Oct. 2, 1951 H. GLATT 2,570,110

IRONING PAD COVER

Filed June 29, 1950

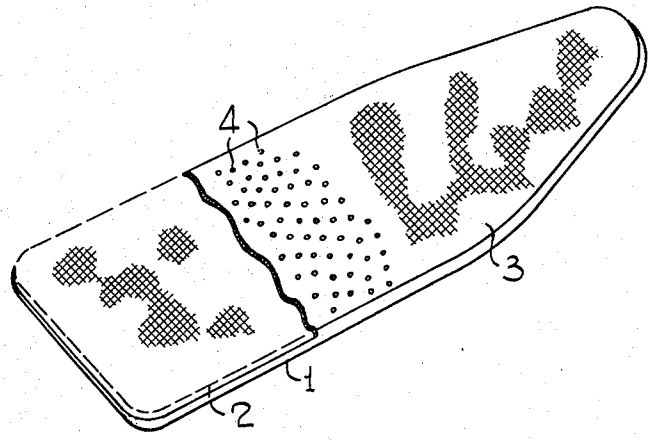


FIG. -1

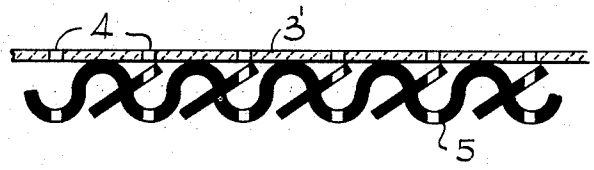


FIG. -2

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Patented Oct. 2, 1951

2,570,110

UNITED STATES PATENT OFFICE

2,570,110

IRONING PAD COVER

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Application June 29, 1950, Serial No. 171,145

2 Claims. (Cl. 38—140)

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This invention deals with ironing pad covers which are placed over ironing pads and upon which clothes are laid for pressing with an iron. More specifically, it pertains to perforated covers coated with certain plastics having a reflective pigment incorporated therein.

Various ironing pads and covers have been described and a number of them have been on the market during the last score of years. Those in the art are familiar with the fact that, prior to ironing, the ironing board is covered with a thick pad of cotton or similar material, upon which is often placed a pad cover comprising a layer of relatively thin fabric, mainly to give a smooth ironed surface free from lint or minimum offset or embossing of the coarse design generally found on the surface of the ironing pad and which design tends to hinder the travel of the iron over the surface ironed. The present invention is specifically directed to pad covers only.

Ironing pads have appeared on the market in the past, the top surfaces of which have been coated with a thermoplastic resin, but ironing directly on such surfaces results in a "drag" effect, caused either by the softening of the resin and/or the building up of localized high temperature and pressure, due to the presence of excessive amounts of steam generated from the water usually employed for moistening the clothes prior to ironing. As a result, the makers of such pads have included in their directions the recommendation to use a cloth cover over the plastic surface during the ironing operation. The incorporation of a reflective pigment in the plastic layer of such pads has not mitigated these difficulties to any great extent.

Ironing pads have been disclosed also in which the pad is perforated to provide venting means for the steam liberated. However, such perforations are not particularly helpful when a porous, e. g. cloth, cover is employed since the porous cover provides sufficient venting itself, and they still do not prevent the "drag" effect if the pad surface is coated with a thermoplastic resin of low stability and softening point, unless a layer of cloth is used over the plastic layer.

The ironing pad cover of the present invention possesses the desirable property of permitting ironing of clothes over the bare plastic surface without entailing any "drag" effect, thus requiring no fabric covering thereon. Furthermore, the pad cover, although perforated, does not tend to emboss on the goods, and there is no scorching, or softening of the plastic layer in spite of the fact that the ironing is done directly thereon.

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The invention will be more readily understood by reference to the drawing in which Figure 1 shows an isometric top view of an ironing board with the pad cover partially removed, while Figure 2 depicts a greatly enlarged cross-sectional view of the ironing pad cover of the present invention. Similar numerals represent similar parts in the various figures.

Referring again to the drawing, numeral 1 represents an ironing board which may be of wood, metal, or the like. On this board is disposed an ironing pad 2 of heavy, loosely-woven, coarse cotton or similar material (which is not the subject matter of the present invention). Over pad 2 is disposed a pad cover 3 which is the subject matter of the present invention.

Pad cover 3 is coated with a film 3' of water-resistant plastic which is thermally stable against decomposition or scorching and softening at ironing temperatures (preferably up to and including 600° F. and even 650° F., which is the highest temperature setting on a household iron), and the surface of which has a high gloss and smoothness, thus providing a low coefficient of friction. The preferred class of plastic for this purpose is a polyvinyl butyral which is preferably calendered onto the cloth surface while in fluid or semi-fluid condition. Other plastics which may be used, though not as desirable, are the higher melting polyvinyl halides such as polyvinyl chloride of high softening point.

Incorporated in the plastic composition is a reflective pigment (preferably metal), such as aluminum powder or flakes, bronze powder, and the like, in amount sufficient to provide a reflective power to the film surface equivalent to 50% to 70% of the heat energy impinging upon the film surface, i. e. with an iron at 500° F., the reflecting surface will be at about 300° F.

This plastic coating 3' is applied to the cloth surface, which latter is preferably cotton drill 5 or other suitable textile material, the plastic acting to fill in the space on the surface around the weave and thus minimize embossing of the weave onto the material being ironed. The plastic-coated cloth 3 is then uniformly perforated with small holes 4 of 0.026''–0.11'' diameter, preferably of about 0.055'' diameter, by means of a power perforating or cut-out machine which resembles a multiple drill press. It has been found that if the holes are made of the size specified, satisfactory steam discharge is effected therethrough without any embossing effect on the material ironed. However, if the holes are substantially smaller, there will be insufficient steam discharge,

while if they are larger, there will be a tendency to emboss the outline of the holes on the material ironed. For most satisfactory steam discharge, it is preferred to maintain an overall perforated (open) area of about 8% on the surface of the pad cover, which holes penetrate both the plastic coating 3' and the cotton drill 5.

It has been found that the heat reflecting pigment incorporated in plastic film 3' aids in concentrating the heat onto the material being ironed and facilitates conversion therein of the water present into steam which is immediately vented through openings 4. If vents 4 were not present, the reflective pigment would do more harm than good, since it would allow local concentration of steam at a much faster rate than in the case when a water-impermeable film 3' were not present. Such high local concentration of superheated steam would result in a "drag" effect and thus would require a cloth covering over the pad surface, the porosity of the covering then acting as a steam venting means.

Such an ironing pad cover as is disclosed herein possesses many advantages heretofore absent in conventional products. It allows pressing of goods directly on the plastic surface and thus enables a considerable saving in time by eliminating the cloth covering, which feature also eliminates the possibility of picking up lint. It also provides a stain-proof surface which can be wiped off and need never be laundered. It provides a waterproof surface during the sprinkling operation prior to ironing, and serves as a protective cover for the pad during storage, thus eliminating the need of a plastic storage cover. Furthermore, it avoids embossing such as that obtained from a cloth whose weave is transferred to the surface of the material being ironed.

In actual tests, under comparable conditions, it has been found that ironing clothes on a pad cover of the present invention is about 20% faster than on a drill cover and over 40% faster than on an asbestos cover. Also, scorching tests showed that whereas it takes about 5 seconds to scorch a cotton drill cover, the scorching time increases to 8 seconds for a pad cover of the present invention under the same conditions, and

even then, the scorching occurs on the underside of the pad cover.

It might be again pointed out that pad covers of the present invention always remain dry no matter how many wet clothes are ironed thereon. Actual comparative tests have shown that such is not the case with drill covers or asbestos covers which soak up residual moisture, the asbestos doing this more so than cotton drill, thus retarding ironing by delaying removal of moisture from the clothes ironed which obviously must be completely dry immediately after the ironing operation. Furthermore, the coating or pigment employed herein is not transferred onto the material ironed. Also, because of the scorch resistance of the pad cover of the present invention, the life thereof is prolonged considerably.

I claim:

1. An ironing pad cover on the surface of which the ironing may be done directly, comprising a fabric textile sheet, a smooth film containing a polyvinyl butyral plastic applied to the upper surface thereof, said plastic being stable against decomposition and softening at severe ironing temperatures, a heat-reflective pigment incorporated in said plastic in an amount sufficient to reflect about 50% to 70% of the heat impinging upon the surface of the pad cover, and uniformly-distributed holes penetrating said fabric textile sheet and said plastic film, said holes having a diameter of about 0.026" to 0.11".

2. An ironing pad cover according to claim 1 in which the holes constitute about 8% of the surface area of the pad cover.

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