

UNITED STATES PATENT OFFICE.

ALEXANDER BRICK, OF VIENNA, AUSTRIA-HUNGARY.

PROCESS OF THE MANUFACTURE OF A DISINFECTANT.

No. 929,383.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed March 10, 1908. Serial No. 420,292.

To all whom it may concern:

Be it known that I, ALEXANDER BRICK, a subject of the King of Hungary, and resident of XX, Petraschgasse 4-6, Vienna, Austria-Hungary, have invented a certain new and useful Process of the Manufacture of a Disinfectant Consisting of Formaldehyde and Ethereal Oils.

I do hereby declare the following to be a full clear and exact description of the invention such as will enable others skilled in the art to which it appertains to make and use the same.

Experience has shown that the use of formaldehyde in the form of spray is exceedingly important for disinfecting the interiors of dwellings, restaurants, theaters, etc. The formaldehyde must, however, be employed in such shape that it neither irritates the mucous membrane, nor retains its penetrating odor, but, on the contrary, it should be so combined with ethereal oils as to be invigorating. For this purpose it is necessary to employ the formaldehyde in combination with ethereal oils and with such a solvent, that it forms an emulsion with the ethereal oils with which it is combined, also with water, and that it can be sprayed with this. This object is best obtained, by proceeding as follows:—A mixture is made of about 2 kilos. of soap solution containing about 40% alcohol (this can be soda or potash soap), $\frac{1}{2}$ kilo-gram rosemary oil, 2 kg. juniper oil, $\frac{1}{2}$ kilo. oil of juniper berries, 200 grams essence of turpentine, $\frac{1}{2}$ kilo. geranium oil, 5 kilos. Neustadt turpentine, 2 kilos. oil of lemon, and, eventually, 10 grams musk. To this mixture, there are added, in the reflex cooler, under constant heat and stirring, gradually, 5 kilos. formaldehyde. The formaldehyde can then be added as 40% solution to the

mixture, or paraformaldehyde can be heated in a retort, and the gas developed therefrom conducted into the liquid, in the reflex cooler. In both cases the mixture during the addition of the formaldehyde is kept constantly at a temperature of about 30° C. The paraformaldehyde can, however, also be put into the mixture and carried over in the form of gas by heating. In this last case, however, the mixture must be heated to at least 103° C.

The heating of the mixture in the reflex cooler is continued some time after the addition of the formaldehyde, and thereby condensation products of the formaldehyde are obtained with the ethereal oils, which, when highly diluted with water, decompose into their components, namely, the active formaldehyde and into ethereal oil. The essence recovered in the reflex cooler is, after cooling, mixed with three to four times the amount of potash or soda soap made from sesame or other oils, which soap contains about 30% of free unsaponified oil and is combined with about 5% of alcohol.

Having thus fully set forth and described my invention, what I claim is:

The process of manufacturing a disinfectant, which consists in mixing a soap solution containing alcohol with ethereal oils, adding formaldehyde to this mixture, heating this mixture combined with formaldehyde, allowing this mixture to cool, and adding to the cooled mixture incompletely saponified oils containing alcohol.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

ALEXANDER BRICK.

Witnesses:

ALFRED KLOSS.

ROBERT W. HEINGARTNER.