

N^o 18,460



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PROVISIONAL SPECIFICATION.

Improvements in Disinfectants and Antiseptics, and in Disinfectant and Antiseptic Soaps.

I MARK HARGREAVES of Fylde Road, Preston, in the County of Lancaster, Chemist, do hereby declare the nature of this invention to be as follows:—

My invention consists in forming chlorophenol acids by combining carbolic or cresylic acids, vegetable tar, or the like (hereinafter referred to as phenols) with chlorine in suitable proportions, and at suitable temperatures, and forming readily decomposable chlorophenol salts by combining the said chlorophenol acids with alkali or alkaline earth.

The said chlorophenol acids may be formed by blowing chlorine gas through the said phenols or by passing the said phenols down a suitable tower in which a current of chlorine gas ascends, or by other suitable means chlorine gas is caused to pass through or amongst the said phenols.

I directly form the said chlorophenol salts by adding hypochlorites or equivalent salts of the alkalies or alkaline earths in presence of water to the said phenols, or I pass chlorine gas through or amongst, or I mix hypochlorites with the said phenols when combined or mixed with alkali or alkaline earth in the presence of water.

To obtain the said chlorophenol acids or salts for use as disinfectants in the form of powder I mix the said acids or their salts (preferably in solution) with suitable powdery absorbents such as lime or its carbonate, sand, sawdust or like materials.

Carbonate of lime (preferably after being thoroughly dried by heat) resulting as a bye product in the manufacture of caustic soda is suitable for use as an absorbent.

When a disinfectant or antiseptic soap is desired I mix the hereinbefore described chlorophenic acid or its salts with any ordinary soap.

Dated this Eighteenth day of November 1889.

Per pro. J. T. KING,
W. B. Johnson,
Agent.

COMPLETE SPECIFICATION.

Improvements in Disinfectants and Antiseptics, and in Disinfectant and Antiseptic Soaps.

I MARK HARGREAVES of 7 Fylde Road Preston in the County of Lancaster, Chemist do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

First. My invention consists in forming chlorophenol acids and like chloro compounds suitable for use as disinfectants and antiseptics by combining carbolic or cresylic acids, vegetable tar, or the like (hereinafter referred to as phenols) with chlorine in suitable proportions, and at suitable temperatures and forming readily decomposable chlorophenol salts by combining the said chlorophenol acids with alkali or alkaline earth.

The said chlorophenol acids may be formed by blowing chlorine gas through the said phenols or by passing the said phenols down a suitable tower in which a current of chlorine gas ascends, or by other suitable means chlorine gas is caused to pass through or amongst the said phenols. I combine about three parts by weight of chlorine with about two parts of phenols. During combination much heat is evolved; I keep the temperature of the phenols below boiling point and preferably between 100°

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Hargreaves' Improvements in Disinfectants and Antiseptics, &c.

and 180° F. by surrounding the vessel in which the operation is performed, with cold water, or other convenient method of cooling may be employed.

Second. In practice I find it preferable to form directly the said chlorophenol salts and I do this by adding hypochlorites or equivalent salts of the alkalies or alkaline earths in presence of water to the said phenols or I pass chlorine gas through or amongst the said phenols when combined or mixed with alkali or alkaline earth in the presence of water. Chlorophenol lime salts are readily obtained suitable for purpose described, by adding solution of bleaching powder to phenols, sufficient bleaching powder is added to give the relative quantity of free chlorine to the said phenols as described under first part. A solution of bleaching powder is used sufficiently dilute and suitable means taken to avoid excessive heating of the solution during the reaction, chlorophenol soda salts may be obtained by adding sulphate, carbonate or caustic soda to a solution of chlorophenol lime salts when sulphate, carbonate or hydrate of lime are precipitated and separated by any convenient method. Or chlorophenol soda salts may be formed by adding solution of hypochlorite of soda to the said phenols. 10 15

Third. To obtain the said chlorophenol acids or salts for use as disinfectants in the form of powder, I mix the said acids or their salts (preferably in solution) with suitable powdery absorbant such as lime or its carbonate, sand, sawdust or like materials. Salt or crude sulphate of soda (salt cake) rendered neutral or alkaline forms a convenient soluble absorbant. Carbonate of lime (preferably after being thoroughly dried by heat) resulting as a bye product in the manufacture of caustic soda is suitable for use as an absorbant. 20

Fourth. When a disinfectant or antiseptic soap is desired I mix the hereinbefore described chlorophenic acids or its salts with any ordinary soap. Solution of chlorophenol salts are preferably incorporated after saponification of the fat. In dry soap consisting for the greater part of carbonate of soda with only a small quantity of fat I preferably add a solution of chlorophenate of soda to a solution of soap and afterwards mix therewith the desired quantity of carbonate of soda. 25

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is :— 30

First. Treating phenols with chlorine substantially as described under the first part to obtain products suitable for use as disinfectants and antiseptics.

Second. Chlorophenol salts of the alkalies or alkaline earths obtained substantially in the manner and for purpose set forth under second part. 35

Third. Mixing chlorophenol salts of the alkalies or alkaline earths with absorbants to form disinfecting powder substantially as described under third part.

Fourth. The admixture of chlorophenol acids or salts with soap or equivalent material for use in washing to form disinfectant and antiseptic soap.

Fifth. Obtaining chlorophenol salts substantially in the manner and for the purposes set forth under the several heads. 40

Dated the Sixteenth day of August 1890.

Per pro. J. T. KING.
J. Johnson,
Agent. 45



