

UNITED STATES PATENT OFFICE.

VIGGO DREWSSEN, OF NEW YORK, N. Y.

PROCESS OF MAKING WOOD-PULP.

SPECIFICATION forming part of Letters Patent No. 730,439, dated June 9, 1903.

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To all whom it may concern:

Be it known that I, VIGGO DREWSSEN, a citizen of the Kingdom of Norway, residing in the city of New York, county of Kings, and State of New York, have invented a new and useful Improvement in Processes of Making Wood-Pulp, of which the following is a specification.

It is known to those skilled in the art that when wood is cooked in the bisulfite liquor the liquor must penetrate the wood thoroughly before the temperature of the contents of the digester is raised above the boiling-point of water. If the wood chips are not thoroughly permeated by the liquor, the sulfurous gas and the steam in the digester will cause the incrusting or non-fibrous material to turn brown, and thus produce spots in the pulp.

The object of my invention is to cure this defect.

The ideal method would be to exhaust the air from the digester containing the wood and then force the cooking liquor into the wood under pressure before the steam is admitted to the contents of the digester; but this method of producing a vacuum and the use of pressure is too expensive for practical use. I have found that practically the same result can be obtained if the wood chips are dipped into a suitable liquor at ordinary temperatures and stored in the bins before the wood is introduced into the digester. It would not be practical, however, to use the ordinary bisulfite of lime liquor for this purpose, because the odor of the sulfurous acid is too strong and offensive and because the acid liquor destroys the material of which the bins are composed.

My invention consists in the discovery that I can obtain the desired result by soaking the wood chips prior to their introduction into the digester and the ordinary cooking liquor in a solution of a monosulfite which is soluble in water, such as Na_2SO_3 , MgSO_3 , &c. The water solution of the monosulfite is neutral, or slightly alkaline, has no odor, and does not attack the material composing the bins. The strength of the solution may of course be varied; but I have found that a solution of four parts of sodium sulfite ($\text{Na}_2\text{SO}_3\text{7aq}$) to one hundred parts of water is efficient.

Having thus described my invention, what I claim is—

1. In the process of making wood-pulp by the bisulfite method, the preparatory soaking of the wood at ordinary temperatures, before introduction into the digester and the cooking liquor, in a solution of a monosulfite which is soluble in water, for a sufficient length of time to enable the solution to permeate the wood, substantially as and for the purpose described.

2. In the process of making wood-pulp by the bisulfite method, the preparatory soaking of the wood at ordinary temperatures, before introduction into the digester and the cooking liquor, in a solution of magnesium monosulfite, MgSO_3 , for a sufficient length of time to enable the solution to permeate the wood, substantially as and for the purpose described.

VIGGO DREWSSEN.

Witnesses:

EDMUND ELLSWORTH FIELD, Jr.,
M. GINTZLER.