

UNITED STATES PATENT OFFICE.

FRANCIS ROBINSON AND HANSON ROBINSON, OF WILMINGTON, DELAWARE.

IMPROVEMENT IN THE PROCESS FOR REMOVING WOOL OR HAIR FROM THE SKINS OF ANIMALS.

Specification forming part of Letters Patent No. 2,096, dated May 15, 1841.

To all whom it may concern:

Be it known that we, FRANCIS ROBINSON and HANSON ROBINSON, of the city of Wilmington, in the county of New Castle and State of Delaware, have invented an Improvement in the Process for Removing the Wool from the Skins of Sheep and the Hair from the Skins or Hides of other Animals, by which improved process the wool on skins which have been dried and the skins and hides themselves are brought into a state more nearly resembling that of wool and of skins and hides which have not been subjected to the drying process, and green hides and skins and the wool removed therefrom are secured from that deterioration or injury to which they are liable in the ordinary process of unhairing.

The expedients hitherto resorted to for the loosening of wool or hair from skins or hides have been, first, the treating of them with lime, so as to destroy the texture of the epidermis, or the treating of them with potash or other alkaline substances with a like intention; but the use of these corrosive materials, and of various mixtures into the composition of which they have entered, have an injurious effect upon the wool and also upon the skins from which the wool or hair is removed, and which injurious effect is not entirely counteracted by the process of cleansing to which they have subsequently to be subjected. The second method which has been adopted for a like purpose is that which is known under the name of the sweating process, and this consists in placing the skins or hides in a pile in any suitable apartment, sometimes covering them with tan-bark or otherwise defending them from the cooling influence of the external air, so as to induce the putrefactive fermentation by which the texture of the epidermis is destroyed, and the wool or hair is consequently readily removed. This sweating process has been modified by hanging the skins or hides in a closed room or vat, near to but not in contact with each other, in which situation they remain until the putrefactive process has so far proceeded as to loosen the wool or hair and admit of its ready removal. In whatever way, however, this process has been modified the unavoidable effect of it is to deteriorate the hide or skin and also the wool thereby removed from sheep-skins, as there is a state of incipient putrefaction in-

duced in these as well as in the epidermis, and it not unfrequently happens, even in the hands of careful persons, that a portion of the skins and hides so treated are so far weakened as to be rendered worthless. By the process discovered and adopted by us these difficulties are entirely removed; and of this process we do hereby declare that the following is a full and exact description.

The nature of our invention consists in the application of steam to the skins or hides suspended for that purpose in a close room or apartment, which must be of such height as will prevent them from touching the floor, and of such size in other respects as shall adapt it to the number of skins or hides to be operated upon at one time. This room or apartment we make sufficiently close to prevent the rapid escape of steam from it, and by means of a tube or tubes leading from any suitable boiler or generator we allow steam to enter into it in such quantities and for such length of time as may be found necessary to produce the desired result. In fresh skins or hides the process will be completed in a much shorter space of time than it will upon such as have been dried. The operation upon the dried skins of our own country will also be completed more rapidly than upon foreign hides or skins, as usually imported. Those which are green do not need any preparation whatever, but may be immediately suspended in the room; but those which have been dried will require to be previously soaked for from two to four or five days, according to their nature, and by submitting them also to the operation of breaking, the action of the steam will be facilitated.

The skins, as they hang in the room, should not be in contact with each other, and provision must be made for their ready examination from time to time. For this purpose the room or apartment may be furnished on its different sides with closely-fitting shutters, which may be opened or closed at pleasure; or the skins or hides may be hung upon arms or frames attached to and proceeding from a vertical shaft, turning upon gudgeons in the center of the room. In this case a single shutter or opening will suffice for the examination, as the skins may be brought in succession opposite to such opening.

Provision should of course be made for the

escape of the water which may be deposited on the floor by the condensation of the steam, and when it is necessary to moderate the temperature cool air may be admitted into the room or apartment and the supply of steam be at any time arrested by means of a cock or valve.

Having thus fully described the nature of our invention or discovery, and shown the means by which we carry the same into operation, we do hereby declare that we do not claim the use of any particular apparatus for carrying the same into effect, but employ such instruments and means as are now known and used for other purposes; but

What we do claim, and desire to secure by Letters Patent, is—

The process of loosening the wool or hair from skins or hides by the direct application of steam thereto, said skins or hides being suspended in any suitable room or apartment, into which steam can be admitted, and said process being conducted substantially in the manner herein set forth.

FRANCIS ROBINSON.
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Witnesses:

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