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CLEANSING MASS AND METHOD OF
PRODUCING THE SAME

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My invention relates to a mass or block for cleansing or scrubbing purposes, and to a method of producing the same.

An important object of the invention is to provide a mass of the above mentioned character containing no metal.

A further object of the invention is to provide a mass or block which will thoroughly cleanse surfaces without scratching the same, using by hand pressure or in a scrubbing device.

A further object of the invention is to provide a mass or block for polishing metal, porcelain, enamel surfaces or the like and which will remove grease, fats, oils or flame discolorations, as well as rust or corrosion.

A further object of the invention is to provide a mass or block which is stiff or rigid whereby the desired pressure may be applied to the surface being cleaned or polished, by hand pressure or in a scrubbing device.

A further object of the invention is to provide a mass or block which may have its working face wetted, without wetting the remainder of the mass, whereby the mass may be used without the hands coming in contact with the wetted surface, dirt, grease or the like.

A further object of the invention is to provide a mass or block having a working face which may be cut or peeled off, to expose a new working face, when the first working face becomes clogged or filled with dirt, grease or the like.

The mass or block comprises the constituents of the following ingredients, preferably combined in the proportions stated:

- 2 parts by weight of powdered soap
- 9 parts by weight of finely divided or powdered magnesite
- 2 1/4 parts by weight of finely divided or powdered clay
- 12 parts by weight of wood wool or fine excelsior
- 24 parts by weight of 18° Baumé magnesium chloride water solution or 11 1/2 oz. dry chloride to 1 1/2 pints of water.

The twenty-four parts by weight of 18° Baumé magnesium chloride water solution when computed in ounces will correspond to 11 1/2 oz. dry magnesium chloride added to 1 1/2 pts. of water. The ingredients above given, when the parts by weight are ounces, are sufficient to produce one square foot of the finished sheet. The parts may be in ounces, pounds, or any other units of weight.

In producing the 18° Baumé magnesium chloride solution, I employ flake magnesium chloride and add sufficient water to the same until the

water solution of magnesium chloride results in 18° Baumé. The water solution of the magnesium chloride is introduced into a receptacle, and the powdered soap, powdered magnesite and powdered clay are added to the magnesium chloride solution and the mass thoroughly mixed.

The liquid mass thus produced is then introduced into a revolving drum, or other suitable mixing apparatus, and the wood wool or fine excelsior is added to the liquid mass, while the mass is being stirred or agitated. The stirring is continued until the resultant mass is thoroughly mixed and the wood wool is coated with the liquid mass.

The resultant mass containing all the ingredients above referred to is now removed from the rotating mixing drum and introduced into flat forms. These forms are preferably 36" x 72" or larger but may be smaller. This particular size of the sheet is not important as we recommend the large size sheets being cut into small size blocks, say, 2" x 2" square, which are conveniently used for hand scrubbing blocks. The mass is preferably fed into each form until it has a vertical thickness of about 6 inches. When one form is filled another form is placed on top and filled with a mass to the above vertical thickness, and this is continued until several forms have been filled. After being introduced into each form the mass is subjected to the action of pressure by means of a hydraulic press or the like until the vertical thickness of the mass is reduced to 1", although this thickness can vary in accordance with desirability. A pressure of substantially 700 to 800 pounds per square inch may be employed.

After the mass in the forms has been subjected to the action of pressure so that it has a vertical thickness of one inch, or desired thickness, steel clamps are adjusted so as to hold all of the filled forms in position and in a uniform thickness of compressed material, and after these steel clamps are in place the pressure is relieved and the forms removed from the press and there is no tendency for the mass to increase or decrease its vertical thickness.

The mass is allowed to remain in each form for a few hours, such as from 5 to 6 hours. A chemical reaction occurs between the magnesite and magnesium chloride which produces considerable heat, and after this chemical reaction has continued for about from 5 to 6 hours, the heat thus produced has sufficiently dried or hardened the mass or sheet so that it can be removed from the form without breakage.

The mass or sheets are then removed from the forms and are placed upon dollies and are rolled into a drying kiln, and are therein subjected to a temperature of substantially 135° F. This heat treatment is continued for about 4 or 5 days to drive off all moisture. The mass is baked and rendered rigid and tough.

After the heat treatment the mass or sheets are removed from the kiln and are cut to the size required on a saw table.

The powdered soap need not be added to the magnesite and clay, as explained. When the soap is omitted at that point, all other ingredients are added in the manner stated and all other steps of the method practiced. After the sheet has been baked and completed I may then submerge the same in a water soap solution, and the sheet will become impregnated with the soap solution. The sheet is then allowed to dry and is subsequently sawed into suitable sizes. Instead of employing soap alone, I may combine with the soap silica dust or the like. I may use soap compounds on the market such as "Old Dutch Cleanser," "Kitchen Cleanser" or the like.

The product produced by the method is a stiff or rigid scrubbing mass or block having a substantially uniform porosity. It has a cellular construction and resembles in appearance fine sponge rubber, to a certain extent. Due to its stiffness or rigidity the mass or block can have sufficient pressure applied thereto for the cleansing or polishing operations, without liability of breakage. The mass does not absorb grease, oils or the like to such an extent that the mass is useless after the first cleansing operation. Should the working face of the mass or block become filled with dirt, grease, oil or the like, then such face can be cut or peeled off to the depth filled with the same thus providing a new working face. This action may be repeated several times until the mass or block is too thin for further use. It is not necessary to wet the entire block, for use, as the block can be used by wetting the working face alone, which permits of the use of the block without the hands coming in contact with the water, dirt, grease or the like.

The cleansing and polishing effects of the mass or block are principally produced by the abrasive action of the wood wool, or excelsior, which constitutes the major portion of the mass. The saponaceous material aids the abrasive action of the wood wool in removing dirt, oil, grease or the like.

The constituents of the block are held together by the mineral binder and the block does not disintegrate when coming into contact with water, oil, grease or the like. No metal, rubber or other material is necessary as a bonding agent to hold the block together. No pressure applied to the block will cause the same to emit the saponaceous material or other ingredients contained therein. The block contains no ingredients that produce harmful effects to food that may afterwards be cooked in utensils cleaned by the block.

The wood wool which constitutes the major por-

tion of the mass is a fine excelsior, having strands of wood which vary somewhat in diameter but which are roughly $\frac{1}{4}$ of an inch in diameter and from 2 to 3 inches in length. The strands vary somewhat in size and the invention is not restricted to the precise size. These strands may be formed from pine, spruce or other woods. They may also be formed from other plant fibers, such as shredded palm bark, sisal, coconut fiber, hemp or other vegetable fibers.

While it is preferred to use the 18° Baumé magnesium chloride solution, yet the strength of the solution may vary somewhat, depending upon the heat and the humidity, and I may use a magnesium chloride solution of from 18° to 20° Baumé.

In the use of the block, the working face of the same is wetted with water and the wetted face is rubbed back and forth upon the surface to be cleaned, while firm pressure is applied to the mass or block. It will be found that the mass will produce a bright polished finish upon the surface without scratching the same.

Having thus described my invention, what I claim is:

1. The method of producing a cleaning composition in the form of a rigid porous dry compressed mass to be held in the hand and rubbed over the surface to be cleaned, comprising combining approximately nine parts by weight of finely divided magnesite, approximately two and one-fourth parts by weight of finely divided clay, and twenty-four parts by weight of 18° to 20° Baumé magnesium chloride water solution, mixing the resultant mass for providing a mineral binder, introducing into the mineral binder approximately twelve parts by weight of wood excelsior, mixing the resultant mass, molding the resultant mass, subjecting the molded mass to a pressure of approximately 700 to 800 pounds per square inch to increase the density of the mass, allowing the molded mass to remain without handling after its compression for about five to six hours so that the chemical reaction between the magnesite and magnesium chloride will produce sufficient heat to harden the mass so that it may be handled without breakage, drying the mass to produce the final stiff product, and incorporating a soap into the mass.

2. A cleansing device to be held in the hand and rubbed over a surface to be cleaned, said device being formed of a dry stiff highly porous compressed body, said body comprising the products of reaction of the following ingredients in approximately the proportions stated, nine parts by weight of finely divided magnesite, two-and-one-quarter parts by weight of finely divided clay, approximately twenty-four parts by weight of a water solution of magnesium chloride of 18° to 20° Baumé, twelve parts by weight of wood excelsior, and two parts by weight of soap, the wood excelsior being present in a preponderance by volume.

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