PRESSING EQUIPMENT FOR PILE FABRICS

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The present invention relates to equipment designed for the pressing of pile fabrics and is concerned primarily with equipment which will result in a highly improved finished appearance of the pressed fabric.

At the present time there are many garments and other articles which are made from napped or pile fabrics. Velvet is a good example of a cut-pile fabric which is widely used in articles of apparel. Such garments assume an untidy appearance after periods of wear and it is necessary from time to time to restore their neatly finished appearance by a pressing operation. Obviously, the conventional ironing board and steam iron is not adapted to the pressing of such napped or pile fabrics because when pressure is applied between the board and the iron the pile will be flattened out or matted and its characteristic structure and appearance lost.

There have been proposed certain devices for pressing such cut-pile fabrics. The now known equipment of this general nature is characterized as including a pad or board which consists essentially of a canvas base from which upstands a plurality of metallic pins. This surface defined by the pins receives the napped surface of the pile fabric and a steam iron is employed to provide the necessary pressure and heat.

While the arrangement above described is an improvement over the ordinary ironing board, it is still unsatisfactory in many respects. When an iron is applied to the canvas base the metallic pins, being good conductors of heat, quickly conduct this heat to the article being pressed and, unless this heat is accurately controlled, there is danger of marring the garment from excess heat. Then the pins themselves exhibit a tendency to pluck or pierce the fabric with a resulting marring that is highly undesirable. There is also danger of too much moisture collecting on the garment being treated, as the metallic pins themselves have little capillary action or absorbent properties.

With the foregoing conditions in mind, the present invention has in view as its foremost objective the provision of pressing equipment for napped and pile fabrics which is characterized as including a pressing surface that is adapted to receive the napped or pile surface of the article being pressed and which pressing surface is provided by a cut-pile animal fiber fabric.

Wool mohair is a good example of a cut-pile animal fiber fabric which may be employed as the pressing surface. When the napped or pile surface of the article being pressed is placed into engagement with the pile surface of the mohair, the latter serves to properly support the cut pile in its upright or outstanding condition. The cut pile of the mohair enters the interstices between the cut pile of the garment being pressed and due to its being an animal fiber it has relatively low heat conductivity as compared to metal. Thus any heat transmission from the iron is greatly retarded and the garment protected.

Moreover, the mohair fibers exhibit a capillary action which has a moisture absorbent effect that prevents excess moisture from the steam collecting on the pile surface of the garment being pressed.

While the cut-pile mohair fibers adequately support the napped surface of the garment being pressed, they are of a resilient or elastic nature and can give under excess pressure. Hence, the possibility of plucking or piercing the garment, which is present when the metallic pins are used, is avoided. With the use of a cut-pile animal fiber fabric as the pressing surface of any article of pressing equipment of this general nature, the possibility of plucking, piercing, matting, marring or otherwise defacing the pile of the fabric being pressed is greatly reduced, if not substantially eliminated.

For certain types of pressing operations it is highly important that the steam be confined between the garment being pressed and the pressing pad or board that is employed in conjunction therewith. With this thought in mind, a further object of the invention is to provide, in pressing equipment of the character indicated, a pressing device having a pressing surface provided by wool mohair with a layer of steam-impervious material immediately therebelow. A metal foil such as aluminum foil is a good example of such steam-impervious material which may be positioned immediately beneath the wool mohair. This layer of aluminum foil prevents the dissipation or escape of live steam through the press board or pad and thereby renders more efficient the pressing operation. As a practical matter the steam is actually deflected back into the space between and among the mohair fibers by this layer of metal foil.

For pressing plain flat work a plain substantially flat press board or pad is indicated. An important object of the present invention is the provision in pressing equipment of the character aforesaid of such a press board which consists essentially of a base layer of heavy material such as canvas, a layer of steam-impervious material such as metal foil, a resilient layer which may
be of fibres or foam rubber, and a surface layer of a cut pile animal fibre fabric such as wool mohair.

Certain types of pressing operations require that opposite faces be pressed at the same time. As an example, a hem will have a napped or pile surface on both sides which preferably are simultaneously pressed. For this type of work a press cloth is indicated. Such a press cloth is susceptible of being folded over to accommodate both faces of the work and is also susceptible of being used under conditions in which the iron is applied to the backing surface of the press cloth rather than to the garment.

Thus, a further object of the invention is to provide, in pressing equipment of the type indicated, a press cloth which consists essentially of a surface layer of cut pile animal fibre fabric, such as wool mohair, an intermediate layer of linen crash or comparable fabric, and an upper layer of linen crash or equivalent fabric. These three layers are assembled as a laminated structure and are preferably joined along one edge only. In use, the top layer of linen crash is moistened and an iron applied thereto. The steam which is created passes through the intermediate layer to the mohair.

Under certain conditions a device which is in the nature of a steam brush is necessary to raise the pile and eliminate shine and wrinkles, this being especially true when the velvet is bruised. Often finger marks and water marks appear and it is necessary to remove these marks and to freshen the pile fabric generally. An important object of the present invention is to provide a steam brush which will fulfill these requirements.

This object is achieved by providing a velvet steam brush, which consists essentially of a surface layer of cut pile animal fibre fabric such as wool mohair and which layer is backed by an upper layer of heavy muslin. The central or intermediate portion of the brush is padded by multiple layers of linen crash with the portions on either side thereof being adapted to be folded up over the padded portion and employed as a grip or handle. In use the multiple-layer crash pad is saturated with water and a hot iron applied thereto to generate steam. The portions on either side of the pad are then folded over to confine the steam and force it into the effective area of the mohair. These folded portions are availed of as a grip or handle and the device used in the manner of a steam brush.

Certain types of work such as sleeves, shoulders, hip lines, Princess lines, silhouette lines, zippered closures and the like involve what is called contour pressing and require a suitably contoured cushion to carry out the necessary pressing operations. With this condition in mind, a further object of the invention is to provide, in pressing equipment of the character aforesaid, a contour cushion which consists essentially of a filled cushion body having an appropriate curvature on its upper working face and a flat base. The flat base is rendered rigid by an appropriate backing, such as a stiff card-board, and is covered with a material such as canvas. This base is provided with a hand hold in the form of a loop or canvas.

The curved surface of the cushion is covered by an underlying layer of steam-impervious material such as aluminum foil, over which is placed a surface layer of cotton or wool felt, with the outer covering being removable and of a cut-pile animal fibre fabric such as wool mohair.

In use this cushion may either be supported on an ironing board or table or the hand held may be availed of and the cushions supported manually in any desired position.

Various other more detailed objects and advantages of the invention, such as arise in connection with carrying out the above noted ideas in a practical embodiment, will in part become apparent and in part be hereinafter stated as the description of the invention proceeds.

The invention therefore comprises pressing equipment for pile fabrics with each piece of equipment characterized as including a pressing surface of cut-pile animal fibre fabric such as wool mohair. Included in this equipment are a press pad, a press cloth, a steam brush, and a contour cushion, all of novel construction.

For a full and more complete understanding of the invention, reference may be had to the following description and accompanying drawings, wherein:

Figure 1 is a side view mostly in elevation, but with parts broken away and shown in section, of a contour cushion that is designed in accordance with the precepts of this invention:

Figure 2 is a bottom plan view of the cushion shown in Figure 1;

Figure 3 is a view in end elevation of the cushion shown in Figure 1;

Figure 4 is a top plan view of the steam brush as folded out flat;

Figure 5 is a view in side elevation, with parts broken away and shown in section, of the brush shown in Figure 4;

Figure 6 is a view in end elevation of the steam brush with the end portions folded over the intermediate padded portion;

Figure 7 is a top plan view of the press pad;

Figure 8 is a side view, mostly in elevation but with parts broken away and shown in section, of the pad shown in Figure 7;

Figure 9 is a top view of the press cloth; and

Figure 10 is a side elevational showing of the pad illustrated in Figure 9.

Referring now to the drawings, and first more particularly to Figures 7 and 8, a press pad is therein illustrated and referred to in its entirety by the reference character P. The press pad P may be of any configuration desired, although for the purposes of this specification it will be assumed that it has the simple rectangular formation illustrated with the side edges covered by binding designated L.

The pad P comprises a base layer 11 which may be made of any appropriate material such as heavy canvas, asbestos, or any fabric which will have the properties required for the base layer.

Immediately above the base layer 11 there is a layer 12 that is intended to be steam-impervious. A metal foil such as aluminum foil is particularly indicated as the material for the layer 12. Over the layer 12 there is a layer 13 which is intended to function as a resilient or filler layer. This layer 13 may be of cellulose, cotton, wool, or the foam rubber illustrated in the drawing. The prime requirement of the layer 13 is that it be resilient. Above the layer 13 there is a surface layer 14, which preferably is of wool mohair. Obviously, other cut pile animal fibre fabrics might be substituted for wool mohair.

The prime requisites of this surface layer 14 are
that it be of a cut-pile which is sufficiently strong to support the pile of the garment being pressed and yet resilient so as to have at least some give. The fibres should be animal fibres because of the capillary absorbent action and also due to its poor heat conductivity.

It is intended that the pad 26 be used by being placed on an ironing board, table or other support with the wool mohair surface 14 in an exposed upper position. The article or garment to be pressed is placed with its napped or pile surface downward in engagement with the wool mohair. The iron is applied to the back of the garment and it is evident that steam will be reflected upwardly and confined by the layer 12 of aluminum foil. The cut pile of the material enters the interstices between the pile of the garment being pressed and offers an adequate though resilient support for these fibres. The capillary action of the wool mohair fibres prevents the accumulation of excess moisture in the pile of the garment.

Referring now more particularly to Figures 9 and 10, a press cloth is therein illustrated and referred to in its entirety by the reference character C. For the purposes of this specification, press cloth C is shown as of rectangular formation, although it may be of other shapes. The important factor is that it have at least one straight edge, as indicated at 15, along which the several layers are joined by the stitchings represented at 16.

The press cloth C comprises a pressing surface 17 which is intended to engage the work and which is of wool mohair or other cut-pile animal fibre fabric. Adjoining this wool mohair 17 there is an intermediate layer 18 of linen crash or its equivalent, and there is an outer layer 19 of linen crash or its equivalent. These several layers 17, 18 and 19 are joined together much in the manner of a book along the edge 15, as indicated at 16.

In use, the garment being pressed is placed on an ironing board with its pile surface exposed upwardly. The outer layer 19 is saturated with water, whereupon the press cloth C is placed over the garment with the wool mohair surface 17 in engagement with the pile surface of the garment and the outer layer 19 in an exposed upward position. The hot iron is applied to this outer layer 19 and steam is generated thereby. This steam passes through the intermediate layer 18 to the wool mohair 17.

It is evident that the cloth C may be folded to accommodate double-faced work.

Referring now more particularly to Figures 4, 5 and 6, a steam brush is therein illustrated and referred to in its entirety by the reference character B. As shown in Figure 4, the brush B in a flattened out condition has a central portion 20 defined by straight side edges 21 and end portions 22 defined by the curved edges 23. Throughout the central portion 20 and the end portions 22 there is an outer working surface of wool mohair such as indicated at 24 in Figure 5. Over this wool mohair layer 24 there is a layer 25 of heavy muslin. The central portion 20 of the muslin 25 is covered by a plurality of layers of linen crash such as is represented at 28. These several layers 26 may be formed by folding a single strip in the manner depicted in Figure 5. Only the end portions of the layers 26 are stitched to the straight side edges 21.

In use, the pad 26 is first saturated with water while the brush is in the flattened out condition depicted in Figures 4 and 5. A hot iron is then applied to the upper exposed surfaces of the pad 26 and maintained in engagement therewith sufficiently long to generate steam. The end portions 22 are now folded up into the position depicted in Figure 6. In this position they are readily gripped by the hand of the user and function as a handle. At the same time, much of the steam is confined and caused to go into the wool mohair of the intermediate surface 20. The device is now used in the manner of a velvet steam brush with the surface of the central portion 20 the working surface that enganges the velvet surfaces which are to be brushed or rejuvenated.

Referring now more particularly to Figures 1, 2 and 3, a contour cushion is therein illustrated and referred to in its entirety by the reference character A. The cushion A comprises a main body or filler 27 which may be of an appropriate fibrous composition such as wool, cotton, cellulose or the like. This filler body A is of appropriate dimensions and from the particular use which is required of the cushion it should be approximately seven inches long, four and one-half inches wide, and three and one-half inches deep. It has what might be called a large or wide end at 28 and a narrower end at 29. It is curved from end to end over the line 30 by an attenuated Hogarth curve with a dipole or depression being formed at 31. It is also curved from side to side, as represented at 32. The curvatures 30 and 32 give in effect an upper curved surface which is particularly suitable for the work required of it.

The cushion A also includes a base surface defined by a piece of canvas 33. Between this canvas base 33 and the filler pad 27 there is a piece of cardboard 34 or a piece of other material having the required property of rigidity and which is included for the purpose of imparting rigidity of a required degree to the cushion.

Extending across the side edges of the bottom of the cushion is a loop or handle 35 which is also of canvas. Only the opposite ends of this loop 35 are attached to the pad, leaving the central portion free for the insertion of the fingers of the user therebeneath.

The upper curved surface of the filler pad 27 is covered by a layer 36 of aluminum foil or other steam-impervious material. Over this layer of aluminum foil there is a surface layer of cotton or wool felt such as represented at 37. A removable wool mohair covering is represented at 38 and is detachably held in position over the upper curved surface by the overlapping corners shown at 39, 40, 41 and 42, and the elastic bands 43, 44, 45 and 46. The elastic band 43 joins the corners 39 and 40. The elastic band 44 joins the corners 41 and 42. The elastic bands 45 and 46 extend between the side edges of the cover and are so positioned as to not interfere with the use of the hand hold 35.

The wool mohair cover 38 is applied with its cut pile in exposed position so that it may cooperate with the velvet or other pile fabric that is to be pressed thereon.

In use, the hand hold 35 may be availed of in manually supporting the cushion in any position required. Obviously the cushion may be placed with its base on a table, ironing board, or other support, under which condition the hand hold will not be used. The action of the wool mohair and layer of aluminum foil is the same as that heretofore described.
While preferred specific embodiments of the invention are hereinbefore set forth, it is to be clearly understood that the invention is not to be limited to the exact materials, mechanisms and devices illustrated and described because various modifications of these details may be provided in putting the invention into practice within the purview of the appended claims.

What is claimed is:

1. In pressing equipment for pile fabrics, a working unit having a working surface made up of a cut-pile animal fibre fabric, and a layer of steam-impervious material therebeneath.

2. In pressing equipment for pile fabrics, a working unit comprising a body member, a layer of steam-impervious material covering said body member, a layer of a resilient filler covering said layer of steam-impervious material, and an outer layer of a cut-pile animal fibre fabric covering said filler.

3. In pressing equipment for pile fabrics, a press pad comprising a base layer of fabric, a layer of steam-impervious material covering said base layer, a filler layer of resilient material covering said filler, and a surface layer of cut-pile animal fibre fabric.

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