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SUPPORTING PAD FOR HOT FLAT IRONS

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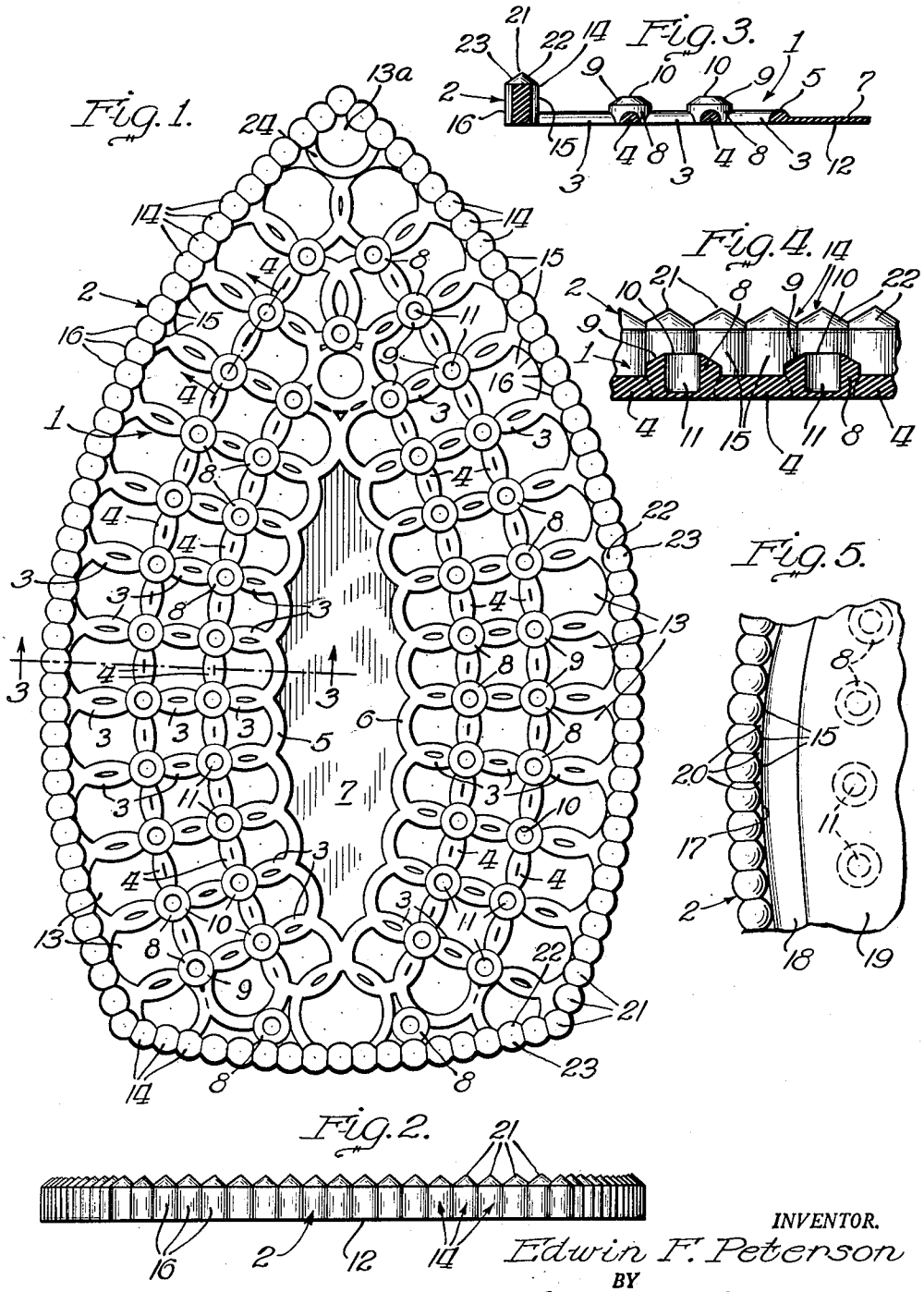

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SUPPORTING PAD FOR HOT FLAT IRONS

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5 Claims. (Cl. 248—117.3)

This invention relates to sad-iron supports in general and more specifically to an ironing board flat iron pad for general use in connection with the ironing operation or while storing a hot flat iron.

One of the main objects of this invention is to provide a utilitarian support for hot flat irons for convenient use by a person while ironing, and which support is constructed of material that has a high coefficient of friction to firmly counteract displacement when positioned upon the fabric surface of a conventional ironing board or upon some other selected surface.

Another object of the present invention is to provide a hot iron supporting pad of small overall vertical thickness to reduce actual flat iron lift to a minimum and to greatly eliminate striking the pad with the edge of the flat iron during placement or removal of the iron.

Another object of this invention is to provide a supporting pad of this character which provides a plurality of individual small area supports for the sole plate of the iron thereby introducing a ventilating and air cooling feature by permitting air flow between the supported flat iron and the pad.

It is a still further object of this invention to construct a flat iron pad with a plurality of cavities that are formed in the pad base and which open upwardly at the iron supporting plane of the pad. Placing the flat iron upon the pad base covers the entrance openings of the cavities sealing the air in each cavity. The heating of the entrapped air by the hot flat iron actually floats the iron upon the pad to provide free non-adherent manipulation of the iron in relation to its supporting pad base.

Another object of this invention is to provide a pad with a generally low height iron supporting structure having a retaining ridge constructed as a plurality of abutment members with cone-like tops. The tops present sloping guide surfaces to aid in retaining or directing a flat iron toward the supporting base area. And the abutment members provide multiple edge contact of the sole plate of a flat iron to break up the continuity of the meeting surfaces of the iron and pad reducing heat transfer by direct contact from the iron to the pad and to permit ventilation between the iron and ridge structure at the points of contact between the iron and ridge.

It is also an object of this invention to provide a pad that is bodily flexible to conform to the contour of the area upon which the pad is used. And further, the pad base is made as a lattice work structure to reduce the weight and bodily volume thereof both for heat dissipation and for reducing the material available for receiving heat from a supported hot flat iron.

Other objects and advantages relating to the hot iron supporting pad of the present invention shall hereinafter appear in the following detailed description having reference to the drawings forming a part of this specification.

In the drawings:

Fig. 1 is a plan view of the supporting pad for hot flat irons comprising the device of this invention;

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Fig. 2 is an edge elevational view of the Fig. 1 construction as seen from the bottom edge thereof;

Fig. 3 is a fragmentary cross sectional view taken substantially as seen along the line 3—3 in Fig. 1;

Fig. 4 is another fragmentary cross sectional view taken substantially as seen along the line 4—4 in Fig. 1; and

Fig. 5 is a fragmentary plan view of the ironing pad with a flat iron partially illustrated as setting thereon.

As seen in Fig. 1, the flat iron pad comprises a base 1 surrounded by a flat iron retaining ridge 2. The base 1 consists of a lattice work structure having a multiplicity of bands 3 extending generally transversely of the pad with a further multiplicity of bands 4 arranged generally longitudinally of the pad base.

The lattice work base terminates centrally of the pad with continuous scroll structures such as 5 and 6 which are connected by a thin wall portion 7 to thereby stabilize the divided lattice work structure as seen in Fig. 1. At the intersection of the bands 3 and 4, a plurality of projections such as 8 may be seen which are connected to the bands and which project upwardly from the general plane thereof. These projections which are best illustrated in Figs. 3 and 4 comprise point supports for the sole plate of a flat iron, and each of the projections 8 terminates in an upper conical top 9 with all of the top edges 10 of such projections being disposed in coplanar relationship with respect to the base of the pad.

In addition, each of the projections 8 is provided with a central cavity 11 which opens upwardly through the entrance edge 10 of each of the projections 8. It should also be noted that the pad seen in Fig. 1 is generally made in the familiar contour of a flat iron with most of the projections such as 8 following this contour pattern in the lattice work construction of the base.

When a flat iron is set upon the base and upon the multiplicity of projections 8, the sole plate of the iron seals the cavities 11 so that the air therein is entrapped as long as the iron remains upon the projections. The contact of the hot iron with the projections heats the entrapped air and creates a floating support for the iron which definitely eliminates any adherence to any portion of the pad and which also induces a feeling of easy removal of the iron from such pad by an operator manipulating the flat iron. It should also be noted that the conical tops 9 of the projections 8 only present a thin circular edge for contact with the iron which prevents any great amount of direct heat transfer to the pad material. Furthermore, the use of the multiplicity of projections suspends a flat iron in spaced relation to the lattice work portion or body of the pad, thus creating an air circulatory system beneath the sole plate of the flat iron which has the effect of cooling the body portion of the pad.

Furthermore, by arranging the major portion of the pad consisting of the base 1 thereof in a lattice work construction, the weight of the pad is reduced as well as the bodily volume thereof, which further promotes heat dissipation and with the use of lesser material less heat is absorbed from the iron into the pad.

The lattice work structure also imparts flexibility to the entire unit whereby such pad may be made to readily conform with a supporting surface upon which the pad is being used. By constructing the hot iron pad of the present invention of a flexible rubber-like material, this pad presents the further inherent quality of having a high coefficient of friction which will prevent slippage of the pad upon the supporting surface carrying the pad. Therefore, in placing a pad of this character and construction upon the fabric cover of an ironing board, such a pad will substantially remain in its placed position under all normal conditions of use in connection with

supporting a flat iron. There are a number of commercially available rubber-like materials possessing the necessary temperature characteristics for the production of these pads, as will be evident by reference to "Chemical Engineers Handbook," published by McGraw-Hill Book Company, Inc., New York, New York, 1950, page 1551, Table 10, entitled "Physical Properties of Synthetic and Natural Rubbers"; literature distributed by Dow Corning Corp., Midland, Michigan, relating to various silicone products such as "Silastic 675" which retains its physical properties at temperatures up to 500° F.; and many other catalogs and handbooks commonly used by those skilled in the art. The bottom **12** of the base and the entire lattice work structure thereof is located in a common plane so that the entire coefficient of friction of this particular surface **12** is presented to the surface upon which the pad is located. Conceivably, the fabric material will also partially, although rather minutely, bulge into the various openings **13** of the lattice work of the pad to further prevent displacement of the unit during the placement or removal of a flat iron therefrom.

The peripheral ridge **2** is constructed of a plurality of abutment members **14** each presenting inwardly and outwardly rounded surfaces **15** and **16** respectively about the edge of the pad. The inwardly rounded surfaces **15**, therefore, provide a multiple of contacting surfaces as best shown in Fig. 5 for engaging the edge **17** of the sole plate **18** of a flat iron **19**. With this arrangement, direct heat transfer to the edge material is also reduced, and a plurality of cavities such as **20** are created to permit vertical air flow from underneath a supported flat iron and upwardly out of the pad structure into the ambient air.

The abutment members **14** terminate upwardly in cone-like ends **21** which present inwardly and outwardly tapering surfaces such as **22** and **23** as shown in Fig. 3. These surfaces help in guiding an iron onto the pad which is usually a motion that is made laterally with respect to such pad. Furthermore, the outwardly tapered portions **23** of the ridge **2** help to prevent striking the pad edge, thus presenting a guiding surface for such iron. It should also be understood that the cone-like portions of the projections **8** will also help to prevent direct lateral striking engagement of a sole plate of a flat iron when the latter is being placed into the hollow formed by the ridge **2** about the base **1**. The entire ridge **2** projects upwardly above the terminal edges **10** of the projections **8** to thereby form an adequate barrier to hold the iron in place upon such projections.

In general, the vertical height of the entire pad is maintained at a practical minimum so that there is very little opportunity for striking of the pad with the flat iron.

This pad may be used during the ironing operation or when storing a hot iron immediately after use. This pad forms a very protective support for the flat iron and also by its ventilated construction fully protects the surface upon which the pad is placed when supporting a hot flat iron, and this holds true whether such iron is being used or cooled prior to storage.

The pad may also be supported or suspended from any hook or nail and preferably from the point thereof wherein one of the openings **13***a* is provided for that purpose as defined by the lattice loop **24**.

Certain changes and deviations from the exact construction shown and described are contemplated without departing from the general fundamental concept of this invention. Such changes and modifications shall, however, be governed by the breadth and scope of the appended claims directed to this invention.

What I claim is:

1. A pad to support a sad-iron comprising an integrally formed flexible body constructed from a flexible rubber-like material capable of withstanding sad-iron operating temperatures, said body comprising an upper surface provided with a plurality of spaced projections to collectively receive a sad-iron thereon, and said body having a continguous and flexibly constituted bottom surface conformable to the normal contour and irregularities of a pad supporting surface, and said spaced projections each comprising a boss member with a conical top encircling a cavity formed in said member, said conical top of each member presenting a feather edge disposed in a position to flatly receive a sad-iron thereon.

2. A pad to support a sad-iron comprising an integrally formed flexible body constructed from a flexible rubber-like material capable of withstanding sad-iron operating temperatures, said body comprising an upper surface provided with a plurality of spaced projections to collectively receive a sad-iron thereon, and said body having a contiguous and flexibly constituted bottom surface conformable to the normal contour and irregularities of a pad supporting surface, and said spaced projections each comprising a boss member with a conical top encircling a cavity formed in said member, said conical top of each member presenting a feather edge disposed in a position to flatly receive a sad-iron thereon, each of said feather edge portions of said members being provided in a plane parallel with said contiguous and flexible bottom surface, and said body having a ridge portion thereon terminating above the level of the feather edges of said members to provide positioning means to orient a sad-iron over the area of said iron supporting members, and said members each being adapted for relative vertical adjustment to abut the underside of a sad-iron through the instrumentality of said flexible body.

3. A pad to support a sad-iron comprising a flexible unitary body constructed from a flexible rubber-like material capable of withstanding sad-iron operating temperatures, said body comprising a base of interconnected flexible lattice-work elements defining a plurality of spaced openings therethrough, said lattice-work elements having substantially plane bottom surfaces for engagement with a support, and a plurality of sad-iron supporting projections integral with said lattice-work elements and extending upwardly therefrom and terminating in substantially a single plane to engage the undersurface of a sad-iron and support the same in spaced relation with respect to said lattice-work base.

4. A pad to support a sad-iron as in claim 3, but wherein said rubber-like material possesses a high coefficient of friction to prevent slippage of said pad on a support.

5. A pad to support a sad-iron as in claim 3, but wherein said sad-iron supporting projections are individually located at the juncture portions of the lattice-work elements and whereby said members are surrounded with the spaced openings of said flexible lattice-work base.

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