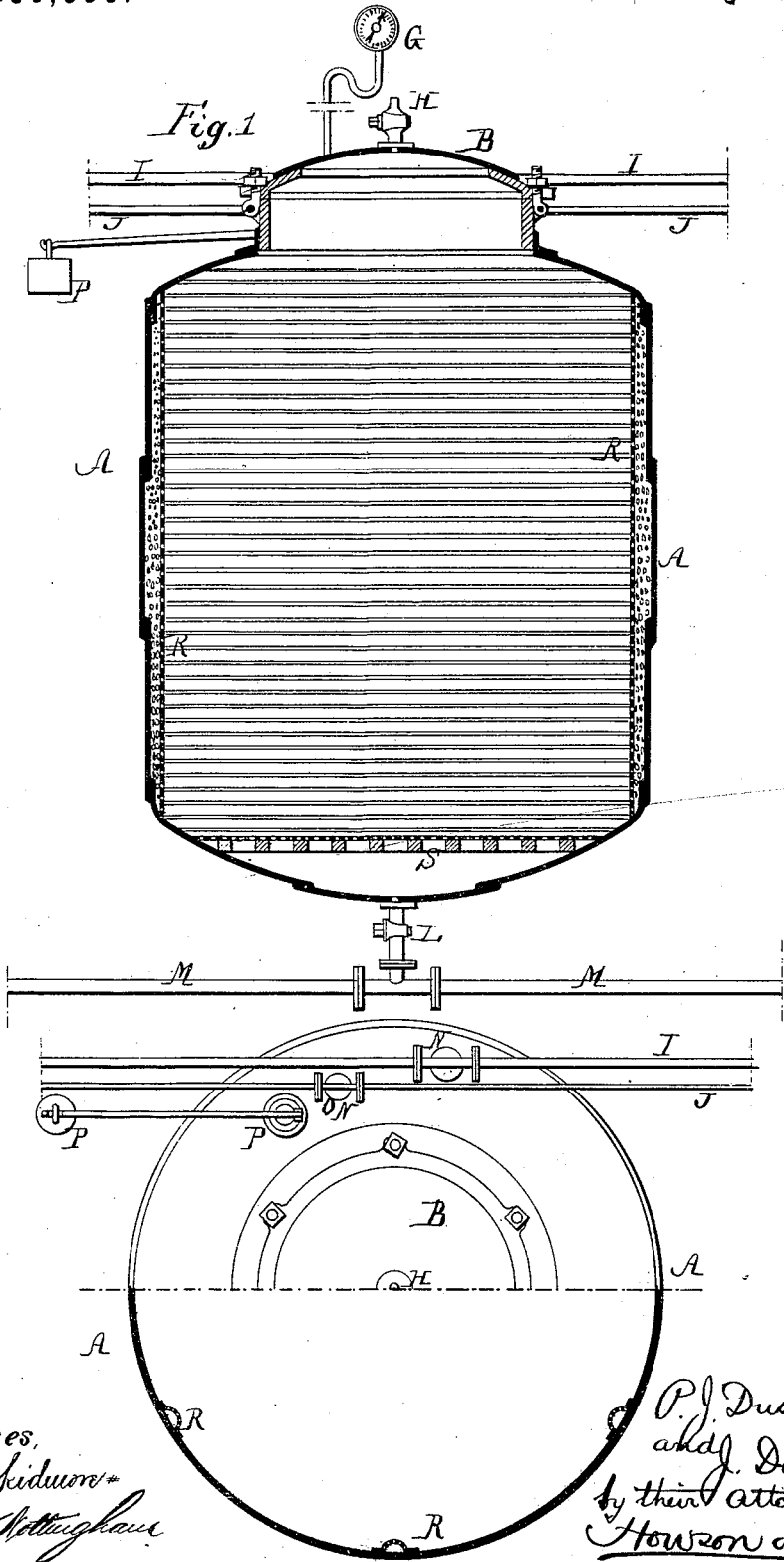


P. J. DUSSAUD & J. DUCHEZ.

TANNING HIDES AND SKINS.

No. 180,563.

Patented Aug. 1, 1876.



Witnesses,
J. L. Skidmore
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UNITED STATES PATENT OFFICE.

PHILIPPE J. DUSSAUD AND JOSEPH DUCHEZ, OF BORDEAUX, FRANCE.

IMPROVEMENT IN TANNING HIDES AND SKINS.

Specification forming part of Letters Patent No. **180,563**, dated August 1, 1876; application filed May 22, 1876.

To all whom it may concern:

Be it known that we, PHILIPPE JOSEPH DUSSAUD and J. DUCHEZ, both of Bordeaux, France, have invented certain Improvements in Tanning, of which the following is a specification:

The object of our invention is to facilitate and simplify the operation of tanning skins, which are subjected to pressure in a closed vessel containing the tanning liquid; and this object we attain in the manner explained hereafter.

We will first describe the means by which we prefer to carry our invention into effect, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical section of a closed vessel, in which are placed the skins to be tanned; and Fig. 2, a plan view, partly in section.

A is a large metal cylinder, closed at each end by a metal cap, to the upper of which caps is adapted a removable cover, B, preferably secured by bolts and nuts, as shown in Fig. 1.

In the lower end of the cylinder is a slatted frame, S, surmounted by a perforated or wire screen, on which the skins to be tanned are spread in alternate layers with porous material, as hereafter described.

Along the sides of the cylinder are placed a series of vertical semicircular screens, R, which facilitate the passage of the liquid to the skins, and also the emptying of the vessel. The pipe I, with its vertical branch N, supplies the tanning liquid to the vessel, while the pressure is supplied through the pipe J.

The liquid is drawn off through the pipe M, which is supplied with a cock, L, and strainer T. G is a pressure-gage; P, a safety-valve, and H a cock to permit the escape of air.

The skins, having been washed and cleaned, are first placed in a vat containing a weak tanning solution, in which they remain from twelve to seventy-two hours, according to the thickness and quality of the skins, which should be often stirred during that time. The

skins are then placed in the vessel A, being arranged in alternate layers with some inert material, for which purpose I prefer to utilize bark which has been freed from its tannin in previous tanning operations. The vessel is then filled with a very strong tanning solution, and the vessel being then closed, pressure is applied.

The skins are allowed to remain under pressure for from two to five days, at the end of which time the vessel is entirely emptied and cleaned, when the skins and the same solution, or one of the same strength, are put back again, but the layers of inert material are now replaced by bark or tanning material containing all its tannin. Pressure may be then applied immediately for very thin skins, but not until the end of about four days for thick ones.

If the skins are of moderate thickness, at the end of five days after pressure has been applied, they should be taken from the vessel, the liquor having first been drawn off, and the layers of bark replaced by fresh layers containing tannin.

The skins are arranged in layers, as before, and the same tanning solution, or one of similar strength, is returned to the vessel, pressure being again applied at the end of from four to six days.

After remaining for from fifteen to twenty days under pressure, the skins should be sufficiently tanned; but for skins of more than ordinary thickness, at the end of twenty days the layers of bark are again replaced by fresh layers containing tannin, the same solution being used as before.

Pressure is applied after twelve days, and the tanning is complete when the skins have remained under pressure for about twenty-five days.

The pressure first applied should not be more than a few kilograms, but should be gradually raised until, at the last operation, it reaches about eight kilograms.

We do not desire to confine ourselves to any precise form of closed vessel, as this does not form part of the present application.

We claim as our invention—

The process herein described of tanning skins by subjecting alternate layers of skins and inert material to the influence of a tanning solution, then replacing the inert material by layers of bark containing tannin, and again applying the solution, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

PHILIPPE JOSEPH DUSSAUD.
JOSEPH DUCHEZ.

Witnesses:

ALFRED COINY,
JOSEPH DELAGE.