

UNITED STATES PATENT OFFICE.

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BLEACHING COMPOUND.

SPECIFICATION forming part of Letters Patent No. 480,554, dated August 9, 1892.

Application filed April 27, 1892. Serial No. 430,889. (No specimens.) Patented in Belgium May 11, 1892, No. 75,304.

To all whom it may concern:

Be it known that I, WILLIAM BAYNUM BRITTINGHAM, a citizen of the United States, residing in the city, county, and State of New York, have invented and produced a new Composition—to wit, a Bleaching Compound, (for which I have obtained Letters Patent in Belgium, bearing date May 11, 1892, and numbered 75,304)—of which the following is a specification.

My invention relates to the employment of tungstate of potassa or soda or the tungstate of any other alkali, together with hypochlorite of lime (bleaching-powder) and water.

My invention relates, broadly, to the employment and utilization of tungstate of soda, potassa, or any other alkali adapted to be employed in the manner hereinafter indicated; but in carrying my invention into effect, although I may employ tungstate of soda or potassa or the tungstate of any other suitable alkali, I prefer tungstate of soda, and will speak of tungstate of soda specifically, although I wish it to be understood that I do not limit myself in this respect, but may employ tungstic acid in combination with any other alkali.

It is well-known that in the ordinary process of bleaching several steps are necessary in order to render the fabric pure and white, so that it can take a color. For example, in order to remove the gummy substances the goods are ordinarily submitted first to a liming process, after which they are boiled under pressure. Then they are subjected to a scouring in order to remove the lime and then washed in water in order to remove the acid, and finally passed through the hypochlorite solution.

In carrying my invention into effect I take a pint of water and mix therewith half an ounce of tungstate of soda, and in this solution I immerse the fabrics to be treated, having previously washed the goods in a manner

similar to the washing employed in other bleaching processes, leaving the goods in the above solution for five, ten, or fifteen minutes, according to the nature of the fabrics. They can remain in longer, if desired, and while so immersed are agitated. At the proper moment I add to this solution and while the fabrics are still immersed hypochlorite of lime or hypochlorite of soda (the ordinary bleachers of commerce) in the following proportion, to wit: half a pound to four gallons of water. The whole is then stirred, and the operation is completed in a period of time varying from ten minutes to an hour. Upon the introduction of the hypochlorite the chlorine will be immediately set free in large quantities, and at the end of the time named the fabrics will be entirely bleached. When adding the hypochlorite of lime or soda to the mixture, the resultant solution may be heated, as the operation is carried into effect much better under a high temperature than under a low; but the heat is not absolutely necessary, and the entire process may be carried on with cold water. Tungstic acid dissolves but slightly in water; but in combination with soda and chlorine the composition dissolved in water is immediately transformed into a powerful bleaching agent.

I am aware of the fact that tungstate of soda has been used before as a mordant; but I have discovered that tungstate of soda used in connection with hypochlorite of lime is a powerful bleaching agent.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

A bleaching compound consisting of the tungstate of an alkali combined with a hypochlorite.

WILLIAM B. BRITTINGHAM.

Witnesses:

HERBERT KNIGHT,
M. V. BIDGOOD.