UNITED STATES PATENT OFFICE.

SAM S. EASTWOOD, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN PROCESSES FOR REMOVING BURRS, &c., FROM WOOL.

Specification forming part of Letters Patent No. **174,509**, dated March 7, 1876; application filed October 25, 1875.

To all whom it may concern:

Be it known that I, SAM S. EASTWOOD, of the city of Louisville, in the county of Jefferson and State of Kentucky, have invented or discovered a new and useful Process for Removing Burrs and other Vegetable Matter from Wool; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to use the same.

This invention relates to a new and useful process employed for removing burrs and other vegetable matter from wool by means of sulphuric acid, heat, and a mixture of alkaline and oleaginous substances.

In carrying out this my invention, I take the wool in its raw state and I subject it to a rolling or beating process, in order to crush or pulverize the burrs or other matter, so as to reduce it to a condition that it may be easily removed without injury to the wool fiber, which is done by passing it through a suitable beater-machine, which removes a large portion of the matter, after which, in order to remove what remains, I immerse the wool in a mixture of sulphuric acid and water of a definite specific gravity, and for a definite length of time, both varying with the fineness and strength or quality of the wool to be acted upon, and the temperature at which the operation is effected, but in no case should the acid be so strong or the temperature so high as to injure the wool fiber. After being treated in the manner above described, and the wool being deprived of most of its moisture, it is then subjected to a definite heat in vacuum, the degree of heat and time of exposure varying with the quality of the wool, after which it is immersed in an alkaline mixture of definite specific gravity, in which is incorporated a variable amount of oleaginous matter, the gravity of the alkaline mixture and the quality of the oleaginous matter and time of immersion varying with the quality of the wool to be acted upon, after which it is taken out and dried in a vacuum, and subjected to the ordinary process for cleaning, all of which is accomplished without loss of material or injury to the fiber, and the wool is left in a clean, soft, and natural condition, ready for use.

I am aware that wool has been treated with sulphuric acid in order to reduce the burr to a condition that it will release its hold on the wool fiber; but, in almost all cases, when so used it has proved a failure, from the fact that it so injured the wool fiber as to render it almost entirely worthless; but when treated according to my process it sustains but very slight injury, which is removed by the alkaline and oleaginous mixture, in connection with the heating process, as herein described. Therefore

I claim as my invention—

The herein-described process for removing burrs, &c., from wool, consisting in first beating the wool, then subjecting it to the action of dilute sulphuric acid, drying *in vacuo*, and, finally, immersing in a mixture of alkaline and oleaginous matter and drying, substantially as specified.

SAM S. EASTWOOD.

Witnesses:

W. W. DAWSON,

C. HEWITT.