

UNITED STATES PATENT OFFICE.

FREDERIC M. RUSCHHAUPT AND JNO. GEO. PERZEL, OF NEW YORK, N. Y.

IMPROVEMENT IN CLEANING WOOL.

Specification forming part of Letters Patent No. **43,647**, dated July 26, 1864; antedated April 29, 1864.

To all whom it may concern:

Be it known that we, FREDERIC M. RUSCHHAUPT and JOHN GEORGE PERZEL, both in the city, county, and State of New York, have invented a certain new and Improved Mode in Separating Wool From Vegetable Matters, as burrs, strawy, and woody substances, &c.; and we do hereby declare that the following is a full and exact description thereof.

The nature of our invention consists in subjecting the raw wool to a chemical process, by which the substances mentioned are destroyed so far that they afterward can easily and entirely be removed by simple mechanical action, rendering the wool in such a proper condition as has hitherto not been practiced.

It is well known that the comparatively low price of the different kinds of wools which contain the above-mentioned substances is not as much caused by the presence of them as mere impurities, but by the circumstance that they cannot be removed without the greatest trouble. This will be at once understood when the peculiar fibrous character of the burrs, for example, is remembered. Indeed it has been found almost impossible to construct suitable machines for rendering the effect as required, not to talk about the great reduction in the quantity of the wool caused by such an operation. We will only make the remark that, by examining such wools cleaned and prepared by this method, either loose, as yarns, or self, as woven fabrics, it will be seen that they possess a very rough character caused by the remaining of many small woody or strawy (burr) fragments. Taking this in consideration, therefore, it will be conceived that the value of these different kinds of wool would be considerably increased when their cleaning process could be accordingly improved.

To realize this and other advantages is the object of our invention, which consists in subjecting the raw wools to a chemical process, by which the impurities mentioned are in so far destroyed that they afterward can easily and entirely be removed by simple mechanical action.

To enable others skilled in the art to make and use our invention, we will now proceed to describe the *modus operandi*.

We take about five hundred gallons of a somewhat sirupy solution of chloride of zinc, chloride of calcium, or other similar chlorides, or, instead of these, a like quantity of an equivalent proportion of diluted sulphuric acid, more or less, according to circumstances, and bring into it as much raw wool (which is prepared by simple washing in order to remove soluble substances, excrements, &c., as much as possible) as may be convenient to work with, and let remain in it for about two hours, or longer, according to the quantity of burrs, &c., which it contains. The wool is now taken out and carefully pressed to remove surplus liquid, whereof it is brought in a close room, which is heated up to about 100° centigrade. 5° or 10° may be allowed when it seems necessary; but it must be observed with care, otherwise the quality of wool will be reduced. It is of the greatest importance that the temperature is equal on all places, which may be observed by a proper construction of the heating arrangement (a similar construction as the malt-roaster may be convenient) and by displacing the wool from time to time. The process is to end as soon as the burrs, &c., are hard, partly carbonized, and easily removable by rubbing or pressing between the fingers. To remove the so-far-destroyed impurities entirely, it is only necessary to bring the wool on a common wool-picking machine, (wolf or gin, &c.) and it will be seen that they very easily remove, rendering the wool as required, and after it has been thoroughly washed, to remove all remaining chemicals in such a proper condition as has hitherto not been practiced.

Having now fully described our invention, we wish it understood that we claim for us as new and desire to secure by Letters Patent—

Subjecting the raw wool to a chemical process, as herein described, and for the purpose set forth.

FREDERIC M. RUSCHHAUPT.
JOHN GEORGE PERZEL.

Witnesses:

CHAS. K. TAYLOR,
JACOB NEUBAUER.