

UNITED STATES PATENT OFFICE.

GEORGE W. HATCH, OF LAWRENCE, KANSAS.

IMPROVEMENT IN MODES OF TANNING LEATHER.

Specification forming part of Letters Patent No. **165,822**, dated July 20, 1875; application filed May 4, 1875.

To all whom it may concern:

Be it known that I, GEORGE W. HATCH, of Lawrence, county of Douglas, of the State of Kansas, have invented a new and Improved Mode of Tanning Leather; and I do declare that the following is a full and exact description thereof, reference being had to the sample of the new tanning-shrub, *Ephedra antispyphilitica*, and leather product of my process of tanning with said shrub, sent herewith.

To enable others skilled in the art to use my invention, I will proceed to describe its construction and operation.

In preparing the hides for tanning with said shrub, they are water-soaked, limed, unhaird, and baited in the usual way. The tannin is extracted from the shrub or its leaves by soaking in cold, hot, or warm water, but more perfectly by hot water; or, in strengthening tan-liquors by heating them, in steeping out the said shrub or leaves, and then putting the prepared hides in the tan-liquor, and handling them in and out until tanned through. But I find the tan-liquor from this shrub is very liable to sour quickly,

becoming aciduous, rapidly precipitates and destroys the tannin, at great loss. And I find the greatest success in utilizing this shrub to tanning, and making the finest and most perfect leather, is by taking the hides after they are baited, soaking them full of water, then hanging them up in a tight room dripping wet, and smoking them by hard-wood chips five or six hours, and then pressing them, expressing the smoky fluid into the tan-liquor, thus rendering the liquor in a preserved condition against souring, and the tannin in full to turn the rawhide into leather, the hides being put into the tan-liquor and handled in and out often until tanned.

I claim—

As an improvement in the art of tanning, the employment or use of the shrub or plant known as *Ephedra antispyphilitica*, substantially as set forth.

GEO. W. HATCH. [L. s.]

Witnesses:

S. E. WELCH,
H. W. BARLOW.