

UNITED STATES PATENT OFFICE.

JULES PIERRE ARSENE BLAYE, OF PARIS, FRANCE.

PROCESS OF REDUCING RAMIE OR LIKE MATERIAL TO FIBER.

SPECIFICATION forming part of Letters Patent No. 523,509, dated July 24, 1894.

Application filed April 21, 1892. Serial No. 430,125. (No specimens.) Patented in France November 29, 1890, No. 209,889; in Germany March 6, 1891, No. 60,433, and in England August 1, 1891, No. 13,072.

To all whom it may concern:

Be it known that I, JULES PIERRE ARSENE BLAYE, a citizen of the French Republic, residing at Paris, in the Department of the Seine, France, have invented an Improved Process of Reducing Ramie or Like Material to Fiber, (for which I have received the following Letters Patent: in France November 29, 1890, No. 209,889; in Great Britain August 1, 1891, No. 13,072, and in Germany March 6, 1891, No. 60,433,) of which the following is a specification.

This invention is designed to clean ramie and the like and reduce it to a fiber by removing the pellicles on the stem and which adhere to the fiber and by removing also the gums or like elements.

The present improvement in the stripping of China-grass, hemp or flax, consists in the addition of alum to the alkaline baths used for that purpose. The addition of alum causes a greater solidity and a greater coherence of the fibers of the plant upon the stem and makes them easily removable from said stem by the hand in such cohesive state.

I preferably use for the stripping, a bath consisting of one hundred liters of water, ten kilograms slacked lime and two and one-half kilograms carbonate of soda to which two kilograms of alum are added. The alum is first dissolved in water of about 15° centigrade which is afterward filtered to remove impurities and added to the bath. The bath is put into a tub of forged or cast iron and is heated; as soon as it commences to boil the stems of the China grass, hemp or flax, no matter whether green or dry are dipped into the

same; at a temperature of from 95° to 100° centigrade; the China grass must remain in it about thirty-five minutes, the flax about twenty minutes and the hemp about fifteen minutes. Afterward the stems are taken out and put into clean, lukewarm water. The outer skin can now easily be removed with the aid of a piece of linen by passing the stems between the fingers and the cohering fibers can be stripped from the stem, by means of the hand, without further washing. The fibers retain their cohesion and after being dry are ready for further working.

The fact that the fibers can be stripped while in perfect cohesion can be explained by the well known property of the alum, to coagulate tan waste substances, especially tannin. As the fibers of China grass, hemp and flax contain tannic bitter principles, these substances coagulate by the working of the alum. Therefore the fibers attain a greater solidity and a greater cohesion upon the stem and the stripping with the hand is possible. Without the use of alum the fibers become loose and without cohesion.

I claim—

The hereinbefore described process of treating ramie and the like, consisting in subjecting said material to an alkaline bath containing alum, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JULES PIERRE ARSENE BLAYE.

Witnesses:

ROBT. M. HOOPER,
JULES FAYOLTY.