

UNITED STATES PATENT OFFICE.

HERMAN ROYER, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN THE MODES OF PREPARING RAWHIDE FOR BELTING.

Specification forming part of Letters Patent No. **149,954**, dated April 21, 1874; application filed December 31, 1872.

To all whom it may concern:

Be it known that I, HERMAN ROYER, of San Francisco, county of San Francisco, State of California, have invented an Improvement in the Treatment of Rawhide, especially for the use of belts and laces, of which the following is a specification:

After the removal of the hair from the hide by means of sweating—a process familiar to every tanner—the hide is dried perfectly hard. Then it is inserted in water for ten to fifteen minutes, long enough to lose its extreme stiffness. In this condition the process of fulling is commenced. This may be done in a machine constructed for this purpose and patented by me May 12, 1868, under No. 77,920. Before the hide is passed into the machine the second time it is stuffed with a mixture of twenty parts tallow, two parts wood-tar, and one part rosin. About two pounds of this mixture is put on a steer hide in a warm liquid state with a brush. After the hide leaves the machine the second time, it is ready for the next operation. It is then moistened with water four or five times during the day. The next day it is stretched and cut into pieces suitable for belting. For purposes of lacing the thinnest hides are selected, and after they have gone through the same mode of treatment as hides for belting, they are shaved, oiled, and hung up to get perfectly dry, when the hide is cut into strings. In order to more fully understand my mode of preparing hides I avoid the use of lime, acid, or alkali, for just to the amount a hide is impregnated with such substances it suffers in its tensile strength and toughness; a slow but constant dissolution is going on with hides so impregnated.

If the effects of the aforesaid substances are in some way neutralized, which must be a chemical one, the hide suffers again in this process. The power to resist abrasion, and the extreme tensile strength for which pure rawhide is noted, are irreparably lost.

I am aware that hides and skins have been prepared by a fulling or bending operation to render them pliable, but this mode alone does not answer for the preparation of machine belts and lacing. It is necessary to make use of a preparation substantially such as before described to render the rawhide fit for use and durable.

The tallow has the effect of imparting a high degree of elasticity and keeps the moisture. The wood-tar prevents dogs, cats, mice, vermin, &c., from attacking the hide, at the same time causing the tallow to enter the hide quickly and thoroughly. The rosin gives the belting a certain solidity and glossy appearance, and assists also in preventing animals and vermin from attacking the belting. Belts and lacing made of such prepared hide are in all respects stronger, more lasting, and cheaper than those made from common leather.

Having thus fully described my invention, I desire to claim—

The treatment of the prepared rawhide in the manner and for the purposes set forth.

This specification signed this 30th day of November, 1872.

H. ROYER.

Witnesses:

E. V. TUTTER,
WILLIAM FIRDERER.

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