

UNITED STATES PATENT OFFICE.

SANDS OLCOTT, OF NEW HOPE, PENNSYLVANIA.

IMPROVEMENT IN THE MODE OF PREPARING FLAX AND HEMP PREPARATORY TO THE VARIOUS PROCESSES OF CLEANING AND SEPARATING THE FIBERS, &c.

Specification forming part of Letters Patent No. **1,532**, dated March 31, 1840.

To all whom it may concern:

Be it known that I, SANDS OLCOTT, of New Hope, in the county of Bucks and State of Pennsylvania, have invented a new and useful Improvement in the Mode of Cleaning and Separating the Fibers of Flax and Hemp; and I do hereby declare the following to be a full and exact description of the method of doing it.

To enable others skilled in the art to use my invention, I will proceed to describe its operation.

I take a quantity of flax or hemp, rotted or not rotted, that has been partially broken either by hand or machinery, and convert it into an endless rove or belt. This may be done by spreading it on a long table and twisting it so that it will hold firmly together and splicing the two ends together. This rove should weigh about two pounds to the yard, and may be as long as the operator may find convenient. I have found it most practicable to make the roves to weigh about forty pounds. This rove I pass in the manner of a belt between a series of fluted rollers until the woody parts are entirely disengaged and the fibers split as required. It may then be steeped in water until the vinous fermentation takes place. Then draw off the water and add fresh water several times. You may then boil it, subject to a high pressure of steam, or steep it in a solution of chloride of lime and souring, or perform any of the known operations of bleaching, as the quality of the article desired to be produced may require. After I have completed the bleaching I again pass it between the rollers, as above mentioned, or repeat the operation as frequently during the bleaching process as experience may dictate. I do not confine the operator to the use of the fluted rollers; but he may use any process that will produce a similar effect. After I have continued the operation and the flax or hemp has become white, or as nearly so as required, it is then dried, and, when perfectly dry, subjected again to the action of the fluted rollers until, as before, all the fibers are completely fine and separated. It is then fit for the

hackling or spinning process, as the case may require. When the article to be produced is desired to be very fine I break the endless rove on a coarse hackle, (after it has been between the fluted rollers the first time and before it is steeped,) so as to allow as much of the shives and dust to work out as possible, and convert it a second time into an endless rove, in order to complete the operation. The ordinary cleansed flax of commerce is cleansed and made fine in the same way, with the exception it is not usually required to be worked between the fluted rollers before it is steeped.

For all ordinary purposes chemical operation of every description may be dispensed with. In that case I follow the following process: I take the rough endless rove and pass it between the rollers, in the manner before described, until the wood is entirely separated and assumes the form of dust or fine shives. I then allow one side of the rope to pass through water at the same time the opposite side is passing between the rollers. This will extract the gum and leave the material nearly white. I then dry the rove and run it again between the rollers until the fibers are again separated. The rove is then broken in pieces and the wood and dust shaken out and made into heads or equalized for spinning.

The advantages of this process are over all others: First, it is more easily and continually subjected to the action of machinery that will separate the wood and split the fibers; second, it is more easily handled and dried; third, the fibers are kept straight and clear amid the process and cause less waste.

What I claim as new and as my invention, and desire to secure by Letters Patent, is—

The shape in which I place the material to be worked, or, in other words, the conversion of hemp or flax to be acted on into an endless rove or belt, so that it may continue to pass in and out of the machinery after the manner of a belt.

SANDS OLCOTT.

Witnesses:

SARAH OLCOTT,
B. M. CUTTER.