No. 773,873. PATENTED NOV. 1, 1904.

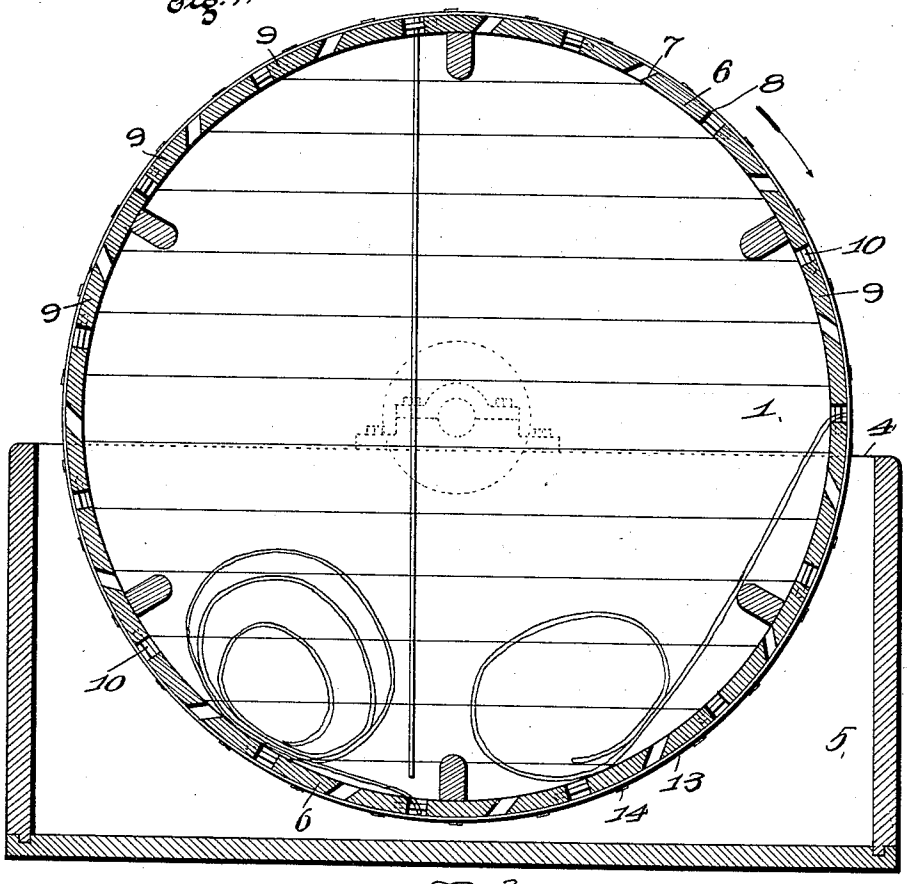
R. KOENITZER.

DEVICE FOR WASHING AND TANNING HIDES OR SKINS.

APPLICATION FILED APR. 2, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



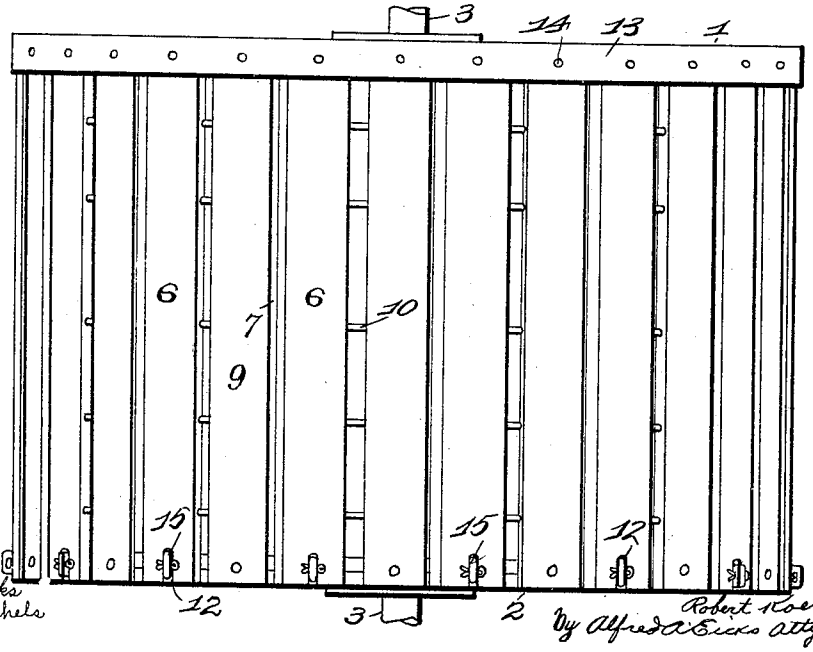


Fig. 2.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3

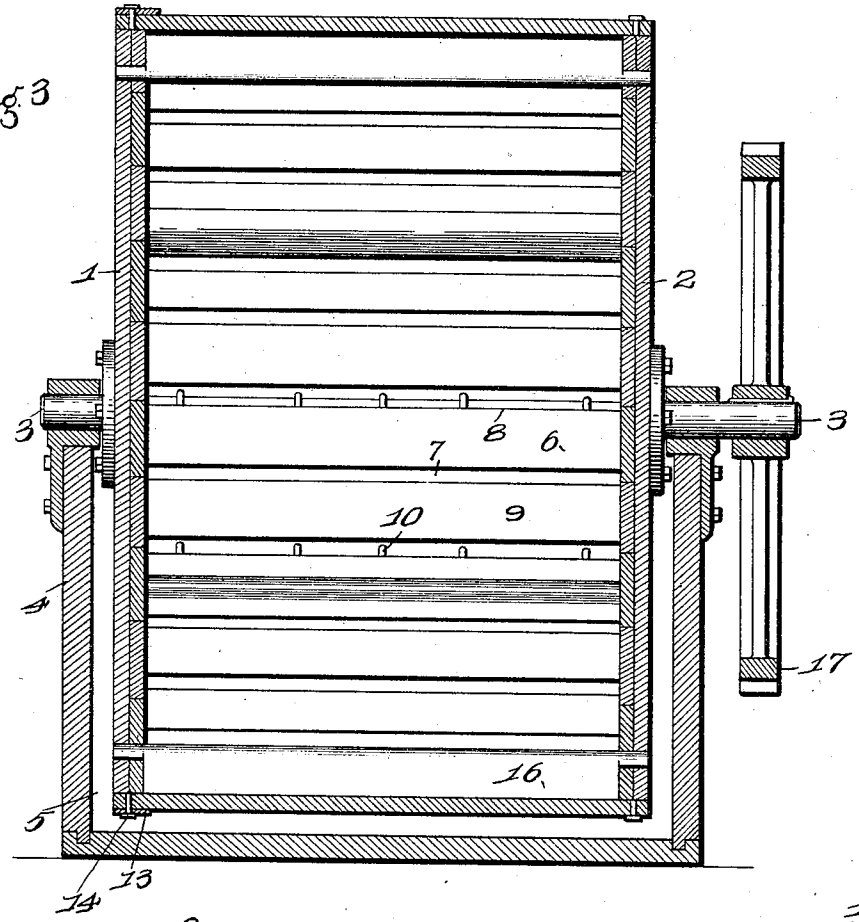


Fig. 4

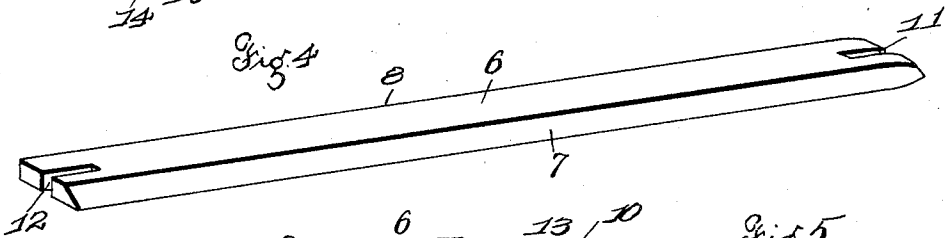
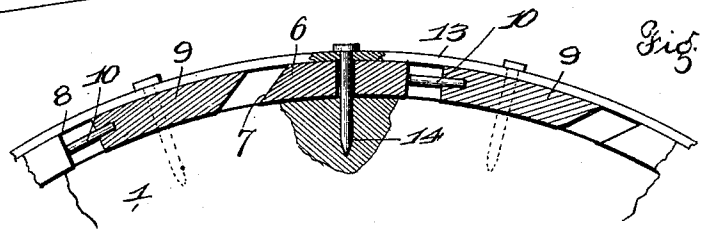


Fig. 5



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No. 773,873. Patented November 1, 1904.

UNITED STATES PATENT OFFICE.

ROBERT KOENITZER, OF ST. LOUIS, MISSOURI.

DEVICE FOR WASHING AND TANNING HIDES OR SKINS.

SPECIFICATION forming part of Letters Patent No. 773,873, dated November 1, 1904.

Application filed April 2, 1904. Serial No. 201,195. (No model.)

To all whom it may concern:

Be it known that I, ROBERT KOENITZER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Devices for Washing and Tanning Hides or Skins, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in a device for washing and tanning hides and skins; and it consists in the novel arrangement, construction, and combination of parts, as will be fully hereinafter described, and set forth in the claims.

The object of this invention is to construct a device in the style of a revolving drum wherein hides and skins are suspended and to become thoroughly drenched by and submerged in a tanning solution during every revolution of the drum.

A further object of my invention is to provide strips arranged at intervals apart around the entire periphery of the drum, the one edge of each strip being beveled, the other straight. Between the straight edges are suspended the hides and skins and retained in a position to protect the hides and skins during the tanning process.

A still further object is the manner and idea of suspending hides within a revolving drum from its periphery, permitting said hides during each revolution of the drum to roll up and unroll and become thoroughly drenched and tanned by a tanning solution contained in a vat, through which the said drum revolves.

In the drawings, Figure 1 is a vertical longitudinal sectional view of my invention, showing its construction and position upon the tanning-vat. Fig. 2 is a top plan view of the drum detached from the vat and the supporting-trunnions broken away. Fig. 3 is a vertical cross-sectional view of my device, taken through the middle. Fig. 4 is a detail perspective view of one of the strips made use of in carrying out my invention. Fig. 5 is a detail enlarged sectional view of a portion of the drum, showing the manner in which the strips are retained upon the heads and the pins for supporting the hides.

Referring to the drawings, I provide a drum composed of heads 1 and 2, which are provided with trunnions 3, by which said drum is supported upon the walls 4 of the tanning-vat 5. The heads 1 and 2 are preferably constructed of a double layer of heavy strips of timber, one layer crossing the other and firmly secured together for the purpose to prevent said heads from warping and becoming out of alinement. On the periphery of said heads are located strips 6, having one edge beveled, as indicated by the numeral 7, the other edge, 8, being straight, the strips 6 being arranged at intervals apart around the entire periphery of the drum, the beveled edges together and the straight edges together. The straight edge of each alternate strip 9 is provided with pins 10, on which the hides or skins are suspended. The said strips 9 are rigidly secured to the heads, while the remaining strips are detachable. The detachable strips are provided on one end with slots 11 and on the other end with a like slot 12, the slots 11 permitting the strips to be placed in position upon the periphery of the head 1 and under the band 13, which is located around the edge of the drum over the strips. By means of the slots 11 the strips are permitted to straddle pins 14, retained in the head and passing through the band 13. On the opposite head are eyebolts 15, which are permitted to pass through the slots 12 to lock said strips in position by means of spring-cotters, rope, or any fastening device deemed practical.

I desire to state that all the metallic parts of my device are composed of some suitable non-corrosive material, so as not to injure or color the tanning solution through which the drum revolves. The drum is also provided with a suitable number of cross-bars 16, extending from head to head, and are used to assist in agitating the tanning solution, shifting the hides and skins as well as bracing the drum.

The drum, by means of its trunnions, is supported in suitable bearings upon the walls of the tanning-vat, in which a tanning solution is placed, and said drum is revolved at the rate of fifteen revolutions or less per minute by means of the large gear-wheel 17, which is located upon one of said trunnions. This

gear-wheel may mesh with a pinion driven by a shaft from any source of motive generation.

While the drum is in revolution the solution in the vat is permitted to enter the drum between the strips to a sufficient height so as to completely submerge the hides or skins in the lower portion of the drum, the solution being drawn into the drum by means of the beveled surfaces of the strips, which act as paddles. A drum of this construction will prevent the hides from becoming grained, bruised, and softened; but by suspending the hides and while in revolution the hides located in the lower end of the drum will roll up and while the revolution is continuing will unroll, thus permitting the entire hide to be thoroughly drenched, and thereby tanned in half the time than it now requires.

Being a tanner of many years' experience, I have found in practice that the tanning-drums now in use have pins projecting inwardly from the inner surface of the periphery and the hides are thrown loosely into the drum to mingle with the projecting pins. These pins are found to be detrimental, because during the revolution of the drum the hides are tossed upon the pins and at each point of contact the hides become softened, thus producing a poor and inferior grade of leather. To suspend the hides in position upon the pins, the detachable strips are removed, the hides punctured at points to correspond to the location of the pins in the stationary strips. The hides are then placed in position on said pins, the detachable strips are then placed in position, their straight edges contacting with the free ends of the pins, thus preventing the hides from becoming detached, and thus each hide is placed in suspended position in the drum until each set of pins is supplied.

The hides are preferably placed with the grain side toward the direction of the drum's revolution, so that the flesh side of the hides will in no wise come in contact with the strips, but during the revolution will as it nears the lower extremity roll in or upon itself, thus preventing the hide from wrinkling, which is termed by the trade as "grain."

In Fig. 1 is indicated the position the hides assume during the revolution.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A device of the class described comprising a drum revolubly mounted upon a tanning-vat, the periphery being composed of strips arranged at intervals apart, each alternate strip being detachably secured the remaining being fixed, pins carried by the fixed strips for suspending the hides to be tanned, substantially as specified.

2. A device of the class described comprising a drum, said drum having heads, a plurality of strips arranged upon said heads, the one edge of said strips being beveled, the other edge straight, pins carried by said strips for suspending hides, and means for permitting the insertion and removal of the hides, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT KOENITZER.

Witnesses:

ALFRED A. EICKS,

M. J. EICKS.