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ARTIFICIAL SPONGE FOR SCOURING METAL AND ENAMEL WARE

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As far as I am aware there are now in use a number of devices for scouring metal and enamelware, which devices consist mainly of the use of the so called steel wool, either in loose form as a mop or such steel wool woven and rolled up into a mop or incorporated in felt or in the form of a cloth; in all of which forms, however, the said steel wool is open and exposed to the alkali and to the moisture which a device of this nature is subject to, the result being that these scouring devices deteriorate very rapidly, falling actually to pieces during the process of using them. I avoid these difficulties by making a novel artificial sponge for scouring purposes. An object of my invention is to make an artificial sponge, in the solid parts of which I incorporate an abrasive substance for scouring purposes.

Another object of my invention is to make such an artificial sponge in which the abrasive substance should be of a large variety, so that a sponge can be selected to answer the most exacting requirement for any job of scouring.

Another object of my invention is to make a scouring device that should be easy to handle, and which should not readily fall to pieces.

Another object of my invention is to make the scouring device in spongy form that it may retain the water and soap needed in the process of scouring, and to be flexible and elastic enough to yield to and enter the irregularities and corners of any piece of hollow ware or kitchen utensil.

Another object of my invention is to make a scouring device easy to handle and cheap to manufacture.

In the process of manufacturing the artificial sponge, which is a well known process to those skilled in the art as disclosed for instance in the United States Patents 963,806, 702,162, and while mixing up the batch, I incorporate into the batch any one of the following abrasive substances, or a combination thereof in any desired proportion. The abrasive substances that I propose to use are: broken up steel wool or steel filings; sand, either coarse or fine; crushed glass in various grades and coarseness of grain as used in ordinary sand-paper; carborundum powder, coarse or fine; pumice powder; rotten stone; rouge. By the use of any one of these abrasives, or a combination thereof in any suitable proportion incorporated in the solid element of the sponge, I obtain a series of scouring, cleaning and polishing devices to answer all the possible requirements in the field of scouring for metal and enamel articles, such as kitchen ware, table ware, and other household utensils.

I am aware that there has been proposed to make a solid rubber device which incorporates steel wool. The difficulty with such a device would be that it is not porous, and therefore has no interstices to retain water and the necessary soap requisite for cleaning purposes. Aside from this, it has not the required flexibility of a sponge, nor can it possess the abrasive quality that a spongy substance possesses from the very nature of its structure. Moreover, the up-to-date artificial sponges retain an elasticity for a long period of time, which approximately gauges the lifetime of such a scouring device as I propose to make.

Having described my novel sponge for scouring purposes, I claim as my invention:

1. An absorbent scouring device comprising a body of spongy resilient vulcanized rubber having an open and irregularly porous structure and having a large number of small to minute cells and passages, the walls of the passages and cells consisting of resilient vulcanized rubber, and having abrasive material embedded in said walls.

2. An absorbent scouring device comprising a body of spongy resilient vulcanized rubber having an open and irregularly porous structure and having a large number of small to minute cells and passages, the walls of the passages and cells consisting of resilient vulcanized rubber, and having abrasive material dispersed substantially uniformly throughout said walls.

3. An absorbent scouring device comprising a body of spongy resilient vulcanized rubber having an open and irregularly porous structure and having a large number of small to minute cells and passages, the walls of the passages and cells consisting of resilient vulcanized rubber and having steel wool embedded in and dispersed throughout said body.

4. An absorbent scouring device comprising a body of spongy resilient vulcanized rubber having an open and irregularly porous structure and having a large number of small to minute cells and passages, the walls of the passages and cells consisting of resilient vulcanized rubber, and having abrasive material carried by said walls.

5. The process of making a scouring device comprising the steps of preparing a rubber compound suitable for the manufacture of sponge rubber, commingling with said rubber compound a predetermined quantity of steel wool and converting said rubber compound into sponge rubber.

6. The process of making a scouring device comprising the steps of preparing a rubber compound suitable for the manufacture of sponge rubber, commingling with said rubber compound a predetermined quantity of solid abrading material and converting said rubber compound into sponge rubber.

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