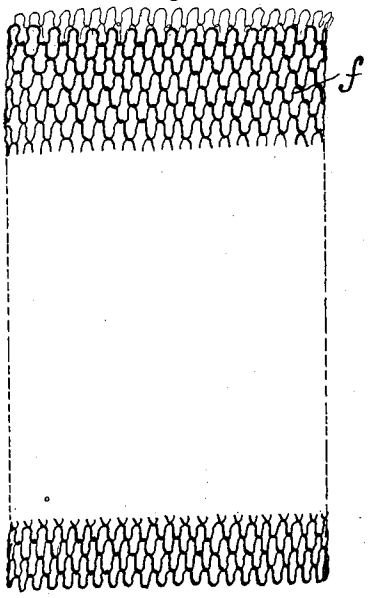
Oct. 9, 1928. 1,686,864

R. B. KINGMAN

SCOURING SOAP CAKE

Filed Oct. 8, 1925

Fig. 1



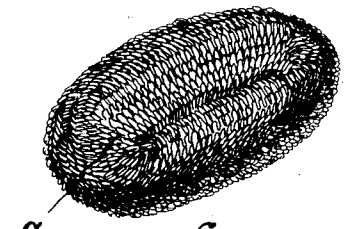
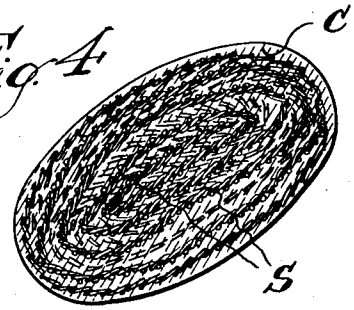


Fig. 2

Fig. 4



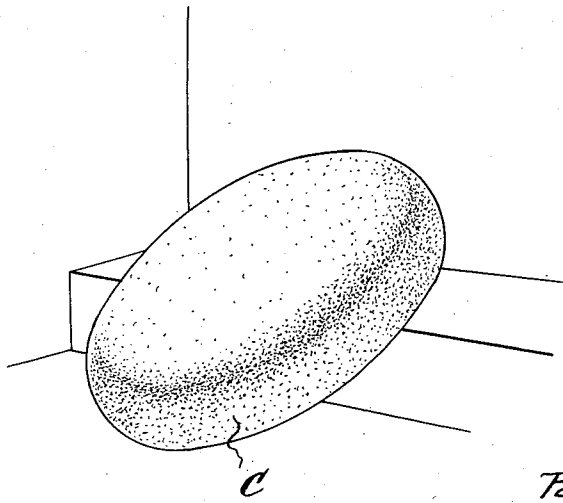


Fig. 3

INVENTOR.
Russell B. Kingman
BY
Fraser & Richards
ATTORNEYS.

Patented Oct. 9, 1928. 1,686,864

UNITED STATES PATENT OFFICE.

RUSSELL B. KINGMAN, OF ORANGE, NEW JERSEY, ASSIGNOR TO METAL TEXTILE CORPORATION, A CORPORATION OF RHODE ISLAND.

SCOURING-SOAP CAKE.

Application filed October 8, 1925. Serial No. 61,224.

This invention relates, generally, to improvements in soap cakes; and the invention has reference, more particularly, to a novel construction of soap cake within the body of which is imbedded a scouring element composed of a more or less resilient foraminous mass of abrasive material, the interstices of which are permeated by the soap substance, when the cake is molded to desired shape.

The invention has for its principal object to provide in combination with a molded or hard soap cake, a mass of substantially splinterless abrasive material imbedded within the soap cake body, so as to provide a scouring element which will expose itself at the exterior surface of the soap cake when the latter is used, whereby the abrasive action thereof will simultaneously cooperate with the solvent cleansing properties of the soap substance, when the soap cake is employed for various scouring and cleansing operations.

This invention has for more specific object to provide in combination with a molded or relatively hard soap cake, a body of abrasive material in the form of a knitted or woven fabric rolled or folded upon itself or otherwise balled up into a mass of desired shape having resiliently compressible characteristics, while at the same time providing throughout said mass a multiplicity of intercommunicating interstices through which the soap substance forming the cake may penetrate when said soap substance is molded around the mass to imbed the same in the finished cake. Preferably the fabric is knitted or woven from thin flattened copper threads or wire, although I may also employ a composite fabric material in the form of suitably combined threads or strands of metallic and vegetable fiber material, and, when but mild abrasive effects are desired, I may even employ a fabric made of vegetable fiber threads or strands only.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a plan view of a knit metallic fabric which is the preferred form of fabric from which is made the abrasive scouring element to be incorporated within the body of a soap cake in accordance with the principles of this invention.

Figure 2 is a view illustrating one manner of interfolding or balling the fabric into the core or mass to be imbedded in the body of a soap cake.

Figure 3 is an elevation of the finished soap cake provided with the scouring element in the form of an imbedded mass of the fabric.

Figure 4 is a longitudinal section through the finished soap cake provided with the novel imbedded scouring element.

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

As above mentioned, the fabric from which the highly foraminous mass constituting the scouring element is composed may, under the general or broad aspects of my invention, be knitted or woven so as to provide either an all metal fabric, a composite metal and vegetable fiber fabric, or an all vegetable fiber fabric, according to the degree of abrasive effect desired to be provided in connection with the completed soap cake. For the purposes of illustration, and for the further reason that such form of fabric is preferable in most instances, I have shown in the accompanying drawings a knitted metallic fabric for making up the foraminous resilient scouring element. Referring to said drawings, the reference character *f* indicates a section of knitted metallic fabric made from a thread or strand of thin, preferably flat, metallic wire of a suitable degree of hardness, and preferably of a non-corrosive metal such as copper. A piece of the metallic fabric thus formed, of requisite area or extent, is interfolded or rolled upon itself, or otherwise balled up into a relatively loosely compacted mass or body of desired shape adapted to provide the scouring element S, as shown in Figure 2. This scouring element will provide a more or less resilient and highly foraminous body, the interior of which possesses a multiplicity of intercommunicating interstices. The advantage of forming the scouring element S of the knit metallic fabric lies in the fact that metallic fibers or strands are firmly interlocked together by the knitting operation, and consequently, in use, there is little or no tendency of portions of the metallic fibers or strands breaking away or splintering off, and thereupon lodging ir the fingers of the user, or shedding off upon the surfaces undergoing cleaning operations. In

other words, the scouring element when made of either a knit or woven fabric provides a splinterless abrasive body.

The scouring element S thus formed is now ready to be imbedded within a soap body or cake. This may be accomplished in any manner found expedient. For example, the foraminous scouring element S may be inserted in a soap mold, and thereupon the soap substance may be run into the mold, so as to both penetrate and fill the interstices of the scouring element S, as well as to surround the exterior sides thereof, all so that, when the soap substance sets or hardens, a solid soap cake C is formed, within which is imbedded the scouring element S, whereby the loosely compacted and resilient mass of the latter permeates the body of said soap cake C.

It will be understood that the soap substance may consist of any desired kind of so-called "hard" soap; and, if desired, the soap substance may comprise a compound of saponaceous and other cleansing or scouring ingredients, i. e. the soap substance may also contain in mixture therewith any desired cleaning, scouring or similar material, such e. g. as silicon, sand, etc.

In the use of the above described novel construction of combined soap cake and scouring element, the soap substance will soften at its exterior surfaces, and will produce a dirt and grease solvent suds in the well understood manner. As the exterior surface of the soap substance softens and wears down the scouring element S is exposed at the surface of the cake, and the exposed surfaces of said scouring element, and particularly the metallic projections provided thereby, will, when rubbed upon the surface to be cleansed and scoured, produce a marked abrasive effect, which will efficiently loosen and scrape away encrusted dirt, grease and other soils. Owing to the more or less resilient character of the scouring element S, it follows that, as the soap substance wears away and is given off from the cake, the body of the scouring element will not only yield so as to further exude or expel soap substance, but will also, as the same is more and more exposed, tend to flatten down upon and conform to the surface upon which the cake is pressed and against which it is rubbed, so as to produce a very effective scouring operation.

Having thus described my invention, I claim:

1. An article for scouring and cleansing uses comprising an abrasive scouring element consisting of a resilient loosely compacted mass of comparatively open mesh metallic fabric material to form a foraminous body, and a hard soap impregnating said body and molded about the same to fill the interstices thereof.

2. An article for scouring and cleansing uses comprising an abrasive scouring element consisting of a knitted open mesh fabric made of flat copper wire formed into a loosely compacted resilient and foraminous mass and a hard soap impregnating said mass and molded about the same so as to fill the interstices thereof.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 3rd day of October, 1925.

RUSSELL B. KINGMAN.