

UNITED STATES PATENT OFFICE.

LEWIS C. SUGGETT, OF SPRING DALE, KENTUCKY.

IMPROVEMENT IN PROCESSES FOR TREATING HEMP.

Specification forming part of Letters Patent No. **10,968**, dated May 23, 1854.

To all whom it may concern:

Be it known that I, LEWIS C. SUGGETT, of the city of Lexington, in the county of Fayette and State of Kentucky, have invented new and useful improvements in the process of manufacturing and preparing hemp and similar fibers preliminary to their conversion into yarn or cordage; and I do hereby declare the following specification to contain a full, clear, and exact description of the nature and operation thereof.

My improvements have for their object, first, the preservation unimpaired of the original maximum toughness and flexibility of the fibers during the processes of maceration and separation of the gum from the lint; secondly, the acceleration of the process of cleaning and detaching the harl or lint from the gum or floccula; thirdly, the thorough farring, pitching, or oiling of the fibers, while in the separate condition, as a preliminary to spinning, &c.

The stage of growth of the hemp at which the stalk should be gathered to possess the maximum toughness, tenacity, and pliability is usually from seven to ten days before the ripening of the stalk, and the present custom of gathering it at the latter stage arises from the greater liability to decay of the lint or fiber at the earlier stage of its growth under the customary processes for dissolution and separation of the albuminous and flocculent substances which accompany and cement together the fibers; and it is also the case that the delay thus necessitated very much increases the difficulty of separation, because the cementing qualities of the gum become of a much more tenacious and refractory character as the stalk reaches the last stages of ripening. Hemp which has been sown in the latitude of Kentucky on about the first of May I usually gather during the second and third weeks in July, depending of course on the season and crop, the test being the first appearance of lint on the stalk and a yellow tinge on the latter. They are not, however, to be all gathered at once, but according to their ripeness. The stalks then, after hav-

ing been passed between fluted rollers or sufficiently beaten to loosen the fibers, are immersed in a solution of common salt maintained at a temperature of about 70° Fahrenheit. After six hours of maceration in the brine they are subjected to the customary alkaline bath for about two hours, and then washed in soap-suds, and finally well rinsed in soft water before drying in the sun and air. The boon is then to be broken and dislodged from the harl in any approved way, and if it is desired to have the twine or cordage saturated with tar, pitch, or oil the hemp is at this stage boiled therein until the moisture has been thoroughly dissipated and the tar is in the most intimate juxtaposition with every fiber. All the superfluous tar is then expressed by passing the hemp between hot rollers.

Hemp made in this way, being much cheaper than that prepared by the methods now practiced, can be advantageously mixed with the latter in weaving, &c., and the softness and sound condition of the fibers will give to the goods a remarkable character for durability.

Having thus described the nature and operation of my invention, what I claim therein as new, and desire to secure by Letters Patent, is--

1. The application of common salt or other saline substance to the steep water in order to enable the removal and separation of the gum at the most advantageous condition of the lint or harl in regard to toughness and pliancy, and before the induration of the gum about the fibers, without endangering the strength of the latter by decay.

2. The saturation of the fiber and expulsion of its moisture by immersion in boiling tar, pitch, or oil for the purpose of more thorough and intimate application of the preserving substance to the fibers preliminary to their conversion into twine or cordage.

LEWIS C. SUGGETT.

Witnesses:

JOHN A. LEWIS,
THOS. WOOD, Jr.