

UNITED STATES PATENT OFFICE.

ORSON A. COE, OF CHARLESTOWN, OHIO.

IMPROVED PROCESS FOR TANNING.

Specification forming part of Letters Patent No. 50,222, dated October 3, 1865.

To all whom it may concern:

Be it known that I, ORSON A. COE, of Charlestown, in the county of Portage and State of Ohio, have invented a new and Improved Tanning Process; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to fully understand and make use of the same.

This invention relates to a process which is equally applicable to tanning light skins with wool, hair, or fur on, or to tanning hides or skins for leather.

First. For the purpose of tanning light hides with wool, hair, or fur on, I first soak and flesh them in the usual manner. I then make a solution of boiled and mashed potatoes, rye or oat bran, common salt, and oxalic acid in water, said ingredients being mixed together in about the following proportion: Soft warm water, eight gallons; potatoes, boiled and mashed, one quart; rye or oat bran, eight quarts; common salt, five pounds; oxalic acid, one-half pound. I stir the potatoes and bran together with the water in the proportion above specified, and let it stand in a warm room till it ferments. I then add the salt, stirring until it is dissolved, and, finally, under continuous agitation, I add the oxalic acid. This solution, which I term the "first solution," imparts no color to the leather or furs.

Second. For heavy hides or skins, such as calf-skins or cow-hides, I add to the above-named solution a liquid made of the buds of sumac, melted catechu, and kino. These ingredients are mixed together in about the following proportion: Extract of the butts of sumac, one quart; melted catechu or Sicily sumac, three pounds; kino or crane's bill, one-fourth pound. This solution, which I term the "second solution," acts on the leather similar to hemlock-bark. It plumps and gives it a body for boots and harness-leather. Light hides require to be handled from thirty minutes to one

hour. Then they are rinsed in soft warm water and hung out to dry in the shade.

Third. For hides or skins from which the hair or wool is to be taken off, I make a liquor as follows: soft water, ten gallons; slack-lime, one-fourth bushel; hard-wood ashes, one-fourth bushel. In this liquor, which I term the "third solution," I handle the hides or skins once or twice each day till the hair or wool comes off. This opens the pores and raises the hide or skin. I then wash out the lime and ashes in the following bathing-liquor: soft water, four gallons; fermented bran-liquor, four gallons; sour milk, two gallons. The hides or skins are kept in this liquor for from six to twelve hours and handled or worked out on the beam twice. Then (if a shade is required) I put the hides in the heavy-leather tan-liquor.

Fourth. The hides or skins should be handled as often as twice each day until tanned, being from forty-eight hours to eight days, according to the thickness of the hide or skin. I then rinse first in clean water, and afterward soak the hides in equal parts of soft water and skimmed milk from two to sixteen hours. This solution kills the acid in the leather. Finally, I stuff, or fill the hide with stuffing.

What I claim as new, and desire to secure by Letters Patent, is—

1. The first solution herein described and composed of the ingredients described under No. 1 and employed for tanning skins with the wool, hair, or fur on.

2. The combination of the first and second solution, made and used substantially as and for the purpose specified.

3. The combination of the first, second, and third solutions, all made and used substantially as and for the purposes described.

ORSON A. COE.

Witnesses:

C. B. CURTISS,
EDWIN HOLDEN.