Patented Aug. 14, 1934 1,969,922

UNITED STATES PATENT OFFICE

1,969,922

METHOD FOR CURING HIDES AND SKINS

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No Drawing. Application June 22, 1929, Serial No. 373,067

5 Claims. (Cl. 149—1)

This invention relates to curing and tanning animal hides and skins, including cattle hides, horse hides, calf skins, sheep skins, skunk skins, pig skins, as well as hides, skins or pelts from any animal, whether fur or hair bearing or not.

Generally speaking, the curing of animal skins or hides consists in the saturation of the natural liquids, juices, blood, etc., contained in the hide or skin, with commercial salt, producing such a degree of saturation that bacteriological reactions and decay are retarded.

Under present practice hides and skins are cured by spreading salt on each one, after which they are piled in what are termed packs, in which position they are permitted to remain until cured. An alternative method currently in use is to soak in brine, before piling in packs, to assure an even distribution of saturation. By either of these old methods the period of curing ranges from 7 to 30 days, depending upon the specific hide being cured. The length of time required for curing results in tying up capital in large inventories, and the loss of considerable floor space.

By my invention I obtain a degree of saturation, directly comparable to that obtained by the old method, in less than one hour, by the application of salt or brine to the hide by pressure, which may be obtained by centrifugal action or other mechanical, hydraulic or vacuum means. I find that the centrifugal wringer or centrifuge, in ordinary commercial use as a separator or dryer lends itself very well to this purpose, because of its simple operation and construction.

In practice, I salt the hide or skin with fine salt on both sides and place it in the centrifugal wringer, which I then operate at a speed depending upon the specific item being cured, for from five minutes to one hour, and obtain a degree of saturation equal to that obtained by conventional curing methods, which for example, is approximately 92% in cow hides and approximately 95% in calf skins.

In practice I have successfully altered this method by soaking in brine instead of salting with fine salt. However, instead of soaking in brine, the hides or skins might be placed in a centrifugal wringer and brine added and the wringer then operated. This latter variation of my method is not as economical as the other two, since a greater quantity of salt is required. The rapid rotation of the centrifuge causes the saline moisture or brine, by reason of its mass and inertia, to seep or percolate outward rapidly through and thence out of the skins, and thereby bathe all of the fibers and tissues thereof with the curing medium.

My invention is not restricted to the curing process, but furnishes a new technique for all steps in the tanning process in which it is necessary to impregnate the tissue with or remove therefrom any particular liquid substance.

As the hides or skins which have been cured by the producer such as the packer or trapper, arrive at the tannery, the surplus salt and a portion of the brine are removed by soaking in fresh water. If the finished product is to be hairless, the hide or skin is limed, depilated, and dehaired. In either case the hide or skin is fleshed and then undergoes a washing treatment followed by a salt and sulphuric acid treatment, after which it is placed in the tanning pickle bath where it remains for a given time, depending upon the age, quality, type, etc. The salt and acid treatment here referred to may be expedited by use of the centrifuge or equivalent means.

After pickling, under the old process, some of the skins are washed and others go direct to the driers or dry rooms. In the various steps of this tanning process, time and material will be saved by applying my process for the extraction of surface moisture, and mechanically absorbed moisture, brine, etc., since in each step of the old customary process or operation the hide or skin shows a distinct tendency to swell. This swelling, which results in a larger percentage of brine, water or other liquid entering the hide or skin, delays the penetration or extraction in the steps or operations which follow in the old method, after soaking, liming, fleshing, washing or pickling.

My invention expedites the actual introduction of the tanning or washing liquids and the subsequent removal of the excess.

My invention replaces moisture in the hide or skin, with the curing or tanning liquor, by means of centrifugal or other suitable pressure, and discourages or prevents the use of excess liquor. The extent or duration of the pressure that may be best for working the necessary curing or tanning media into the solution within the cellular structure, depends largely upon the moisture in the hide or skin. The centrifuge does this in one operation, since it subjects the entire mass to centrifugal force, causing the immersing liquid or tanning liquor, as well as the contents of the skin cells to tend to flow outward centrifugally through the cell walls, thereby withdrawing any previously residual liquid and forcing new liquor to replace it and finally withdrawing this to any

extent desired, as determined by the speed of the centrifuge.

It is to be understood that some of the details hereinbefore specified, may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. The method of curing animal skins or hides which consists in scattering a curing substance on both sides thereof and then forcing a liquid to penetrate such animal skins or hides by means of a centrifugal wringer.

2. The method of curing animal skins or hides, which consists in scattering a curing substance on one side thereof and then forcing a liquid to flow through such animal skins or hides by means of a centrifugal wringer.

3. The method of curing animal skins or hides, which consists in soaking such animal skins or hides in a curing liquid, and then causing such liquid to penetrate the skins or hides by means of a centrifugal wringer.

4. The method of curing animal skins or hides which consists in scattering salt upon the skins or hides while moist, and then subjecting the skins or hides to the action of a centrifugal wringer to force the solution of such salt and moisture through the skins or hides.

5. The method of curing animal skins or hides which consists in scattering salt upon both sides of the skins or hides while moist, and then subjecting the skins or hides to the action of a centrifugal wringer to force the solution of such salt and moisture through the skins or hides.

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