

292

ALIEN PROPERTY CUSTODIAN

REFINED CELLULOSE AND METHOD FOR OBTAINING THE SAME

Erich Opfermann, Berlin-Charlottenburg, Germany; vested in the Alien Property Custodian

No Drawing. Application filed November 25, 1940

This invention relates to refined cellulose and method for obtaining the same, and more particularly to cellulose cooked according to the acid disintegration process.

An object of this invention is to inexpensively and easily obtain a uniform refined cellulose derived from wood having a large amount of leafy material and other impurities.

Another object of this invention is to provide a method for removing impurities from cellulose in a simple, inexpensive manner.

A further object of this invention consists in an improved method for treating cellulose to remove very fine cellulose particles such as parenchyma, sclerenchyma, pith ray and epidermal cells.

A still further object of this invention consists in treating cellulose, particularly such made by the acid disintegration process, with alkaline earths to remove the undesired fine particles and agglomerate the slime and mealy materials contained therein.

An additional object of this invention consists in treating cellulose, particularly such made by the acid disintegration process, with alkali in combination with alkaline earths or with chemically indifferent materials favoring the agglomeration of slime and fine material.

In my prior copending application Serial No. 330,469, filed April 19th, 1940, I proposed a novel method for the treating of cellulose to remove the undesired fine particles and agglomerate slimy and mealy materials by the use of milk of lime. I have now discovered that the alkaline earths, including magnesium hydroxide may be used with advantage, as also alkalis in combina-

tion with alkaline earths as well as alkalis mixed with chemically indifferent substances favoring the agglomeration of the slimy and fine matters. These materials can be used in the stated combination alone or can be further mixed with one another. As the chemically indifferent materials favoring the agglomeration of the slime and fine materials in the cellulose, which result particularly when cellulose is derived from leafy wood or raw material with an extraordinarily high content of accompanying elements, I prefer to use such materials as fuller's earth, silicagel, or the like.

The treatment of the cellulose material with alkaline earths, alkalis mixed with alkaline earth, or alkalis mixed with chemically indifferent agglomerating material can take place at any stage of the preparation or bleaching of the cellulose, and may be repeated during different stages of the cellulose treatment process, if desired. Preferably, the treatment of the cellulose material in accordance with this invention is followed by a supplemental mechanical wash upon the usual apparatus to remove the slimy and mealy materials which have been separated from the main cellulose fibers and agglomerated by the action of the alkaline earths and the alkalis.

The method according to this invention can also be combined with advantage with the well known hot or cold alkaline refining process.

The advantage of the present invention lies in the fact that by reason thereof the cellulose is improved in its chemical, physical and paper-technical characteristics by the use of inexpensive, readily obtained material.

ERICH OPFERMANN.