

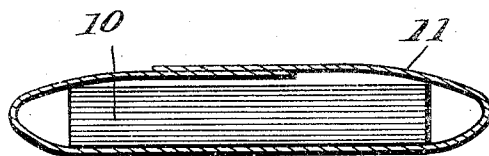
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DETERGENT

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UNITED STATES PATENT OFFICE

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DETERGENT

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This invention relates to improvements in detergents, and more particularly concerns a composition and package of detergents for employment in cleansing fabrics.

5 One of the objects of the present invention is the provision of an improved detergent material for removing soiled spots from garments.

10 Another object of this invention is the provision of an improved detergent material containing a spot removing substance in a flexible abrasive base.

15 A further object of this invention is the provision of a detergent package comprising a liquid spot removing material in a flexible absorbent base, in which the liquid is prevented from escape by a non-permeable envelope.

20 Still another object of the invention is the provision of a detergent package in which a volatile solvent spot remover is provided in a flexible absorbent base, the loss of solvent by evaporation being prevented by enclosing the base and solvent in a non-permeable envelope.

25 A still further object of the invention is the provision of a detergent package comprising an inflammable grease solvent in a flexible coherent absorbent material, the danger of combustion of the solvent being eliminated by providing a non-permeable envelope about the base and solvent.

30 With these and other objects in view as will appear in the course of the following specification and claims, an illustrative form of package by means of which the detergent may be marketed and employed is shown on the accompanying drawing.

35 In this drawing, a pad 10 of flexible coherent absorptive material such as a number of sheets of thin absorbent paper, is impregnated with a spot removing substance, and the pad enclosed in an envelope 11 which is hermetically sealed and is non-permeable
40 to either the liquid of the cleansing material or its vapors. Such a material is the thin transparent cellulose product readily obtainable on the market and now employed for hermetically sealing for moisture proofness,
45 or other film products such as those having a

paper base with a glue sizing thereon. The propriety of employing a particular film material may readily be determined by placing some of the liquid spot removing composition in direct contact therewith, and observing
50 whether or not penetration occurs.

A preferred form of composition to be used in the absorptive pad is as follows: 0.1% oil of citronella; 0.1% of spirits of ammonia, concentrated; 25% of fuller's earth; balance
55 mineral spirits such as coal tar naphtha or a crude oil distillate fraction of boiling point from 300 to 400° F.

This composition is maintained in suspension and sprayed onto the thin sheets of absorbent paper to a point short of saturation, whereby the sheets become impregnated with this material and are competent to give off the liquid when squeezed in contact with a spot, whereby the liquid is driven into the
60 fabric on which the spot is located and caused to dissolve the grease or similar binder which holds the spot on the fabric. It is preferred to apply the material by friction, wherewith alternately the pad is compressed at one point to yield off its solvent while at another point the pad will reabsorb the solvent and the grease which it has dissolved. The fuller's earth assists the paper in the reabsorption of this liquid, and both together act as
65 an abrasive and serve to physically remove portions of the spot. The flexibility of the pad of material adapts it to conform both with the hand or other instrument used for application, and to the contour of the fabric surface from which the spot is to be removed. The ammonia serves to brighten and freshen the fabric; while the oil of citronella ob-
70 scures and overcomes the odor of the spirits.

The mineral spirits of this particular composition being highly inflammable as a liquid, and more especially as a gas, and being easily volatile so that such solvent would escape quickly, it is desirable for the permanency and safety of the package that the solvent
75 should be confined with the pad, which is accomplished by the employment of the hermetically sealed envelope as described above.

In employment, the individual package containing the impregnated pad may be car-
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ried in the pocket-book or kept in a drawer without danger of deterioration or fire, and without the possibility of itself staining or soiling surrounding articles. In employment, the envelope is torn away, and the pad applied to the spot by rubbing. The abrasion, extrusion of solvent and reabsorption of solvent and grease occurs at the point of application so that the solvent does not tend to spread the spot beyond the point of application of the pad.

What I claim as new and desire to secure by letters patent is:

1. A detergent material comprising a pad of a plurality of layers of absorbent paper, and a mixture of fuller's earth and mineral spirits having the volatility and grease-solvent property of coal tar naphtha impregnating said paper pad, the quantity of said solvent being insufficient to saturate the pad.

2. A package of detergent material comprising a pad of a plurality of layers of absorbent paper, a mixture of fuller's earth and mineral spirits having the volatility and grease-solvent property of coal tar naphtha impregnating said paper pad, the quantity of said solvent being insufficient to saturate the pad, and a flexible envelope of material having the properties of a cellulose film of being non-permeable to said liquid or its vapor whereby to prevent escape of the liquid and enclosing and sealing said impregnated pad.

3. A package of detergent material comprising a pad of a plurality of layers of absorbent paper, a mixture of fuller's earth and mineral spirits having the volatility and grease-solvent and inflammable properties of coal tar naphtha impregnating said paper pad, the quantity of said solvent being insufficient to saturate the pad, and a flexible envelope of material having the non-permeable property of a cellulose film for preventing the escape of said liquid or its vapor whereby to prevent the loss or ignition of the liquid, said envelope enclosing and sealing said impregnated pad.

In testimony whereof, I affix my signature.

WILLIAM S. OPPENHEIMER.

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