

UNITED STATES PATENT OFFICE.

ROBERT E. DIVINE, OF CHICAGO, ILLINOIS.

SOAP.

No Drawing.

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To all whom it may concern:

Be it known that I, ROBERT E. DIVINE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Soaps, of which the following is a specification.

The present invention relates to improvements in the manufacture of soaps and more particularly to the prevention of decomposition or rancidification of soaps, and particularly those made from fats which rapidly develop rancidity, such as cottonseed oil, cottonseed oil foots, commercial greases and the like.

In accordance with the present invention, the fat from which the soap is to be made, which may be, for example, cottonseed oil foots, cottonseed oil, or other oil or fat, is directly saponified or may be hydrolyzed in any suitable manner, for example, by means of sulphuric acid, sulfo-fatty acid compounds or the like and the resulting fatty acid removed by steam distillation. The fatty acid is then converted into a soap, for example, by the usual kettle process, being neutralized, preferably with soda, boiled and washed in the usual manner, this procedure resulting in a soap stock of the desired commercial type, as is well recognized in the art. After the soap in either case has been sufficiently washed, it is drawn off, and while in molten state there is incorporated into it a small proportion, say from one-twentieth to one per cent, of an organic

amine having a residual hydrogen atom, such as aniline, alpha naphthylamine, para-phenylene-diamine, diphenylamine, hexamethylenetetramine or the like. The soap is then dried in the usual manner, the resulting dried soap being marketed in flaked form or in cakes, as desired.

By the incorporation of the stabilizing compound, I have found that the decomposition and rancidification of soaps, and particularly those made from fats having a particular tendency towards becoming rancid, is substantially prevented. Thus a soap made from the fatty acids of cottonseed oil foots, in which one twentieth to one-half per cent of diphenylamine has been incorporated, has been found to remain permanently sweet, the same soap without the addition of the stabilizing compound becoming very rancid in approximately two weeks. The stabilizing compound likewise prevents discoloration of the soap, keeping it in its original color.

I claim:

1. A soap containing a soap and from one-twentieth to one per cent of an aromatic amine.
2. A soap containing a soap and one-twentieth to one-half per cent of diphenylamine.
3. A soap containing a soap derived from the fatty acids of cottonseed oil foots and one-twentieth to one-half per cent of diphenylamine.

ROBERT E. DIVINE.