

UNITED STATES PATENT OFFICE.

GEORGE RAWLE, OF BRISTOL, AND WILLIAM N. EVANS, OF BEDMINSTER,
ENGLAND.

IMPROVEMENT IN THE MANUFACTURE OF LEATHER.

Specification forming part of Letters Patent No. **141,459**, dated August 5, 1873; application filed
April 16, 1873.

To all whom it may concern:

Be it known that we, GEORGE RAWLE, of Temple street, in the city of Bristol, and WILLIAM NATHANIEL EVANS, of Bedminster, in the county of Somerset, England, subjects of the Queen of Great Britain, have invented or discovered new and useful Improvements in the Manufacture of Leather; and we, the said GEORGE RAWLE and WILLIAM NATHANIEL EVANS, do hereby declare the nature of the said invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement thereof; that is to say—

The object of this invention is mainly to diminish the time now required for tanning hides and skins. In tanning hides and skins it is now usual to commence the tanning operations by subjecting the skins to weak solutions of tannin material, and gradually to increase the strength of the solution as the process proceeds. By proceeding in this manner a considerable length of time is necessarily occupied, and if, in order to save time, the skins are at once subjected to a strong solution of tannin, the grain side of the skin becomes hardened, and the leather produced is comparatively valueless.

According to our invention we protect the grain side of the skins or hides from the action of the liquor before placing them into the pits, so that the skins may at once be placed into a strong tannin solution, and consequently the tanning of the skins will be greatly expedited, while the grain side, being protected from the action of the liquor, will remain soft and pliable. The hides or skins may also be first partly tanned in weak tannin solutions in the ordinary manner, and be afterward protected on the grain side from the action of the tannin liquor before submitting such partially-tanned skins to the action of strong tannin solutions. To protect the grain side from the action of the tannin liquor we prefer to rub it over with a dubbing of grease and oil; but other modes of protecting the grain side from the liquor may be adopted. When we employ a mixture of grease and oil as the protecting material we use, by preference, a mixture composed of cod-oil and tallow in the proportion of about two pounds of tallow to one gallon of the oil.

In carrying out our invention we prefer to

proceed as follows: The skins, after being un-haired and after being washed in water, are rubbed down in the usual way; the grain side of the skins is then smeared over with the mixture of tallow and oil, and the skins are placed into a pit containing a strong tannin solution, say of a strength of eighty to ninety degrees, which is the usual strength for the last bath when tanning skins in the ordinary manner. A stronger liquor may, however, be used with advantage.

We prefer that the skins should be suspended in the pit at a short distance apart from one another, so that the tannin liquor may have free access to the flesh side of each skin. By this means the tanning of the skins or hides may be effected without removing them from the pit, tannin material being from time to time added to the liquor in the pit as usual to keep it up to the required strength.

In place of coating the grain side of the skins or hides with a protecting coating, the grain side of two skins might be placed together and caused to adhere to one another by rubbing them down before placing such skins into the tan-pit, or the grain side might be in other ways protected from the action of the tannin liquor. We, however, prefer to apply a coating of protecting material to the grain side, as above described.

By thus tanning hides and skins not only will the tanning process be greatly expedited, but a superior leather will be produced to that tanned by the present tedious tanning process.

Having thus described the nature of our invention and the manner of performing the same, we would have it understood that we claim—

Coating the grain side of skins or hides with a protecting coating of grease and oil, or other coating capable of protecting such grain side from the action of tannin liquor, and subsequently submitting the skins so prepared to the action of tannin liquor in a tan-pit, substantially as herein described.

GEORGE RAWLE.

WILLIAM N. EVANS.

Witnesses:

JAMES CUNDALL,

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Solicitors, Bristol.*