United States Patent Office.

JAMES MONACH, OF PHILADELPHIA, ASSIGNOR TO HIMSELF, JEFFERY HART, AND ROBERT THORP, OF CONSHOHOCKEN, PENNSYLVANIA.

Letters Patent No. 74,113, *dated February* 4, 1868.

IMPROVEMENT IN TREATING JUTE-FIBRE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES MONACH, (assignor to myself, Jeffery Hart, and Robert Thorp,) of Philadelphia, Pennsylvania, have invented an Improved Substitute for Wool and Similar Fibres; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of jute treated with caustic alkali, of about the strength of 60° Twadell's hydrometer, substantially as described hereafter, so as to render it available as a substitute for or to be mixed with wool and other fibres, in the manufacture of yarn and textile fabrics.

In order to enable others to make my invention, I will now proceed to describe a mode of carrying the same into effect.

I have ascertained, after repeated trials, that jute-fibres may be rendered so tough and elastic as to be but little if any inferior, as regards these qualities, to wool, by boiling the fibres in and contracting and otherwise changing them by caustic alkali, of about the strength of 60° of Twadell's hydrometer.

After being boiled for about two hours, the mass of fibres is removed from the vessel in which they were boiled, washed in clean water, then steeped for a short time in a weak solution of sulphuric acid and water, or other liquid, which will neutralize or remove the alkali, after which it is again washed in water, and afterwards dried, when it is ready for the manufacturer as a substitute for wool, which it very closely resembles both in appearance and quality of fibre.

The improved fibre thus produced admits of being picked and carded by machinery similar to that used in operating on wool, and can be bleached or dyed, and spun into yarn, and converted into substantial textile fabrics, either alone or in conjunction with wool or other fibres.

I am aware that it has heretofore been usual to boil jute and other fibres, prior to dyeing and manufacturing into yarn, in a solution of alkali, of a strength not exceeding three or four degrees Twadell's hydrometer. I have found, however, that the jute-fibre is not contracted and changed in character so as to resemble and be an efficient substitute for wool without it is boiled in caustic alkali of a strength of about 60° Twadell's hydrometer. Without, therefore, claiming broadly a fibre produced by the action of an alkaline solution upon jute-fibre,

I claim as my invention, and desire to secure by Letters Patent, as a new manufacture—

Jute-fibres treated with caustic alkali, of a strength of about 60°, substantially as described, for the purpose specified.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES MONACH.

Witnesses:

H. HOWSON,

C. B. PRICE.