

United States Patent Office.

EMIL F. RICHTER, OF BERLIN, PRUSSIA.

Letters Patent No. 106,871, dated August 30, 1870.

IMPROVEMENT IN CLEANSING WOOL.

The Schedule referred to in these Letters Patent and making part of the same

Description of the apparatus and improved process for Washing and Cleansing Wool in the Yolk in a cold way, invented by EMIL F. RICHTER, of the city of Berlin, Kingdom of Prussia.

A, the apparatus. These are not newly invented and peculiar, as they are already employed in washing and cleaning wool. They consist in—

First, the wooden soaking-tubs, in which a perforated bottom is placed, four inches apart from the bottom of the tub; also a faucet-hole.

Second, a pair of press-rolls of vulcanized India rubber.

Third, four cleansing-tubs. These are of the very same nature of the soaking-tubs. These four tubs are below connected with a copper tube and outlet faucet-hole. Above the tubs lies another copper tube with feeding-faucets for each of the tubs. A feeding-pump is connected with this upper tube.

Fourth, the rinsing-machine, the same as used in woolen factories.

Fifth, the centrifugal machine.

Sixth, a complete distilling apparatus with cooling-worm.

B, the arrangement to free or to release the wool of its animal grease; a liquid is used which is gained in spirit distilleries only, and known by the name of amylic alcohol, or tenyloxydhydrat.

First, I claim that amylic alcohol has never heretofore been used for the purpose of cleansing wool.

Second, I claim that the amylic alcohol brought in connection with wool releases the animal grease instantly.

Third, I claim that the wool saturated with amylic alcohol is not damaging the fiber of the wool, and leaves the fiber its natural curly appearance.

Fourth, I claim in cleaning the wool with amylic alcohol, the loss of wool is four to five per centum less than by any other method heretofore known of cleansing wool.

Fifth, I claim that I gain a substance which I will name "wool fat," which is valuable for industry, for axle grease, &c.

Sixth, I claim that amylic alcohol heretofore was nearly worthless, and now becomes a valuable article of commerce.

Seventh, I claim the wool so treated with amylic alcohol gives the wool a greater softness and greater purity, as those wools washed with alkalis. I also claim that cloth woven out of wool treated with amylic alcohol is easier to full and to nap, and the cloth more durable.

C, the working process.

The wool to be washed and to be cleansed is first brought into the soaking-tubs, and enough water poured on till the wool is covered. The wool remains so from four to six hours. After this the wool is brought in the centrifugal machine and slung out. The wool is now put into the cleansing-tubs. Upon the wool in the first tub is poured, with the pump, amylic alcohol, enough to cover the wool; after ten minutes standing the amylic alcohol is to be let off, and shaken with the pump to the second tub; after this to the third and fourth tub, when amylic alcohol is added to the first tub until it runs off colorless. In such a manner are treated the second and third tub.

The thus cleaned wool of the first tub is now brought between the pressing-rolls, and so wrung out of the amylic alcohol, then taken in the rinsing machine, rinsed by water, and afterward into the centrifugal machine, and thence dried.

The amylic alcohol, which by continual use, has become colored and greasy, is now brought into the distilling apparatus, and through steam brought to a boiling state. The amylic alcohol runs off clean, and can again be used for cleansing wool, while the wool-fat remains in the boiler of the distilling apparatus, and is hence taken out.

Claim.

I claim as my invention—

The process of cleaning wool by the use of amylic alcohol, substantially as described.

This specification signed by me this 29th of November, 1869.

E. F. RICHTER.

Witnesses:

H. KREISMANN,
P. PUHLMANN.