the side opposite to the head, just as though heat were initially supplied directly to both sides. My improved padding holds the heat between operations and leads to faster drying. More important practically is the advantage in connection with conventional pressing machines wherein both the head and buck are heated by contained steam (or possibly at times electrically). There my improved padding holds the heat supplied to it and even between pressing operations, when the head is raised, the dried garment removed, and a new wet garment supplied to the buck, the padding on the buck remains hot. This leads to quicker drying and thus to more efficient operation.

Objects

One of the objects of my invention therefore is the provision of a new and improved pressing machine.

A further object of my invention is the provision of new and improved padding for pressing machines.

A further object of my invention is the provision of a new and improved pressing machine padding that will have superior heat retaining capabilities to any padding previously used.

A further object of my invention is the provision of a new and improved pressing machine padding that has a greater lasting resistance despite higher temperatures than any other resilient material known.

A further object of my invention is the provision of a new and improved pressing machine that will have an impervious padding capable of withstanding the high temperatures incurred in use; that will be able to dissipate the moisture remaining in the fabric being pressed; that will have sufficient resiliency either alone or together with the associated parts of the padding to conform to the irregularities of the articles or other fabric being pressed; and that will have wearing qualities of exceptionally long life.

Another object therefore is to prolong the life of pressing machines and their paddings by providing a padding which is highly resistant to the deteriorating action of heat and moisture, my padding being capable of resisting high temperatures of as much as 500 to 600° F.

A further object is the provision of a padding having a low compression set so that it will not pack down and can be made with a low durometer number.

A further object is the provision of a padding that will be desirably soft and at the same time have high wear resistance.

Further objects and features of the invention will be apparent from the following specification and claims and from the accompanying drawings.

For a clearer understanding of the invention and its objects, I have shown in the accompanying drawings particular embodiments of the invention for the purpose of illustration and have described these embodiments in the following description.

Drawings

In the drawings illustrating embodiments of my invention:

FIG. 1 is a fragmentary view in elevation illustrating a pressing machine which is one embodiment of my invention; and

FIG. 2 is a view in vertical section of the pressing machine of FIG. 1, the pad being separated from the buck and into its component parts (or expanded) in order to show and explain the construction more clearly.

Referring now especially to FIGS. 1 and 2 for a detailed description of the embodiment of my invention illustrated therein, it may be seen that I have shown in FIG. 1 a pressing machine 11 having a lower assembly 12 and a head 13. The lower assembly 12 comprises a base or stand 14, a platform or table 15, and a buck 16 mounted on a pedestal 16a. Means are provided for supplying heated steam under pressure to the hollow 17 of the buck 16 and the pedestal 16a in order to heat said buck.

Alternatively and more conventionally the hollow of the buck 16 may be separated from the hollow in the pedestal 16a and steam supplied to the hollow of the buck 16 by pipes extending through the hollow of the pedestal 16a. Such an arrangement is preferable both from a safety and an expense standpoint, but inasmuch as such modification is not at the heart of my invention it is not believed necessary to show this modification. The buck 16 is covered by a pressing pad 18 later to be described in detail.

The dimensions of the pedestal, buck, head, etc. may be varied as desired inasmuch as the drawings are not made to scale and inasmuch as the pedestal, buck, etc. are not at the heart of my invention.

The base 14 carries a fixed arm 21 on which a pivoted arm 22 is supported on a pivot as at 23. The arm 22 carries the head 13 on the outer end thereof. The head 13 is hollow and means are provided for supplying heated steam under pressure to the hollow 24 of said head 13.

The pad 18 includes a layer 31 of resilient fibers. These resilient fibers may be any resilient fibers including those mentioned above, as for example, metal wool. As an important part of my invention I provide a layer 32 of silicone rubber. This silicone rubber has the advantages set out above in that it withstands a high degree of temperature for long periods of time without deterioration, it withstands repeated compression without breaking or crumbling or substantial loss of thickness, and it holds heat for relatively long periods. Finally, there is shown a cover 33. The resilient fibers of layer 31 may be metallic wool such as steel wool, felted steel shavings, asbestos fibers, fiber glass, cotton padding, wool fibers, nylon or other synthetic fibers, etc. The silicone rubber of layer 32 is a synthetic rubber or plastic, the molecules of which are long chains of silicone-oxygen units with two methyl groups attached to each silicon atom. It retains its elasticity at temperatures as high as 300° C. (572° F.) and stays elastic at temperatures as low as -50° C. (-58° F.) and is unaffected by ozone, corona, or ultraviolet light. It has superior heat retaining capability to any other material known to have been used for pressing machine padding. It has a lasting resistance, despite high temper-

atures, not found in any other resilient material. It has a low compression set and will not pack down. The cover 33 may be of cotton or nylon, or any other suitable material.

In FIG. 2, the layer 31 is much thicker than the sheet of silicone rubber which forms layer 32. The sheet 32 is flexible and resilient. However, it is firmer than the layer 31 and has a smooth surface which does not leave undesirable impressions on the fabric being dried and pressed. The cost of the fibers of layer 31 is much less for equal volume than would be the cost of an equal volume of silicone rubber so that the combination is much less expensive than the same volume of silicone rubber. Where cost is not a factor, a thicker sheet of silicone rubber could replace both layer 31 and layer 32.

Operation

The pressing machine 11 is operated in the same way as such machines are usually operated. The article or fabric to be pressed is placed on the pressing pad 18 and the head 13 is pressed firmly down upon the article or fabric. The combination of heat and pressure serves to dry the article or fabric substantially instantly evaporating the moisture therefrom and to press it to a desirable smoothness. The padding 18 absorbs any irregularities in the article pressed caused by seams, hems, buttons, zippers, etc. The layer of silicone rubber 32 absorbs and holds a great deal of the heat supplied to it making such heat available to the next article or fabric pressed. At the same time by reason of its smooth surface it avoids leaving impressions on the fabric or article being pressed.

It is to be understood that the above described embodiments of my invention are for the purpose of illustration only and various changes may be made therein without departing from the spirit and scope of my invention.

I claim:

1. For use with a pressing machine having a stationary buck and a movable head, a padding comprising a layer of metallic fibers, a layer of silicone rubber and a cover therefor.
2. For use with a pressing machine having a stationary buck and a movable head, a padding comprising a layer of metallic wool, a layer of silicone rubber and a cover therefor.
3. For use with a pressing machine having a stationary buck and a movable head, a padding comprising a layer of steel wool, a layer of silicone rubber and a cover therefor.

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