

UNITED STATES PATENT OFFICE.

RUDOLF REISS, OF CHARLOTTENBURG, AND OTTO SCHMATOLLA, OF
BERLIN, GERMANY.

PROCESS OF MAKING MEDICATED SOAPS.

SPECIFICATION forming part of Letters Patent No. 730,018, dated May 17, 1904.

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To all whom it may concern:

Be it known that we, RUDOLF REISS, chemist, residing at 27 Knesebeckstrasse, Charlottenburg, near Berlin, and OTTO SCHMATOLLA, chemist, residing at 63 Klopstockstrasse, Berlin, Germany, subjects of the Emperor of Germany, have invented certain new and useful Improvements in Processes of Making Medicated Soaps, of which the following is a specification.

The present invention relates to the manufacture of soap for medicinal purposes.

It is known that ointment-soaps possess high dermatological value as media or vehicles for medical agents in comparison with ordinary ointments, principally on account of their great capacity of reabsorption. Hitherto, however, it has not been found practicable to manufacture ointment-soaps with which therapeutically valuable medicaments can be incorporated, as sooner or later such soaps decompose, in consequence of which the medicament effect of the incorporated substance or substances is lost. Now we have discovered that the cause of this decomposition is the presence of water in the soap serving as a base. This water causes decomposition of the soap base and also a union of the liberated alkali with the added medicament substance with the liberation of fatty acid. Therefore if water be altogether excluded in the manufacture of soaps of this character it becomes possible, as we have discovered, to produce such a soap which will keep permanently—*i. e.*, will not decompose and lose its medical properties. Such a water-freed soap base can be obtained by any known method of freeing any prepared alkali soap of water; but it has been proven to be materially more advantageous to form the base and manufacture the complete medicated soap itself in a single operation. It is of course essential therein that the added medicated substances be retained as such in the ointment-soap—*i. e.*, that no free alkali whatever be present therein—for substances of this nature when combined with alkali are not taken up by the skin and are therefore entirely useless for the purpose.

To obtain increased power of absorption of the soap base and also to get a homogeneous soap mass, the fatty acid is retained in excess.

As medicament substances for dermatological soaps, salicylic acid, benzoic acid, cinnamic acid, kinic acid, guaiacolsulfonic acid, ethylsulfonic acid, mercuric chlorid, iodine, their combinations, and the like come chiefly into consideration. Any of these substances, though of high therapeutic value, will cause decomposition when water is present in the soap substance. It is serviceable to add to this medicated soap paraffin or vaseline preparations of olefiant or unguentous consistency as used in medicine.

The process in general is the following: The fatty acid to serve as the soap-base is melted together with the vaseline or a paraffin preparation and is then gradually compounded with a quantity of a fixed alkali, insufficient for saturation of the fatty acid, in watery or any alcoholic solution. When the alkali is completely bound, the water is completely driven out of the soft-soap mass so obtained by heating to the requisite temperature. As is self-evident this heating can be done *in vacuo* in order to be able to work at a lower temperature and so obviate a possible decomposition of the organic substances. After the water has been entirely removed one or the other of the before-mentioned medicated substances is incorporated with the soft thoroughly mixed soap base so obtained.

By way of illustration, the following example of manufacturing a particular medicated soap by this process is given: One hundred grams oleic acid are melted together with two hundred grams vaseline, and the fluid mixture so obtained is gradually combined with thirty grams potash-lye of 70° Baumé. The soft-soap mass thus obtained is then heated to about 130° Celsius until all the water is driven off. Thereupon a desired quantity of the medicament to be employed—salicylic acid, for example—is incorporated with this soap base.

The production of other medicated soaps takes place in an analogous way.

Of course the employment of the process herein described is not limited to the medicated substances named, but may be generally applied for all therapeutical purposes.

5 What we claim as new, and desire to secure by Letters Patent, is—

The herein-described process of making medicated soaps, consisting in incorporating a fatty acid with a hydrocarbon to form a
10 soap base, adding a fixed alkali-lye insufficient for saturation to said base, heating the mass

until all the water is driven therefrom, and then incorporating a medicinal substance, substantially as described.

In witness whereof we have hereunto set 15 our hands in presence of two witnesses.

RUDOLF REISS.

OTTO SCHMATOLLA.

Witnesses:

HENRY HASPER,

WOLDEMAR HAUPT.