

# UNITED STATES PATENT OFFICE.

JOHN ANGUS, OF CALAIS, MAINE, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO  
JAMES S. HALL AND FREDERICK H. HALL, OF SAME PLACE.

## IMPROVEMENT IN PROCESSES OF TANNING HIDES AND SKINS.

Specification forming part of Letters Patent No. **167,866**, dated September 21, 1875; application filed  
June 14, 1875.

*To all whom it may concern:*

Be it known that I, JOHN ANGUS, of Calais, in the county of Washington and State of Maine, have invented a new and useful Process of Tanning Hides and Skins, hair left on; and I do hereby declare that the following is a full and exact description thereof, with the ingredients and composition, as hereinafter fully set forth.

This invention relates to that class of processes employed for tanning hides and skins; and it consists in tanning hides and skins without the use of lime or other injurious ingredients in a very brief time—to wit, the space of six days—closing the pores and making the leather water-proof.

In carrying out my invention, if the hides or skins are new or wet soak them in soft water thoroughly, changing the water three times, and drain. If salted or dry and hard, put them through a fulling-mill until they are thoroughly softened, or in about the condition of the wet hides, drain, and they are ready for the solution. Take four pounds of sulphuric acid to six hogsheads of water; soak the hides and skins in this compound twenty-four hours, drain, and put in the tanning-liquors, made up as follows, to wit: One-half sweet-fern liquor, medium strength; four pounds of borax to six hogsheads of water; three bushels of

salt; one barrel and a half of alum, strength forty degrees. The hides and skins to remain in this liquor five days; taken out and nailed to boards, hair side in, and stuffed in this position with the following compound, to wit: Fifty per cent. beef-tallow; twenty-five per cent. Lightfoot A A X oil; twenty-five per cent. straits-oil; add four gallons of green tar to each half barrel of stuffing. Apply this compound with a wool swab when the hides are partly drained or dried, and the leather comes out water-proof at a cost of less than fifty per cent. compared with any other mode of tanning known to exist.

I claim this as a dehairing process, and claim as an improvement in the art of tanning—

1. The application to hides and skins of the solutions and compounds named, in the order and manner substantially as set forth.

2. The tanning compound composed of the ingredients named, in about the proportions stated.

3. The stuffing compound composed of the ingredients named, in about the proportions stated.

JOHN ANGUS.

Witnesses:

D. H. BATES, .  
S. D. WOODCOCK.