April 30, 1940. C. E. HAMILTON 2,199,157

FABRIC TREATING ELEMENT

Filed May 17, 1937

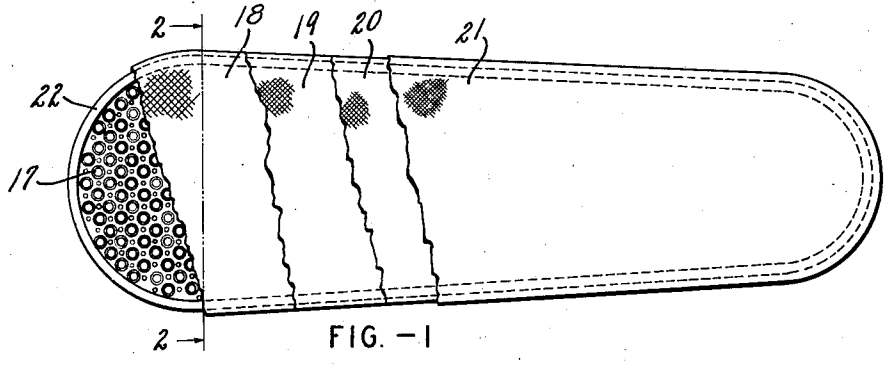


FIG. -1

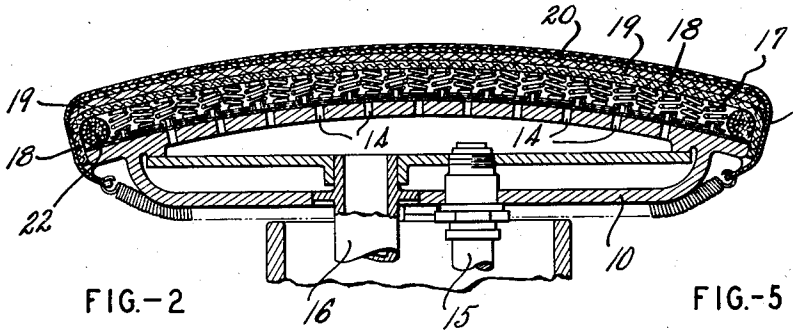


FIG.-2

FIG.-4

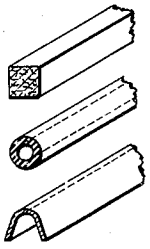


FIG.-5

FIG.-6

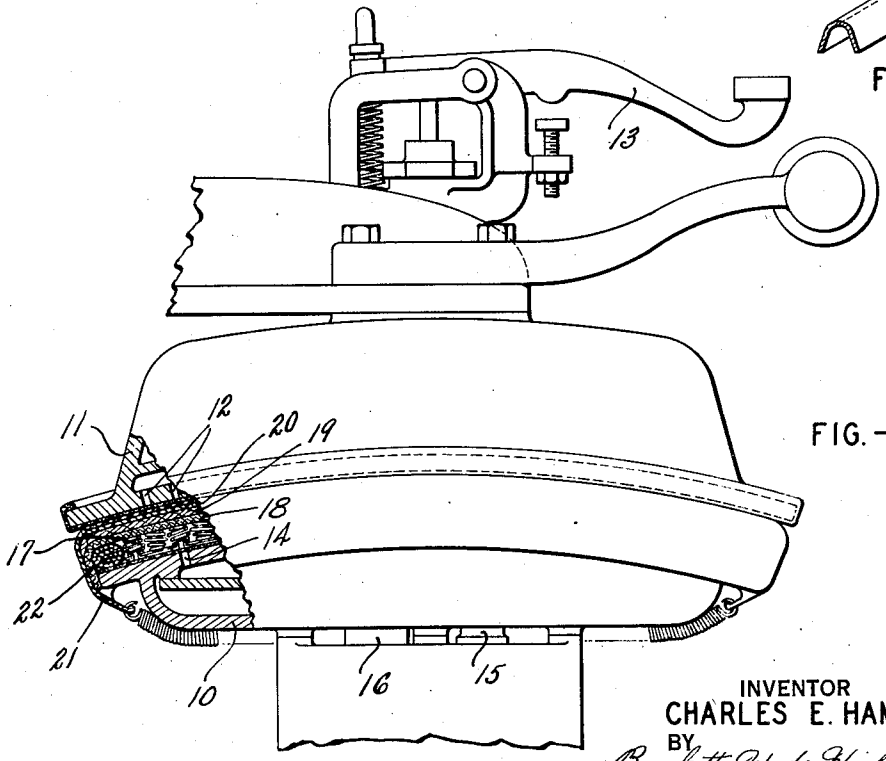


FIG.-3

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FABRIC TREATING ELEMENT

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5 Claims. (Cl. 38—66)

This invention relates to improvements in fabric treating elements and more particularly to an element having a padded area over which the fabric is subjected to treatment involving fluid flow, and a novel arrangement of a sealing strip about the periphery of the padded area adapted to resist fluid flow therethrough.

My invention is particularly adapted to use in pressing machines involving a pair of coacting pressing platens wherein one of the platens is provided with a padded area through which a fluid flow is created in treating the garment or fabric between the platens. Around the padding of such an element I provide a novel strip of sealing material resistant to fluid flow so that a garment or fabric lying on the padded area is subjected to fluid flow through it and the escape of fluid about the periphery of the padding is prevented or greatly restricted.

The action of the sealing strip as described in the preceding paragraph is additionally enhanced if the fluid flow occurs when the pressing elements are engaged, at which time the sealing strip is squeezed between the pressing elements, thus providing additional restriction to leakage of fluid about the periphery of the padded area.

My invention includes the novel arrangement of a pressing element or other fabric treating element, such as a steam table, as shown and described in the drawing and specification and the essential features will be summarized in the claims.

In the drawing, Fig. 1 is a plan view of a member of a pressing machine, parts being broken away to show the construction of the various layers; Fig. 2 is an enlarged sectional view taken along the line 2—2 of Fig. 1; Fig. 3 is a fragmental end elevation of a pair of coacting pressing members equipped with my improved pressing element, parts thereof being shown in section; while Figs. 4, 5 and 6 are fragmental detail views showing modifications of the sealing strip.

In steam tables and pressing machines, fabric of various sorts and outer garments, such as suits, overcoats and the like, are treated with various fluids, including steam and air, in connection with a pressing or ironing of the fabric or a treating of the fabric surface. For example, in the pressing of men's suits of the usual wool fabric, the pressing head is brought down nearly in contact with the garment on the pressing bed and a head steaming device is operated to steam the garment. This may be followed by a patting application of pressure with intermittent application of steam from the head and this may be followed by a steady application of pressure dependent upon the particular type of material. In combination with such an application of pressure or after the head is raised, a vacuum device in the pressing bed may be operated to draw steam and moisture out of the garment or fabric. In treating other types of fabric of a soft nature, such as camel's hair cloth, the press head is not used and in such cases the garment is placed on the bed or table and steam may be applied to it, possibly upwardly through the supporting table. This may be followed by a smoothing operation and by a vacuum operation which draws the moisture from the material down through the supporting table. In all of these applications and others which will occur to one skilled in this art, I provide novel means to prevent the steam, air or other treating fluid from passing laterally through the edges of the padding so as to increase the effectiveness of the fluid acting upon the fabric resting on the padding surface.

I have shown my invention as applied to the pressing bed 10 of a pressing machine having a coacting head 11 and provided with means, not shown, for causing pressing engagement between the members 10 and 11. The pressing head 11 may be hollow and provided with perforations 12 through which steam supplied from a suitable source and controlled by the manually operated valve 13 may be ejected upon the garment or fabric lying beneath it. The pressing bed 10 may also be hollow and provided at the padding supporting surface with perforations 14 through which steam supplied at 15 may be blown upwardly through a garment or fabric resting upon the bed surface. Suction producing means may be connected to the conduit 16 so as to create a vacuum in the pressing bed and cause air flow downwardly through the perforations 14, thus withdrawing steam and moisture from fabric resting upon the pressing surface or creating a current of air downwardly therethrough. It will be obvious, of course, that air under pressure might be blown outwardly through the perforations 14 or other treating fluids might be used if desired.

In the present embodiment the major portion of the area of the member 10 is provided with spring padding 17 which may be covered by a layer of asbestos cloth 18, a layer of knit padding 19 and a layer of canton flannel 20, all of which is covered by the usual cover cloth 21. I so arrange the spring padding or other compressible padding covering the major portion of the pressing area to provide a margin thereabout for re-

ceiving a sealing strip 22. In the form shown in Figs. 2 and 3, this strip is an asbestos rope extending uninterrupted about the periphery of the padding 17 and inclosed with the padding in the superimposed layers of cover material.

Wherever in the specification and claims I have used the term "spring padding," I refer to a layer of padding for a pressing member composed of a number of relatively small, short, helical springs set sufficiently close together over a pressing surface to form a substantially uniform yielding support for material to be pressed, ironed or treated.

If fabric is treated lying upon the surface 21 without the coaction of the member 11, it is obvious that fluid flow about the periphery of the padding is resisted and substantially prevented by the strip 22 upon which are superimposed the close lying layers of cover material, whereas fluid flow through the central or padded portion of the surface is relatively less restricted and flow through the treated fabric is enhanced.

I so arrange the sealing strip 22 with reference to the padding 17 that when the pressing members are engaged as shown in Fig. 3, the strip 22 is squeezed by the action of the engaged pressing members so as to additionally seal the periphery of the padding. The padding in any case is pervious to fluid flow and for pressing operations must also be compressible. The spring padding 17 is of course very readily compressible and while the asbestos rope 22 is not resilient yet it is sufficiently compressible to accommodate itself to the pressing action as shown in Fig. 3.

Other materials which might be used for the sealing strip in place of the asbestos rope 22 are shown in Figs. 4, 5 and 6. Fig. 4 represents a strip of felt or other similar material. This of course would be compressible so as to accommodate itself to pressure between the pressing elements but is not very resilient. Fig. 5 is a rubber strip which might be solid but in the form shown is tubular, adding to the compressibility and resilience of the strip. Fig. 6 is a metallic strip bent to provide resiliency in the direction of pressing action.

Of all the materials described, I prefer the asbestos rope because it resists rapid deterioration when subjected to heat and moisture as is usual in these operations. The felt strip is fairly resistant to both heat and moisture. The rubber strip is resistant to moisture but deteriorates somewhat under the influence of heat. The metal strip is resistant of course to both heat and moisture but is somewhat more expensive and difficult to construct.

It will be obvious that the strip 22 of whatever form, when supplied around the periphery of an area provided with the spring padding, performs the additional function of protecting the cover materials from the abrasive action generally encountered at the edges of spring padding material. In other words the strip 22 is in contact with the layers of cover material at the edges of the member 10 so that the cover materials do not rub against the spring padding.

What I claim is:

1. A fabric treating element comprising a compressible padding and a separate substantially uninterrupted strip of fluid-sealing material having compressibility at least equal to that of said padding and extending entirely around said padding and having its top edge substantially level with the top of said padding and said strip being located close to the periphery of said padding.

2. A fabric treating element as in claim 1 wherein said separate strip is of asbestos.

3. A fabric treating element as in claim 1 wherein said separate strip is of rubber.

4. A fabric treating element as in claim 1 wherein said separate strip is of felt.

5. A padded pressing element adapted for use with a coacting element in a pressing operation involving fluid flow in the padding of said element comprising spring padding, and a separate strip of compressible material extending substantially uninterruptedly around and close to the periphery of said padding, the top of said strip being substantially even with the top of said padding at its periphery so as to be compressed between said elements in a pressing operation, and said strip being adapted to accommodate itself to pressure between the elements and adapted to substantially seal said padding against fluid leakage about its periphery.

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