

UNITED STATES PATENT OFFICE.

BENJN. F. EMERY, OF BATH, MAINE.

IMPROVED PROCESS FOR REMOVING WOOL AND HAIR FROM SKINS.

Specification forming part of Letters Patent No. 336, dated July 31, 1837.

To all whom it may concern:

Be it known that I, BENJAMIN F. EMERY, of Bath, in the county of Lincoln and State of Maine, have invented or discovered a new and useful Improvement in the Method of Softening Hides and Skins and of Removing Wool, Hair, or Bristles from them, of which the following is a specification.

This improvement is effected by the application of steam of the proper temperature to the hides and skins, instead of water, acids, or other materials.

For the purpose of softening dried sheep-skins for pulling the wool and tanning the skins a room should be provided large enough to contain, suspended as hereinafter described, as many skins as it may be required to operate upon at one time, and made as nearly airtight as it can be without much expense—say by tight boarding and shingling—with several small windows or openings with shutters to admit or exclude the air, as occasion may require. Racks consisting of rails or strips of boards or planks placed about three feet apart and having tenter-hooks inserted about four or five inches from each other, precisely as they are now commonly used for drying sheep-skins after they are tanned. As many of these may be put up in the steam-room as will consist with the objects of not having the skins touch each other and of permitting passages through them to hang up and take down the skins.

The steam may be generated in any kind of boiler and conveyed by pipes from the boiler into the steam-room, most advantageously discharged in it only a few inches from the floor in the center of the room. For a room about twelve by fifteen feet square and nine feet high a common potash-boiler having the steam secured and forced into the room by tin or copper pipe of about two inches tube would be sufficient, although an iron boiler resembling those used for steam-engines is more convenient. Two windows of about two feet square placed opposite each other would well answer for such a room. With the temperature of blood-heat the skins in such a room would be sufficiently steamed in about three hours unless they were much harder than usual. It is easy to ascertain, however, by

going into the room, when the wool will come off and the skins are sufficiently pliable, taking care to lose no more steam by keeping the door open than is necessary.

The process may be somewhat expedited by raising the temperature a little higher, although I should not advise raising it above 150° of Fahrenheit for fear of injuring the skins. The softening will be expedited by wetting the skins or hides before hanging them up. Hides of neat cattle and other large animals may be softened for tanning in the same way, the rails and tenter-hooks being larger and farther apart in proportion to the size of the skins or hides. The time required for softening will also be longer in proportion to the thickness and hardness of the skins or hides. In all cases the skins and hides should be affixed to the tenter-hooks by the shanks, so as to keep them moderately stretched.

Slaughtered hogs, instead of being scalded in the usual way for the purpose of scraping off the bristles, may also be more conveniently scalded by steam in a similar way, where the business of dressing them is carried on to a large extent. The hogs may be hung up by the gambrels only far enough apart to permit the butcher or dresser to work between them. Hot steam should then be rapidly thrown into the scalding-room until it rises to the temperature of about 175° or 180°, and, if very rapidly done, even to the boiling-point, (although this is rather dangerous,) when the room should be immediately ventilated sufficiently to admit of the operation of dressing.

In order to keep the laborers employed, there may be two steam-rooms, so that they may operate in one room while the preparation of the hogs and scalding is going on in the other.

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

The application of steam instead of water or other substance to hides and skins for the purpose of softening such as are dried and of removing the wool and hair from them, and to slaughtered hogs for the purpose of removing the bristles.

BENJ. F. EMERY.

Witnesses:

BENJA RANDALL,
EBENR. CLAPP.