

UNITED STATES PATENT OFFICE.

THOMAS CROSSLEY, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN CLEANING WOOL OF BURRS, &c.

Specification forming part of Letters Patent No. **141,038**, dated July 22, 1873; application filed July 2, 1873.

To all whom it may concern :

Be it known that I, THOMAS CROSSLEY, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented an Improved Process of Cleaning Wool, of which the following is a specification:

Wool of all grades is mixed more or less with vegetable matters, and especially with burrs, the beard or claws covering which become so entangled with the fibers of the wool that it is utterly impossible to remove the burrs by mechanical means alone without injuring the fiber of the wool until these claws have first been disintegrated. The most successful chemical process of disintegrating the beard of the burr heretofore practiced consisted in treating the wool with an acidulous solution, in which it remained immersed until the beard of the burr became sufficiently corroded to crumble under the action of the burr-picker. The acidulous solution, to be effective upon the beard of the burr, had to be made so strong that it attacked the fiber of the wool also, and to a certain extent injured its luster and fulling quality. The object of my invention is to provide a chemical process for disintegrating the beard of the burr and other vegetable matters mixed with and entangled in wool without injuriously affecting the fiber of the wool; and it consists in passing sulphuric acid or sulphurous-acid gas through the wool.

In practicing my process the wool, after having been thoroughly washed and scoured and again dried in the hydro-extractor, is spread loosely to a thickness of, say, four or six inches, upon a rack elevated about four feet above the floor of the bleach-house. The

rack may be made of boards set up on edge, about an inch and a half apart. The sulphurous-acid smoke, being introduced under the rack, rises and penetrates every particle of wool spread upon it, corroding and disintegrating the beards of the burrs and every atom of vegetable matter entangled in it without in the least corroding or otherwise injuring the fibers of the wool. After this treatment the wool is again thoroughly dried, and subsequently subjected to the action of the burr-picker, which at once reduces the beards of the burrs and seeds to dust, (to be removed by currents of air passed through the wool,) and readily extracts the berry or body of the burr or seed from the wool without breaking its fiber.

The sulphurous acid or sulphuric acid may be generated by burning sulphur and saltpeter, mixed in the proportion of one part, by weight, of saltpeter to five parts, by weight, of sulphur, in a suitable vessel placed under the rack carrying the wool.

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

The process of disintegrating the beard of burrs, seeds, and other vegetable matters entangled in wool by passing a sulphuric or sulphurous acid smoke through the wool, substantially as specified.

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

THOS. CROSSLEY.

Witnesses:

HERMAN BEACH,
O. H. A. BROTHWELL.