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A. T. SMITH ET AL

2,214,824

IRONING PAD

Filed March 2, 1939

Fig. 1.

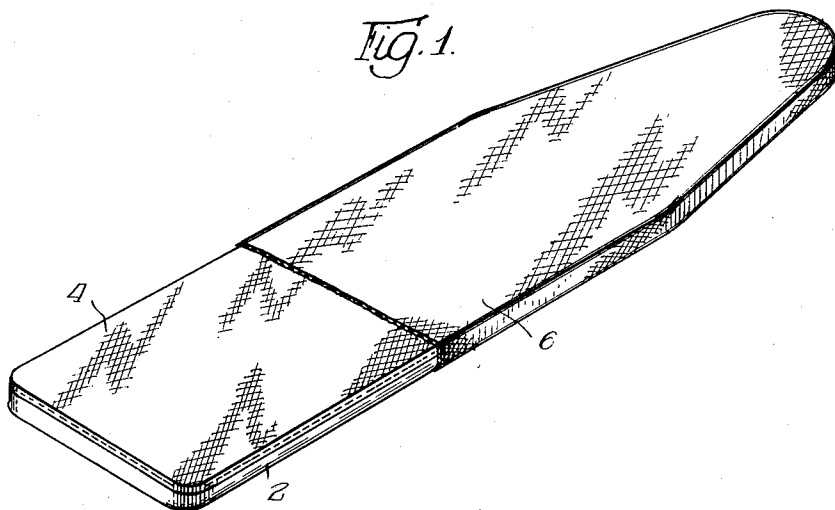


Fig. 2.

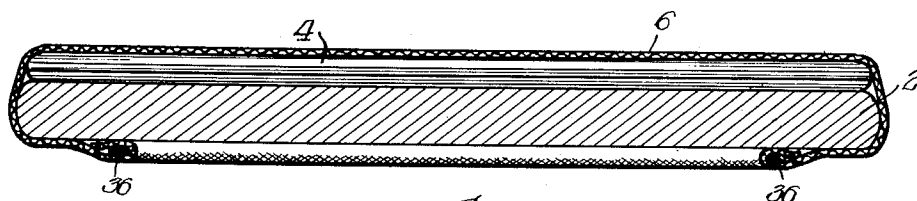


Fig. 3.

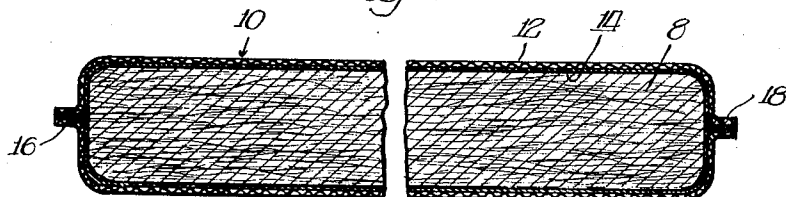


Fig. 5.

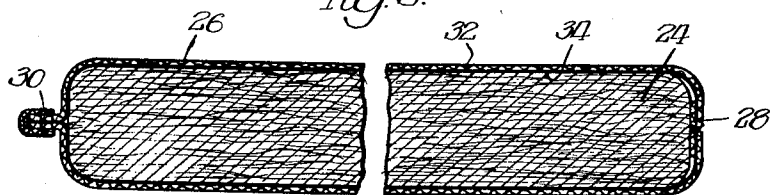
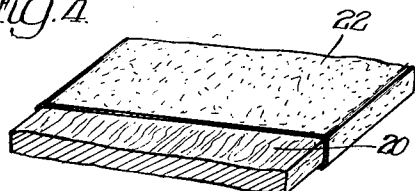


Fig. 4.



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IRONING PAD

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4 Claims. (Cl. 38—140)

The present invention relates to improvements in ironing boards or devices, and more particularly to ironing pads and covers therefor.

Among the objects of the present invention is to provide a novel ironing pad which can be easily manufactured and assembled at low cost and inherently possesses structurally certain features overcoming disadvantages now present in the conventional types of ironing pads.

Strange as it may seem, very little progress has been made in the development of ironing pads to overcome well-known objectionable characteristics of conventional pads as now used. The conventional pad usually comprises a covering of felt, cotton batting or the like, held in place on the ironing board by a covering, which material forms the ironing surface. It is rather generally acknowledged that such a pad is highly objectionable from a number of standpoints, the principal one being that the same loosens up after a few ironing operations, tending to wrinkle and to impart such wrinkles to the clothes being ironed thereon as the iron passes thereover. Furthermore, steam penetrates the pad, loosening the fibrous material and being instrumental in a wadding or bunching of said fibrous material, causing unevenness therein, which in turn leads to uneven ironing of the particular articles thereon. The penetration of the steam and heat also causes compactness of the material forming the pad, which makes a very unsatisfactory ironing surface because of buttons, hooks, etc., which are easily torn from the garments during the ironing operation where the pad is not of sufficient resiliency to receive the same during said operation.

In addition to the above, very little attention has been given to the time factor in the ironing operation. Essentially, the ironing process involves the moistening of the articles to condition the same for the ironing step, consisting of the application of heat and pressure, the heat causing the moisture to evaporate and the pressure being applied to cause a smoothing of the articles during this evaporation step. The completeness of the ironing is in substantially direct proportion to the completeness of the evaporation of the moisture, and in order to be assured that the garment is completely dried, it is oftentimes necessary to continue the ironing step over a substantial length of time. Incomplete evaporation of the moisture results in a treated garment or article which is particularly subject to excessive wrinkling and creasing when worn. In other words, a proper ironing of the garment or

article is dependent upon the complete evaporation of the moisture during the ironing operation and not later after the same has been so treated. With the conventional ironing pads as above described, moisture in vaporized state penetrates the innermost portions of the pad, and after use for a short time is completely saturated with moisture. Successive ironing operations require additional time because of this moisture which penetrates the garment or article, and the proper ironing thereof can be effected only by continued efforts. This factor in an ironing operation has been recognized as leading to the necessity for lengthy applications of heat and pressure to completely dry the garment or article, but up until the present time it has been accepted as one of these conditions surrounding the ironing operation about which nothing could be done, and as a result much time is lost not only in the household but also in those commercial establishments where a large number of garments and articles are continually being ironed, improper ironing of the articles or garments being incidental to such operations.

The present invention therefore contemplates as one of its novel features a moisture-proof covering applicable to a surface of a pad, which can be easily and readily prepared and cut to the proper size and shape for the particular job.

The present invention has proceeded upon the theory that the most objectionable feature of the conventional type of pad has been the absorption of moisture. Accordingly waterproofing of the cover has led to highly desirable results in that the objectionable features of the previously known type of pad have been eliminated and overcome, but other improved constructions herein contemplated by the present development inherently possess additional characteristics which are instrumental in further facilitating the ironing operation.

As one of the desiderata of the present invention, the novel cover construction contemplated for a pad has the property of not only waterproofing the pad, but further provides for the reflection of heat from the iron or other pressing instrumentality into the article or garment being pressed, thus assisting in the evaporation of the moisture therein and accordingly decreasing the time required for the ironing operation. In addition, the character of material of the cover is such that heat is retained from one ironing operation to another, thereby accelerating the ironing operation and causing a more uniform and complete evaporation of moisture from

the beginning to the end of the ironing operation without a lag in the initial stages of the application of heat to the garment or other article being ironed.

- 5 Still a further object of the present invention is to provide a cover for a pad, which not only has the inherent property of waterproofing the pad, but in addition facilitates the ironing operation because of the particular properties of materials used in the construction of the same, such properties being its ability to reflect heat and to hold heat during the interim between successive ironing operations.

- 10 As an additional novel feature of construction, the present invention comprehends as an article of commerce an ironing pad of any desirable material, but preferably fibrous, such as jute or the like, which is enclosed by a cover of suitable construction to give the above desirable results and which thereby forms a complete merchantable article applicable to the top of an ironing board and held in place by any suitable means, for example, a fabric cover embracing the marginal edges of the board and retaining said pad in position.

Other objects, features, capabilities and advantages are comprehended by the invention, as will later appear and as are inherently possessed thereby.

- 30 Referring to the drawing:

Figure 1 is a view in perspective with certain parts cut away to disclose an ironing device incorporating a pad made in accordance with the present invention;

- 35 Figure 2 is a transverse cross-sectional view of the device shown in Figure 1;

Figure 3 is a view in cross-section of a pad made in accordance with the present invention and disclosing one of the preferred constructions for the cover;

- 40 Figure 4 is a fragmentary view in perspective of an alternative construction for a pad contemplated by the present invention; and

- 45 Figure 5 is a view in cross-section of Figure 3 but showing a still further modified construction for the cover thereof.

- Referring now more in detail to the drawing, an ironing device selected to illustrate the invention is shown in Figures 1 and 2 as comprising an ironing board 2 of conventional form for supporting an ironing pad 4 made in accordance with the present invention, which pad is secured to the ironing board by means of a cover 6. The ironing pad 4, as well as the cover 6, are of suitable size and shape to conform to the ironing board 2.

- An embodiment selected to illustrate the invention is shown in Figure 3 as comprising a pad 8 of any suitable material, that disclosed being of fibrous material such as felt, cotton or wool, but preferably of jute or some other equivalent which is resilient in its characteristics to facilitate an ironing operation. This pad 8 of fibrous material is enclosed within a cover 10 of laminated construction, including an outer layer of fabric material 12 and an inner layer of metal foil, such as aluminum foil, 14. Because of the nature of the layer of metal foil, making it undesirable to form the cover as a bag and turning the same inside out, this cover 10 is formed separately of two parts each comprising a layer of fabric and metal foil and the same are connected together by the outwardly disposed seams 16 and 18, thus providing a complete enclosure for the fibrous material 8. Although the inven-

tion contemplates disposing the layers of fabric and metal foil in juxtaposition to one another, cutting the same to proper size and shape, and then stitching to form the seams 16 and 18, nevertheless, because of ease and facility in handling this material, the two layers forming the cover are preferably secured together by some suitable adhesive material, among which are rubber, thermo-plastics and the like.

The metal foil serves to waterproof the pad 8 preventing ingress of moisture into the same, thus eliminating the difficulties heretofore experienced with the conventional type of pad. The metal foil further inherently possesses the ability to reflect heat, which is highly desirable in the particular environment in which the same is used in the present invention. By taking advantage of this heat-reflecting property of metal foil, a more uniform evaporation of moisture takes place throughout the garment or article being ironed and the heat necessary to finally dispose of said vapor is more directly applied and uniformly distributed to all parts of the garment, and particularly the under portions of the same, thus greatly increasing the effectiveness of the ironing operation and materially decreasing the time required therefor. It is of course obvious that this metallic material waterproofs the jute pad, and has as an additional attribute the ability of holding a certain amount of heat between successive operations whereby this heat is available at the initial stages of an ironing operation. All of the above factors contribute to a material decrease in the time required for any ironing operation and greatly increase the effectiveness of said operation to assure a proper ironing of the article or garment.

As an alternative construction, Figure 4 discloses the fibrous pad 20 enclosed within a cover 22, which cover is of laminated construction including a layer of metal foil and a layer of thermo-plastic material, the two being closely and intimately connected and associated with one another, the thermo-plastic material having the property of increasing the tensile strength of the cover, thus increasing the life of the metal foil and adapting the same for use as a cover for an ironing pad of an ironing device without the further use of fabric material. This thermo-plastic material formed as a layer in this laminated cover construction also has the property of becoming soft at ironing temperatures and thereby effectively provides for a smoothing out of wrinkles and indentations which may be caused in the surface of the cover by placing thereon articles having protuberances or the like. This construction is highly desirable and has all of the attributes and characteristics of the previously described assembly.

Various thermo-plastic materials for the laminated cover formation above described are available, the better known being polyvinylite hydrochloride and the product sold under the trade name "Pliofilm," which is understood to be a hydrochloride composition of rubber.

Although the two above described constructions are preferred because of the inherent heat reflecting and retention properties of the metal foil in addition to its waterproofing feature, nevertheless the present invention contemplates an ironing pad wherein the cover is so constructed that the same is waterproof to prevent penetration of the pad, which feature leads to highly desirable results in a construction of this kind. Figure 5 is illustrative of this assembly,

the same comprising a pad 24 of fibrous material, preferably jute, which is enclosed by a cover 26 in the form of a bag constructed from two pieces of treated fabric connected together by the finished seam 28 along adjacent marginal edges, and by the outwardly disposed seam 30 at the other adjacent marginal edges. This covering comprises a layer of fabric material 32 impregnated on its inner face as at 34 with waterproofing material, such as vulcanized rubber, plastic cellulose nitrate compositions, or other thermo-plastic materials, one illustration being pyroxylin, and all of which have the property of adhering to the surface of the fabric 32. In this construction the waterproofing material prevents ingress of moisture into the fibrous pad 24, thus overcoming previous objections to known constructions as clearly pointed out above.

Any of the particular illustrative embodiments shown in Figures 3, 4 and 5 may be used in the assembly of Figure 1 and may be retained in position by the outer fabric covering 6. Figure 2 discloses this covering 6 as being provided with resilient means 36 embraced by the marginal edges of the cover, and which resilient means tends to pull the cover 6 over the marginal edges of the ironing board 2 and the pad 4. It will be noted that the pads, as specifically shown in the illustrations, are formed to provide for reversibility if for any reason the effectiveness of the cover on the exposed ironing surface is not as efficient as desired. Furthermore, the covers of all the illustrative embodiments may be replaced at any time, it being noted that because of the moisture-proof quality of all of them the pad of fibrous material will be in its original condition, thus making it adapted for continued use upon renewal of the covers.

As an additional modification within the purview of the present invention, the ironing device may take the form of a support over which is disposed a layer of metal foil to which is applied a thin layer of fibrous material, such as a pad of cotton or the like, or a fabric of suitable material, or both, providing a suitable ironing medium wherein the metal foil is adapted to reflect the heat from the iron, thus facilitating the ironing operation. In this embodiment the pad or covering, or both, become impregnated with moisture during the ironing operation which, however, is quickly driven out of the layer or layers and evaporated because of the heat reflecting properties of the under layer of metal foil.

Although the above paragraph describes the contemplated modified construction, nevertheless, from a practical standpoint it may be advisable to construct the heat reflecting body or layer of material adjacent the support in the form of laminations, one layer thereof being constituted by a metal foil and another layer thereof consisting of material adapted to reinforce the layer of metal foil and which can be secured to the support, it being understood that under such circumstances the metal foil may or may not be connected to this reinforcing layer. As an example of a suitable laminated structure for the device, the layer of metal foil may be secured

to a layer of paper, or the like, which paper in turn can be readily secured to the support whereby the metal foil is reinforced and at the same time is suitably held in position by the attachment of the paper to the support. The ironing medium may consist of a pad of fibrous material, such as cotton, or if desired an additional layer of fabric may be used to form the ironing surface which at the same time serves to hold the pad in place.

While we have herein described and upon the drawing shown illustrative embodiments of the invention, it is to be understood that the invention is not limited thereto but may comprehend other constructions, arrangements of parts, details and features without departing from the spirit of the invention.

We claim:

1. In an ironing device, the combination of a pad of resilient material, a covering for said pad characterized by being waterproof and having heat-reflecting properties comprising a laminated flexible structure including a layer of fabric to at least one of the surfaces of which is applied a coating of waterproofing and heat-reflecting material embodying metallic material as an element in the laminated structure secured to the surface of said fabric by said waterproofing material.

2. In an ironing device, the combination of a pad of resilient material, a covering for said pad characterized by being waterproof and having heat-reflecting properties comprising a laminated flexible structure including a layer of fabric to at least one of the surfaces of which is applied a coating of waterproofing and heat-reflecting material embodying aluminum foil and a thermo-plastic as elements in the laminated structure wherein the said aluminum foil is secured in adhesive relation to the surface of said fabric by said thermo-plastic.

3. In an ironing device, the combination of a pad of resilient material, and a covering for said pad characterized by being waterproof and having heat-reflecting properties comprising a laminated flexible structure including a layer of fabric to at least one of the surfaces of which is applied a coating of waterproofing and heat-reflecting material embodying aluminum material and a thermo-plastic as elements in the laminated structure wherein the said aluminum material is secured in adhesive relation to the surface of said fabric by said thermo-plastic.

4. In an ironing device, the combination of a pad of resilient material, and a covering for said pad characterized by being waterproof and having heat-reflecting properties comprising a laminated flexible structure including a layer of fabric to at least one of the surfaces of which is applied a coating of waterproofing and heat-reflecting material embodying metallic material and a thermo-plastic as elements in the laminated structure wherein the said metallic material is secured in adhesive relation to the surface of said fabric by said thermo-plastic.

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