

UNITED STATES PATENT OFFICE.

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GERMANY.

SCOURING AGENT.

1,111,488.

Specification of Letters Patent.

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No Drawing.

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To all whom it may concern:

Be it known that I, HEINRICH OCKELMANN, a citizen of the German Empire, and residing at Gross-Jena, near Naumburg-on-the-Saale, Germany, have invented certain new and useful Improvements in Scouring Agents, of which the following is a specification.

My invention relates to a scouring agent in the form of a paste or of a powder or bleaching powder. The said agent is primarily intended for removing spots or blemishes, *e. g.* from textile fabrics.

I have found that, in the case of liquid scouring agents which contain caustic or other alkalis, the addition of a solution of sugar produces a protective action, *i. e.* an action which eliminates the action of the alkalis on the fabric or on the colors of the fabric but does not impair the cleansing action of the alkalis. According to the present invention I utilize this experience, which I have obtained when making liquid scouring agents, in order to produce a solid, soap-like, powderlike or paste-like scouring agent. I have ascertained that when the constituents of the mixture both in respect to the soap and to the other scouring and bleaching agents are rightly chosen, the admixture of sugar causes an important enhancement in the cleansing or scouring action without the alkalis contained in the soap, *i. e.* in the washing agent, attacking the fabric either in respect to its fibers or to its coloring.

As is already known, sugar has been added to soaps, the object of this sugar being, in one instance, simply to serve the function of a loading material. On the other hand, as is already known, sugar has been added in order to neutralize the action of the alkalis. In contradistinction to these known methods, I add a quantity of sugar which is many times greater than the quantity of alkali contained in the soap. It is thus obtained that the alkali can effect its cleansing or dirt-removing action without attacking the fabric and the colors. I have also found that the greater the amount of added sugar the greater can be the percentage of alkali in the soap or in the bleaching and washing agent. As, however, the cleansing or dirt-removing action of the soap depends on the percentage of alkali present, it is preferred to increase this percentage as much

as possible. It has been found on the other hand that the admixture of very large quantities of sugar to soap gives rise to difficulties inasmuch as with such a large admixture the product crumbles and obtains such a consistency that the soap is rendered unfit for use. I have found, however, that I can give to my soap a very considerable quantity of sugar and consequently can give a somewhat considerable percentage of caustic potash by adding to the mixture either alcohol or a material analogous thereto such as the oxidation products of alcohols. Even the addition of a comparatively small percentage of alcohol yields the desired beneficial action. Moreover the alcohol negatives the sticky effect of the sugar. Finally I have found that if I reduce the percentage of fatty acids, or soaps as far as possible or if I exclude the fatty acids entirely, then, owing to the correspondingly large admixture of sugar, I can obtain a cleansing or a bleaching material which has the form of a powder or of a paste and to which soap or soda can be added according to requirement. The soap which I produce has an exceptional property in that it can be used with sea-water.

In carrying out my invention I preferably employ the following mixtures:

1. In the case of a soap of the first kind described: 40% fatty acids, 10% caustic potash (or alkali), 25% sugar or analogous materials, 25% water. The percentage of the constituents of the mixture may be chosen to be somewhat different from the above. Instead of caustic potash, caustic soda may be employed. It would be taken for granted, however, that the percentage admixture of sugar is many times greater than the percentage of alkali. The materials analogous to sugar may consist of starch, syrup, molasses or the like.

2. When the percentage of sugar is increased owing to an admixture of alcohol: 2000 g. sugar, or analogous materials, 2000 g. grain-soap, 80 g. caustic potash, 120 g. alcohol or analogous materials; or 1500 g. grain-soap, 500 g. sugar, or analogous materials, 19 g. caustic potash, 30 g. alcohol or analogous materials.

3. When it is desired to make a cleansing, washing, or bleaching agent in the form of a powder or paste: 4% caustic potash,

80-83% sugar or analogous materials, 12-14% alcohol or analogous materials.

When employing caustic soda I prefer the following mixture: 3% caustic soda, 84-87%
5 sugar or analogous materials, 12% alcohol or analogous materials. The latter mixture may however comprise an admixture of soda or soap in desired proportions, because the
10 washing or bleaching agent in the said mixture will not froth or lather without such an admixture; on the other hand, the formation of froth or lather is in practice required of a washing agent.

I claim:—

15 1. A detergent comprising sugar, caustic alkali and alcohol, the sugar being largely in excess of the alcohol, and the product being a dry, granular substance.

20 2. A detergent comprising sugar, caustic alkali and alcohol, the quantity of sugar being in excess of the quantity of alcohol

and of alkali, the product being a dry, granular material.

3. A detergent comprising sugar, caustic alkali and alcohol, the sugar being in excess
25 of the combined quantities of alcohol and alkali, the product being a dry granular material.

4. A detergent comprising sugar, caustic alkali, alcohol and a soap addition, the
30 product being a dry powder.

5. A detergent, comprising sugar, caustic alkali, soap and alcohol, the sugar content of the detergent being a multiple of the combined content of alkali and alcohol.
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In testimony whereof, I affix my signature in the presence of two witnesses.

HEINRICH OCKELMANN.

Witnesses:

RUDOLPH FRICKE,
N. R. SNYDER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."