April 30, 1940. J. S. IRVINE 2,198,620

PAD FOR PRESSING MACHINES

Filed Oct. 21, 1936

FIG-1-

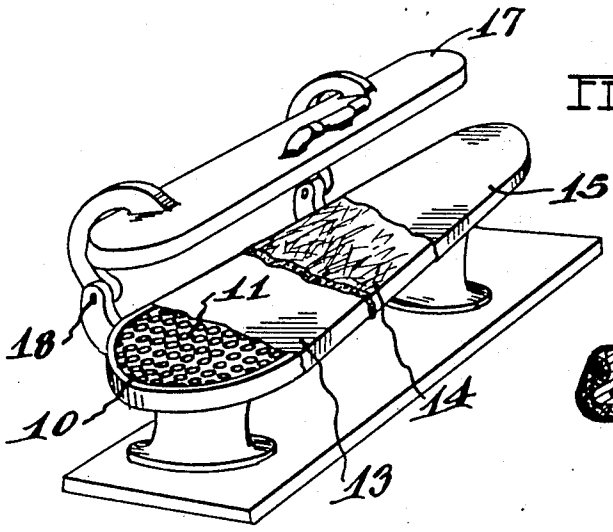


FIG-2-

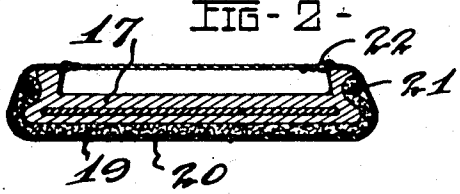


FIG-3-

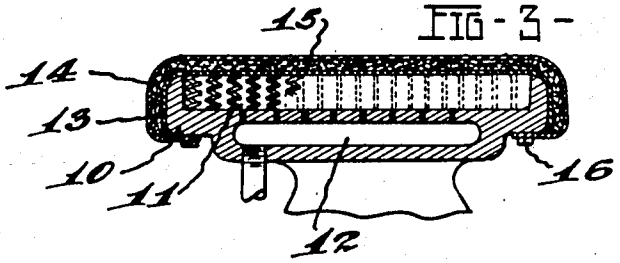


FIG-4-

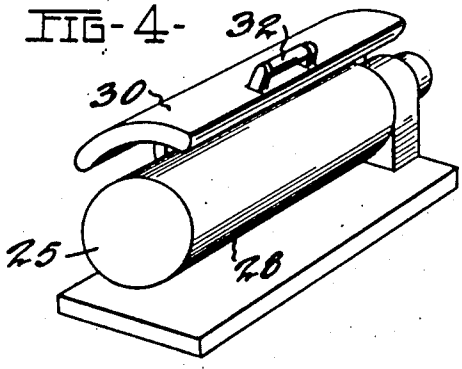
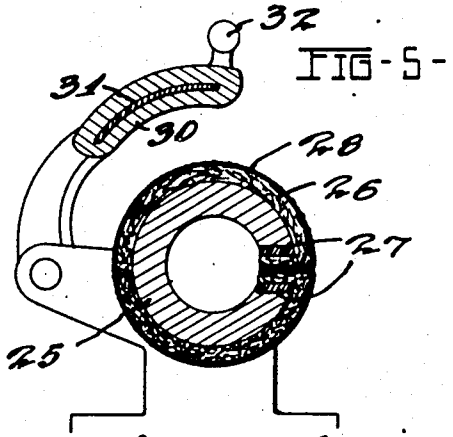


FIG-5-



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PAD FOR PRESSING MACHINES

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1 Claim. (Cl. 38—66)

The present invention relates to improvements in pads and coverings for flat work ironers, pressing machines and mangles, and more particularly to the novel use of pads and fabrics of fibrous glass for such purposes.

An object of the present invention is to greatly prolong the life of pads and covers for pressing machine platens, laundry rolls, ironing boards and mangles or the like, which may be subjected to heat, steam, moisture, and other destructive elements, so as to avoid frequent shut-downs and deterioration of the pad.

Another object of the invention is to provide a padding and covering for these machines which are devoid of fire hazard and which will not rot or weaken under the destructive action of heat, flame, or various reagents such as greases, soaps, or other substances.

Another object of the invention is to provide a pad and covering for these machines which possess great flexibility, high strength, and which have a high permeability for the passage of steam or other gases which may be used.

Other objects and advantages of the present invention will become apparent from the following description taken in conjunction with the drawing, in which:

Fig. 1 is a perspective view of a pressing machine, the cover of which has been partially broken away for the sake of clarity;

Fig. 2 is a cross-sectional end view of the upper platen or shoe of the pressing machine shown in Fig. 1;

Fig. 3 is a cross-sectional end view of the lower shoe or platen of the pressing machine shown in Fig. 1;

Fig. 4 is a perspective view of an ironing mangle incorporating the present invention; and

Fig. 5 is a cross-sectional end view of the mangle shown in Fig. 4.

Heretofore in the use of paddings and coverings for pressing machines, ironers, mangles, or the like, it has been conventional to apply a soft padding material and a covering thereover of various organic materials or fabrics such as cotton, or the like, which have a comparatively short life because of their rapid deterioration owing to the deleterious effects of the heat, steam, and continual rough usage to which the pads and covers are subjected. Moreover, the outer coverings were not effectively insulated from the hot steam heated ironers or platens but made a direct contact with these hot metal portions.

The present invention provides paddings and fabrics of fibrous glass for these laundry machines. It has been found that fibrous glass has many advantages over the conventional pads and fabrics of the prior art. Fibrous glass may be drawn by various methods into long fine fibers which are extremely flexible and even stretchable to a certain degree. It is also possible to form interfelted masses or mats of these fine fibers, these mats being strong and flexible and possessing a high degree of resilience and permeability. The individual fibers in these fabrics or mats are extremely strong, having been measured at tensile strengths of several hundred thousand pounds per square inch. In addition, the glass forming the fibers is not injured, weakened, or destroyed by the heat, steam, flames or various chemicals to which these fabrics or pads may be subjected. I have found, therefore, that fibrous glass forms an excellent pad and covering material for these laundry machines.

When long fine glass fibers are laid into a mat, it is possible to arrange all the fibers so that they all lie on top of one another in more or less criss-cross relationship extending parallel to the face of the mat. A web of this characteristic has been found to have a high degree of resilience and yieldability in the direction of the thickness of the mat, and a high degree of strength and resistance to deformation in any other direction. Moreover, if a mat of this type is compressed or flattened out due to pressure being exerted on the mat, as for example, during the pressing of a garment, it will yield to all the irregularities of the garment, and when the pressure is removed, the mat will immediately spring back and resume its original fluffy condition. For this reason, mats of this character are excellently suited to pressing machines, mangles or the like, as noted hereinabove.

Moreover, mats and fabrics of glass wool are exceedingly strong and elastic and do not require a filling agent or binders to lend permanence or resilience to the mat. Apart from incidental coating materials such as lubricants or the like upon the individual fibers to prevent mutual scratching between the fibers, the fabrics or mats do not require filling substances between the interstices of the fibers. On the contrary, these interstices are preferably left open to increase the permeability of the mats or fabrics.

Referring more particularly to Figs. 1 and 3, reference character 10 designates a steam heated platen commonly used in the laundry industry. Multiple springs 11 are mounted at the top of the platen to provide resilience and uniform yieldability over the surface of the platen. A steam

chamber 12 is provided underneath the springs to admit steam to the top of the platen through the open passages between the springs 11. A suitable covering 13 is provided over the multiple springs 11. This is preferably a fabric made of glass wool, although other fabrics, of course, such as muslin, or the like, may also be used, these latter fabrics, however, requiring constant replacement. Over the top of the cover 13 I have provided a pad 14 of glass wool. This fibrous glass pad 14 is preferably of sufficient thickness to provide a relatively soft base or backing and to provide sufficient flow of movement and compressibility in the material to take up the irregularities in the garment being pressed, and yet rigid enough to establish sufficient contact and to assure uniform pressing over the entire area to be pressed, as for example, trouser seams, pockets, buttons, or other humps in the garment.

The glass wool pad 14 overlying the metallic platen 10 or the springs 11 serves not only as a take-up pad for irregularities and bumps in the garment to be pressed but also serves as heat insulation for the top cover 15 and the garment.

Overlying the pad 14 is a thin covering 15 of suitable fabric such as muslin, glass wool or the like, this material being capable of simple and speedy replacement and, therefore, may be relatively inexpensive.

The pad 14 and the covers 13 and 15 may be made to the proper size and contour of the platen to be insulated and covered, and may be secured in position by providing sufficient overhang around the margins, and providing these margins with staples, eyelets, hooks for lacing, or other fastening means 16 as desired. The steam heated platen 10 coacts with an upper platen 17 which is connected by hinges 18 or the like, as one skilled in the art would readily understand. The platen 17 has preferably provided thereover a glass wool pad 19 similar in characteristics to pad 14; and overlying the pad 19 is a suitable covering fabric 20 of glass wool, muslin, or the like, as desired. The pad 19 may be held in place by suitable bands 21, and the cover 20 may be tied in place by laces 22 or other suitable means.

Referring more particularly to Figs. 4 and 5, a conventional mangle embodying the present invention has been illustrated. A roll or mangle 25 is covered with a pad of fibrous glass 26 which is fastened in place by suitable means 27. Around the pad 26 may be placed a covering of suitable fabrics 28 such as glass wool cloth, or even muslin or the like, if desired. Coacting with the mangle roll 25 is a metal shoe 30 containing the heating element 31 of any suitable design. As is well known in the art, the material to be pressed is placed between the mangle roll 25 and the heated shoe 30 which is pressed down over the garment a predetermined degree by means of a handle 32 or other suitable means. In this embodiment, it will be noted that the glass wool pad 26 serves as an excellent backing material possessing high strength, yieldability, resistance to heat attack and wear, and accordingly may possess a long life. The same may be said of the top cover 28 when it has been formed of a fabric of fibrous glass as pointed out hereinabove.

Modifications may be resorted to which are within the spirit and scope of the appended claim.

I claim:

A pad for a metal pressing platen comprising a resilient, compressible integrated mat of substantially uniform thickness throughout, consisting of long, fine intermatted glass fibers, and a cover sheet overlying said mat consisting of glass fibers woven into textile form, said mat being at least several times thicker than said overlying sheet.

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