No. 872,097. PATENTED NOV. 26, 1907.

R. VAN BUGGENHOUDT.

PROCESS OF BLEACHING COTTON FIBERS.

APPLICATION FILED DEC. 22, 1906.

Fig. 1.

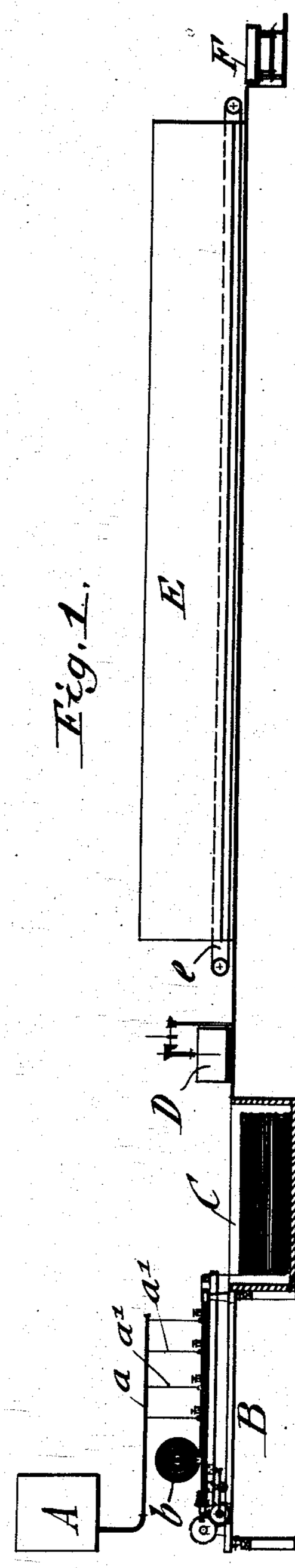
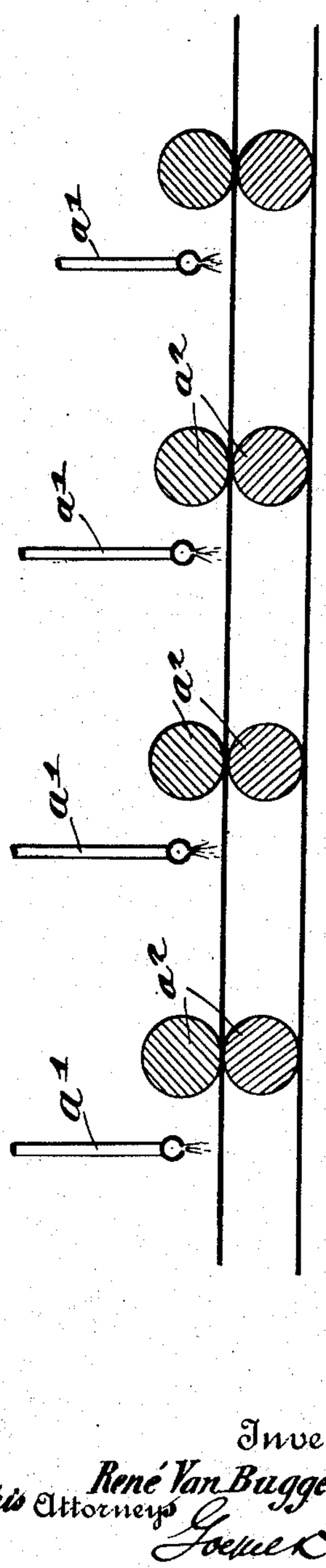


Fig. 2.



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RENÉ VAN BUGGENHOUDT, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO OTTO GOETZE, OF NEW YORK, N. Y.

PROCESS OF BLEACHING COTTON FIBERS.

No. 872,097. Specification of Letters Patent. Patented Nov. 26, 1907.

Application filed December 22, 1906. Serial No. 349,188.

To all whom it may concern:

Be it known that I, RENÉ VAN BUGGENHOUDT, a citizen of the Kingdom of Belgium, residing in New York, in the borough of the Bronx, county and State of New York, have invented certain new and useful Improvements in Process of Bleaching Cotton Fibers, of which the following is a specification.

This invention relates to an improved process of bleaching fibers, such as cotton, flax, jute, ramie, hemp and the like, also manufactures made from said fibers, such as yarns or cloth; and for this purpose the invention consists of the process of bleaching fibers, comprising novel steps which will be hereinafter described and claimed.

In the accompanying drawing, Figure 1 illustrates diagrammatically the apparatus by which the improved process is carried out, and Fig. 2 shows a detail of the spray-pipes and squeezing-rollers.

In carrying out my improved process the fibers are delivered in a lap or sliver to an endless apron and subjected to successive sprays of a bleaching medium, such as a solution of sodium or potassium hypochlorite containing from 0.2 of 1% up to 2% of available chlorin. Between the repeated operations of spraying, the fibers are conducted through squeezing-rollers, the operation of spraying and squeezing being repeated until a uniform and complete saturation of the fibers is obtained. The fibers are then delivered automatically from the apron in superposed layers into a tank, by moving the apron to and fro over the tank. The impregnated fibers are then permitted to stand for about two hours or longer in the tank, until the bleaching operation is completed, which can be lengthened or shortened according to the material to be treated. When the action of the bleaching medium on the fibers in the tank is completed, water at ordinary temperature is let into the tank from the bottom and made to pass upwardly through all the layers in the tank so that the bleaching medium is thoroughly washed out of the fibers. After the washing is completed, the water is drawn off from the tank and the lap or sliver of fibers taken from the tank to an extractor so as to remove the largest amount of water by centrifugal force in the well known manner. The fibers are then removed from the extractor and dried in the open air or conducted through a drier, after which the bleached fibers are ready to be spun in the usual way.

In the drawing A denotes the tank in which the bleaching solution is contained.

B is the apparatus upon which the roll of fibers *b* is supported, and which embodies an apron to carry the fibers while they are being sprayed with bleaching solution by means of pipes a^1 leading from the pipe *a* of the supply-tank. Between the spray-pipes a^1 there are arranged the squeezing-rollers a^2.

C denotes the tank to which the fibers are carried after being subjected to the spraying and squeezing operations described.

D is the centrifugal extractor by means of which the water is removed from the fibers after the washing operation has been completed. From said extractor the fibers are carried through a heated drier E by means of an endless apron *e* and said fibers are delivered from said apron, after having been effectively dried, to a car or vehicle F.

For cleaning the fibers in conjunction with bleaching the same, an alkaline solvent is added to the bleaching solution, which solvent has the property of removing the fatty matter and other impurities contained in the fibers, producing thereby the cleansing of the fibers simultaneously with the bleaching of the same.

My improved process has the advantages that it shortens the time of bleaching fibers, considerably, is carried out at ordinary temperature, dispenses with the use of a keir, and produces a uniform and reliable bleaching action on the articles treated.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

The herein described process of bleaching fibers, which consists in moving the same by means of an apron to a tank and meanwhile alternately spraying the same with a bleaching solution and squeezing the same, then permitting the impregnated fibers to remain in moist condition until the bleaching action is completed, then immersing or

saturating with water to wash the fibers and thoroughly remove the bleaching solution, draining off the water, subjecting the fibers to the action of an extractor for removing the excess of water, and finally further drying the fibers by heating the same.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

RENÉ VAN BUGGENHOUDT.

Witnesses:
PAUL GOEPEL,
HENRY J. SUHRBIER.