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E. B. FLANIGAN ET AL

2,932,839

CLEANSING CLOTH

Filed Aug. 24, 1953

Fig. 1.

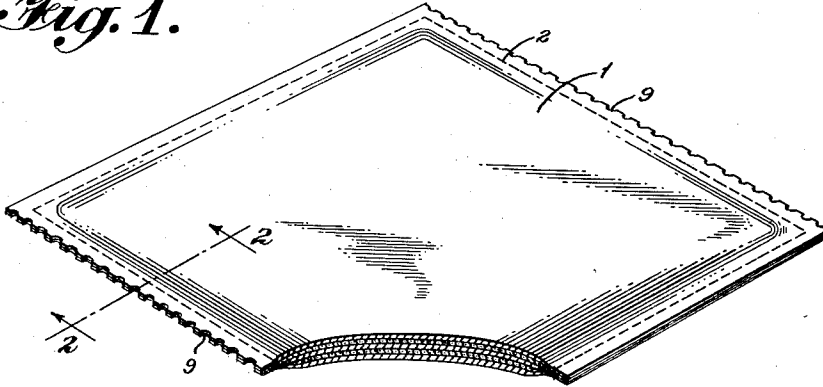


Fig. 2.

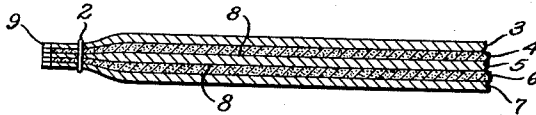
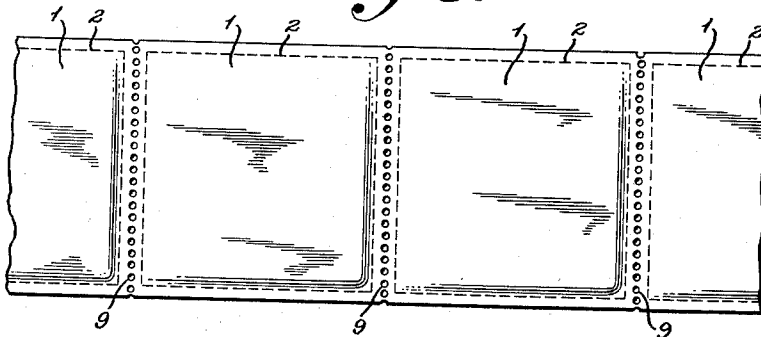


Fig. 3.



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2,932,839

CLEANSING CLOTH

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2 Claims. (Cl. 15—122)

This invention relates to a cleansing cloth, more particularly a washcloth which may contain soap to be worked into a lather when the cloth is wet, which subsequently can be rinsed from the cloth by repeated wettings.

The construction of this cloth makes it suitable for any purpose wherein it is desirable to have a cloth that is possessed of adequate mechanical strength and capable of absorbing liquids, to act as a solvent for such as soap, polish or cleaning solutions contained therein.

We are aware that attempts have been made to make paper washcloths of single sheets of embossed paper, and also of paper sheets impregnated with soap merely as a soap-carrier to be used as a substitute for cake soap, or powdered or liquid soap. Our invention, however, is directed to the problem of a washcloth which will have the necessary mechanical strength to withstand the wetting, handling and rinsing, and which will contain a quantity of soap capable of producing a lather, but which will also readily rinse out so that the pad may be used as a damp cloth. This pad or washcloth is a laminated construction consisting of one or more sheets of absorbent cellulose paper, so that there will be an element for the retention of the water and also to lend softness to the pad, as the surface sheets are papers of high wet-strength and while very permeable, are not very absorbent.

An object of this invention is the provision of a laminated paper pad having surface layers of high permeability and high wet-strength characteristics and an intermediate layer of lower wet-strength paper having a large water absorption capacity.

Another object of this invention is the provision of a laminated paper pad having as surface sheets, highly permeable translucent paper with a very high wet-strength characteristic and a colored intermediate absorbent layer or layers of lower wet-strength but of greater water absorption capacity.

Another object of this invention is the provision of a laminated paper pad having very highly permeable paper with a very high wet-strength characteristic as surface sheets, with an intermediate laminar layer or layers carrying a soap capable of producing a lather when wet.

Another object of this invention is the provision of an integral washcloth, containing soap, made of laminar layers of paper which can be dispensed individually in dispensing machines.

Further and other objects will become apparent from the following specification in which like numerals refer to like parts.

In the drawing:

Fig. 1 is a view of the paper washcloth with the corner in section, showing the laminar layers;

Fig. 2 is an enlarged fragmentary section taken on the line 2—2 of Fig. 1; and

Fig. 3 is a view of a plurality of washcloths of the type described, showing the manner of manufacture so that they may be dispensed in a dispensing machine.

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The paper washcloth indicated as 1 in Fig. 1 consists of a plurality of layers of paper, the edges of which are secured together by stitching 2. It is to be understood, however, that the plurality of layers of paper may be assembled in any other suitable fashion, such as by taping or gluing to close two or more sides of the assembly. In use, the sheets will be approximately eight or nine inches square and if manufactured in strips for purposes of dispensing, they may be perforated along the edges, as shown at 9, for the purpose of separating the separate pads.

Fig. 2 shows the details of construction of the preferred form of the pad, in which the outer sheets 3 and 7 are of a paper of a high degree of permeability and high wet-strength. This paper should be of a weight of not less than three ounces per square yard in the single sheet. The wet tensile strength in either direction should be approximately 150 grams per inch of width minimum. A further specification of the preferred form should be that when one cubic centimeter of water is placed on its surface and backed by an absorbent material, the water should be absorbed in three seconds. This permeable, high wet-strength paper is made of smooth finished, long fibered stock.

Intermediate layers 4 and 6 are of an absorbent cellulose paper. This cellulose material is of bleached sulfite chemical pulp free of starch or sizing, and its weight approximately four ounces per square yard. This paper should absorb twelve to fifteen times its weight of water. This paper has very little wet-strength. The absorbent layer or layers may also be of material similar to paper toweling stock which is quite absorbent but has very little wet-strength as compared with the high wet-strength sheets specified for the surface sheets but somewhat more wet-strength as compared to the cellulose paper described above. The wet-strength of the paper should not be less than .275 kg. per 15 mm. of width. Such paper weighs approximately 32 lbs. per 480 sheets 24" x 36".

For eye-appeal, the intermediate layer or layers can be of colored paper stock which shows through the translucent high wet-strength surface sheets when dry and to even a greater degree when wet. The colored intermediate layer can also be used to code the final product to indicate the presence or absence of soap or the kind of detergent in cleansing cloths.

Layer 5 is similar to layers 3 and 7 and may be included to add mechanical strength to the pad to prevent layers 4 and 6 being bunched or wadded in the pad as it is used.

Soap 8 may be applied to one inner layer but preferably layer 5 inasmuch as this layer has greater mechanical strength for processing in the application of soap. The soap may be applied by dipping, thus coating each side of sheet 5, or applied in the form of a liquid spray, or cream, or finely divided powder or chips caused to adhere to an inner layer.

While Fig. 2 shows the pad comprising five layers, it should be understood that a pad can be made satisfactorily consisting of the two outer layers 3 and 7 of a high permeability and high wet-strength, with an intermediate layer such as 4 or 6 of the absorbent cellulose paper impregnated or carrying soap or other cleaning material in some form.

Fig. 3 shows the way in which a plurality of sheets making up the layers of the pads can be brought together in strips and sewed and perforated, so that they may be provided in a continuous roll for purposes of dispensing. The same method can also be employed to manufacture the pads in a continuous operation, substituting a cut-off operation for the perforating operation.

It is to be understood that certain changes, alterations, modifications and substitutions can be made with-

out departing from the spirit and scope of the appended claims.

We claim:

1. A cleansing cloth comprising a plurality of outside and intermediate layers of paper sheets, said outside layers and the middle layer being of light weight, thin, high wet-strength, long fiber paper having a high degree of permeability, at least one intermediate layer between the middle layer and an outside layer being of absorbent cellulose paper, and securing means at the edges of said layers to form said layers into a unitary pad.

2. A washcloth comprising a plurality of layers of paper sheets, the outside layers and middle layer being of lightweight, thin, high wet-strength, long fiber paper having a high degree of permeability, at least one layer between the middle layer and an outside layer being of

absorbent cellulose paper, soap carried by an intermediate layer, and means to secure said plurality of layers at the peripheries thereof, to form a unitary pad.

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