

UNITED STATES PATENT OFFICE.

ISAAC D. NÖRDLINGER, OF STUTTGART, WÜRTEMBERG, GERMANY.

IMPROVEMENT IN PROCESSES FOR DISINTEGRATING THE STALKS OF HOPS.

Specification forming part of Letters Patent No. **209,286**, dated October 22, 1878; application filed September 4, 1878.

To all whom it may concern:

Be it known that I, ISAAC D. NÖRDLINGER, of Stuttgart, Würtemberg, Germany, have invented a new and useful Process for Disintegrating the Stalks of Hops, which invention is fully set forth in the following specification.

The object of this invention is the production of long fibers adapted for spinning by disintegrating the stalks of hops, which stalks at present are valueless. These fibers are so long and fine that they can not only be used as an upholstering material, but also with great advantage for spinning and weaving.

The above-named fiber resembles flax fiber very closely, and in respect to elasticity, softness, and durability it is superior to all other fibrous materials, such as nettle fiber and articles of a similar nature. It is also much cheaper than these articles.

As already stated, the stalks or tendrils of hops are the raw product for the production of the fibers. These stalks, after the clusters have been plucked, are at present burned on the field or are used as manure, and they can be obtained in great quantity in places where hops are cultivated.

In carrying out my invention these stalks or tendrils are boiled for about three-quarters of an hour in water, to which some soap and soda have been added; in a closed pot or ket-

tle. Then the stalks which have been thus prepared are washed in clean water, the scales are peeled off, and the fibers are boiled a second time for about three-quarters of an hour in water to which some vinegar or acetic acid has been added. Finally, the fibers are washed in clean water and dried, after which they are ready to be hackled.

The remaining processes or manipulations, as well as the bleaching, are the same as those of all known fibers of the textile industry. The refuse material is well adapted as an upholstering material.

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

The herein-described process for disintegrating the stalks of hops for the production of fibers adapted for spinning and weaving, by first boiling the same in water containing soap and soda, then peeling off the scales, then boiling again in water containing vinegar or acetic acid, and finally hackling and bleaching the same, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 12th day of August, A. D. 1878.

ISAAC D. NÖRDLINGER. [L. S.]

Witnesses:

R. M. JACKSON,
JOHANN ROSER.