Feb. 21, 1928. 1,659,977

R. B. KINGMAN

SCOURING PAD

Filed Sept. 30, 1927 2 Sheets-Sheet 1

Fig. 1

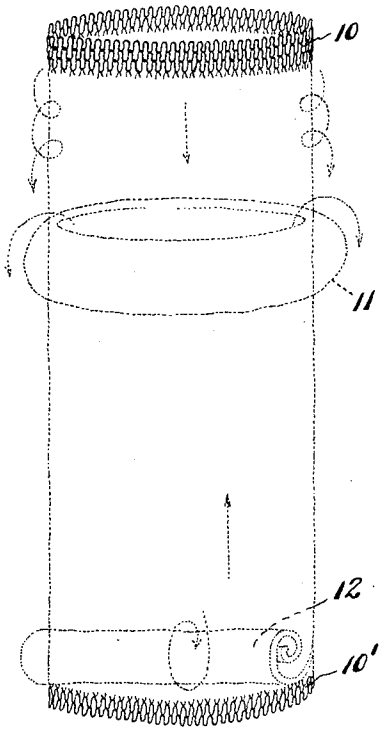


Fig. 2

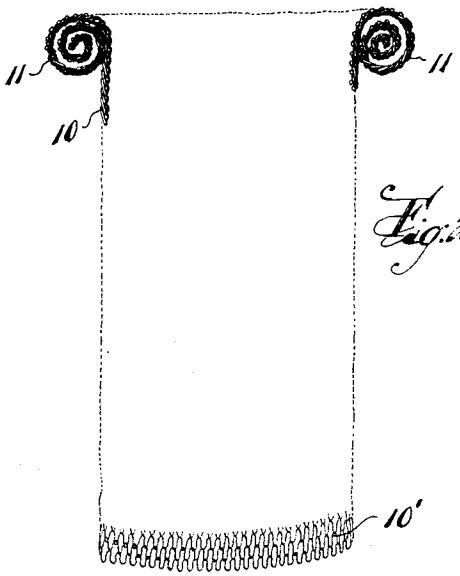


Fig. 3

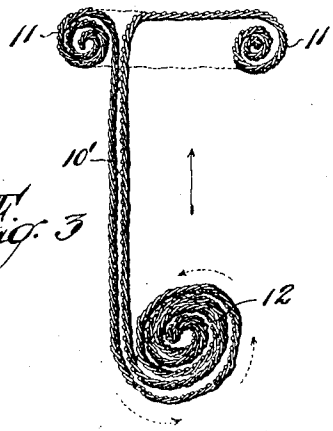


Fig. 4

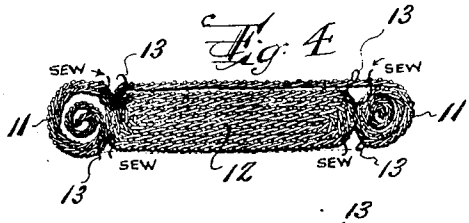
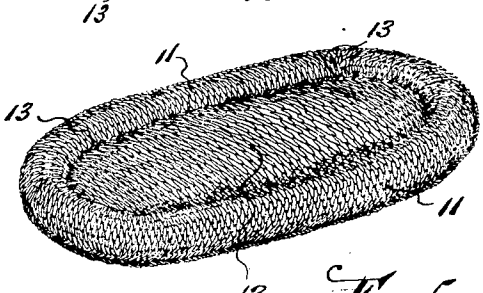


Fig. 5



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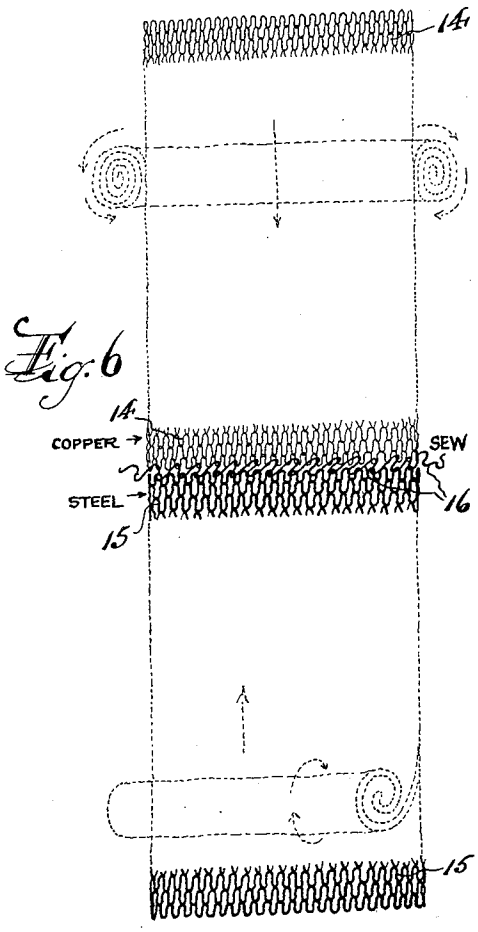


Fig. 6

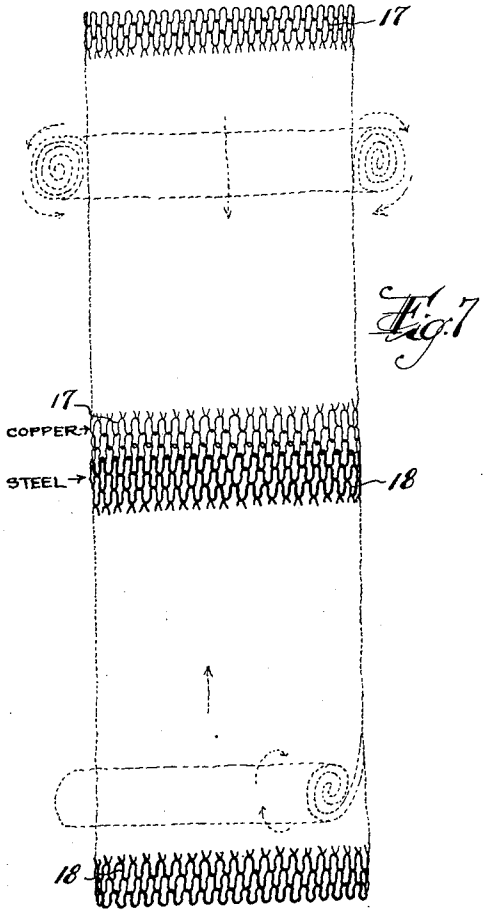


Fig. 7

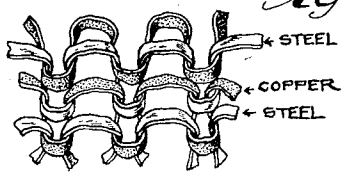


Fig. 8

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UNITED STATES PATENT OFFICE.

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SCOURING PAD.

Application filed September 30, 1927. Serial No. 223,053.

This invention relates, generally, to a novel form and construction of device adapted for use as a scouring implement or pad.

The invention has for its principal object to provide a novel form and construction of metallic abrasive pad made of metallic fabric to provide a relatively flat and yet more or less resilient body, comprising, generally, a center portion or pad surrounded by a marginal portion consisting of a rolled peripheral edge member; and the invention has for a further object to provide a novel and easily performed method of producing the aforesaid novel construction of pad out of an initial tubular knit metallic fabric body.

Other objects of this invention, not at this time more particularly enumerated, will be clearly understood from the following detailed description of the same.

In the accompanying drawings, the various steps involved in the method of makthe novel scouring or abrasive pad, as well as the finished article itself, are clearly illustrated.

In said drawings, Figure 1 is a diagrammatic view showing an initial length of tubular knit metallic fabric ready for the necessary manipulation involved in the novel method of making the desired novel construction of pad. Figure 2 is a view in part section, and illustrates the step of forming the rolled peripheral edge portion of the pad; Figure 3 is a sectional view, illustrating the method of forming the center portion of pad to be enclosed or surrounded by the rolled peripheral edge portion; Figure 4 is a sectional view through the finished pad; and Figure 5 is a perspective view of the finished pad.

Figure 6 and 7 are views similar to that shown in Figure 1, but illustrating a modified arrangement of the knit metallic fabric; and Figure 8 is a fragmentary view on an enlarged scale of another modified construction of knitted metallic fabric out of which the novel pad of this invention may be made.

Similar characters of reference are employed in the above described views, to indicate corresponding parts.

In making up the novel construction of abrasive pad in accordance with the instant invention, a tubular knit seamless metallic fabric is produced; although sheet abrasive fabric joined into the desired tubular form by a seam may be employed if desired. The fabric may be all metal, that is one formed entirely from metallic material, preferably in the form of a thin ribbon-like or flat wire; and the fabric may be made up of a single metallic material, as copper, or it may be made up to provide sections of different kinds of metallic material, as copper and steel or nickle or aluminum, etc., in various combinations; or again the fabric may be knit to provide an intermixture of a plurality of different kinds of metallic material; or the fabric may be made of vegetable yarn and metal in any suitable manner to produce an abrasive fabric of composite character.

To form the novel pad I first take a suitable length of tubular fabric, such, for example, as a single piece of all copper tubular knit fabric 10, and beginning at one end thereof I roll the same back annularly upon itself to form an annular rolled member 11, continuing the rolling operation until said annular rolled member 11 attains the desired mass or size, while still leaving a considerable length 10′ of the tubular knit fabric extending downwardly from the thus formed annular rolled member 11. The free length 10′ of the fabric is now flattened together, and beginning at its free end I roll or fold the same over and over upon itself toward the annular rolled member 11, thus forming a center portion or main pad body 12. The thus produced center portion or main pad body 12 is more or less flattened down, and is thereupon worked into the open center of said annular rolled member 11 so that its outer edges are entirely surrounded by the latter, and whereby the center portion or main pad body 12 and annular rolled member 11 are brought into a common plane. The completed body thus produced is now provided in the form of an elongated or substantially oval shaped flattened pad, having all raw edges of the fabric concealed and retained well within its interior parts, and having a rounded peripheral marginal portion provided by said rolled member 11 which is continuous or unbroken, and which is not only comfortable when held in the

hand of the user, but which provides resilient marginal portions adapted to readily conform to angles and corners of utensils to which they are applied when the pad is employed for cleaning and scouring operations, while the main body of the pad furnishes a generous area of abrading surface for application to the flat surfaces of utensils undergoing scouring thereby. In order to retain the center portion 12 and annular rolled member 11 in proper assembled relation one to the other, wire stitching 13 is applied around the junctures thereof, as indicated in Figure 4.

From the above description it will be apparent that by a relatively quick and simple manipulation of a single length of tubular knit metallic fabric, the respective center pad portion 12 and rolled marginal or edge portion 11 may be easily produced and assembled and so that each of said portions are respectively produced from a single integral initial length of tubular knit fabric.

The completed device while providing a compact body of very convenient shape, is nevertheless sufficiently resilient to readily conform itself to the surfaces to which it may be applied for cleaning and scouring effects, and as a consequence a very convenient form of scouring pad is furnished in which all raw edges of the metal fabric composing the same are prevented from contacting with the hand of the user, thus eliminating uncomfortable pricking or possible scratching or abrasions of the user's hands.

It may be desired to furnish the pad in bimetallic forms. For example, it may be desired to produce the center pad portion of steel, nickle, aluminum or the like and the rolled marginal edge portion of copper, or vice versa. In such case the tubular knit fabric is prepared accordingly, in any convenient manner calculated to provide adjoining longitudinal sections respectively of the different metals desired. One way of producing such bi-metal form of initial tubular fabric body is illustrated in Figure 6, in which a length 14 of copper fabric is arranged end to end with a length of fabric 15 formed of a different metal, as e. g. steel, and then joining by stitching 16, to form the total length of initial tubular metallic fabric necessary for the production of the device in the manner already above described. In Figure 7 another way of producing the bi-metal initial fabric is shown, whereby the knitting of the same is begun with one kind of metal to provide a section 17 thereof and finished with another to provide a section 18 thereof to thereby produce the desired initial tubular fabric body in integral form but with sections of respectively metal materials.

It may also be desirable to furnish the novel pad produced from a fabric having a mixture of different metal materials throughout its body. This form of bi-metallic fabric may consist of alternated rows of knitted stitches of the respectively different metals. It will be understood that knitting machines may be easily adjusted and arranged to knit with two or more different metallic strands to produce either the sectional arrangement shown in Figure 7 or the intermixed arrangement shown in Figure 8.

I am aware that some changes other than those already above indicated may be made in either the novel structure or the novel method of producing the structure without departing from the scope of this invention as defined in the appended claims. It is therefore intended that the above descriptions of structure and methods of production as well as the showing thereof in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:—

1. A scouring pad, comprising a tubular abrasive fabric having one end annularly rolled upon itself to provide an annular rolled edge portion, its remaining end portion flattened together and folded over and over upon itself to provide a center pad portion disposed within said rolled edge portion to lie in the plane of the latter, and means for securing the adjoining portions of said center pad portion and rolled edge portion together to retain said parts in assembled relation.

2. A scouring pad, comprising a length of tubular knit metallic fabric knitted from flat ribbon-like wire and having one end annularly rolled upon itself to provide a ring-like edge portion, the remaining end portion of said length of tubular knit fabric being flattened together and folded over and over upon itself to provide a center pad body disposed within said ring-like edge portion so as to be surrounded thereby, and stitching to secure the adjoining portions of said center pad body and ring-like edge portion together to retain said parts in assembled relation.

3. A scouring pad, comprising a length of tubular knit metallic fabric folded upon itself to provide a center pad body and an annular rolled marginal edge portion surrounding the periphery of said pad body, and means for retaining said pad body and rolled marginal edge portion against relative displacement one from the other.

4. A scouring pad, comprising a length of tubular knit bi-metallic fabric folded upon itself to provide a center pad body and an annular rolled marginal edge portion surrounding the periphery of said pad body, and means for retaining said pad body and rolled marginal edge portion together.

5. A scouring pad, comprising a length of

tubular knit metallic fabric comprising longitudinally adjoined sections of different metal materials, one section being annularly rolled upon itself to provide a ring-like edge portion and the other section being flattened and folded over and over upon itself to provide a center pad body disposed within said ring-like edge portion whereby the latter provides a surrounding peripheral binding for the former, and means to retain said center pad body and ring-like edge portion against relative displacement one from the other.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 26th day of September, 1927.

RUSSELL B. KINGMAN.