

No. 730,815.

PATENTED JUNE 9, 1903.

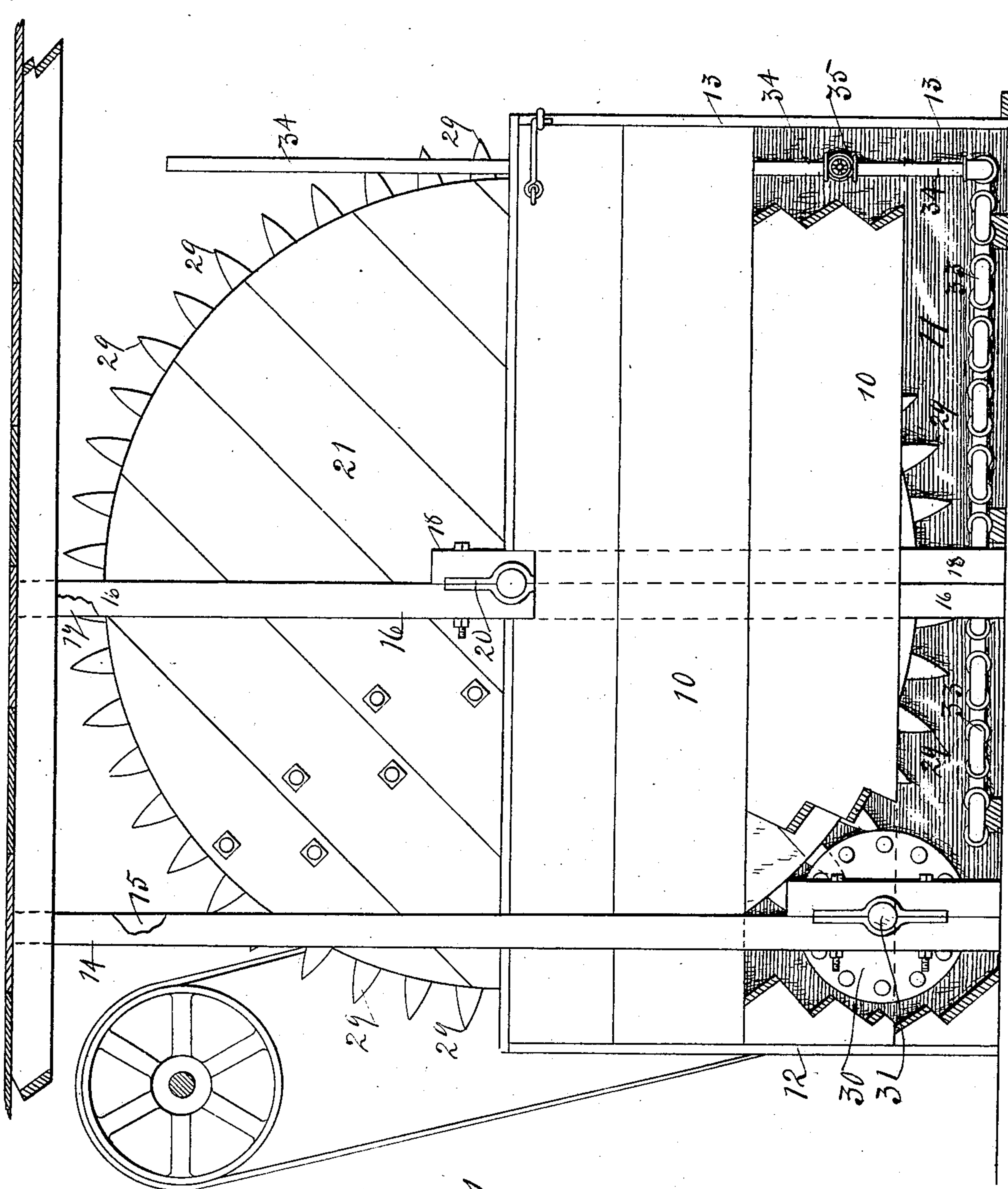
S. D. CASTLE.

MACHINE FOR CLEANING, SOFTENING, AND DRYING  
TANNED HIDES FOR ROBES.

APPLICATION FILED FEB. 2, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:  
F. R. Lowery.  
L. H. Orwig.

*Fig. 1*  
*By*

Inventor:  
Samuel D. Castle,  
Thomas G. Orwig, atty.

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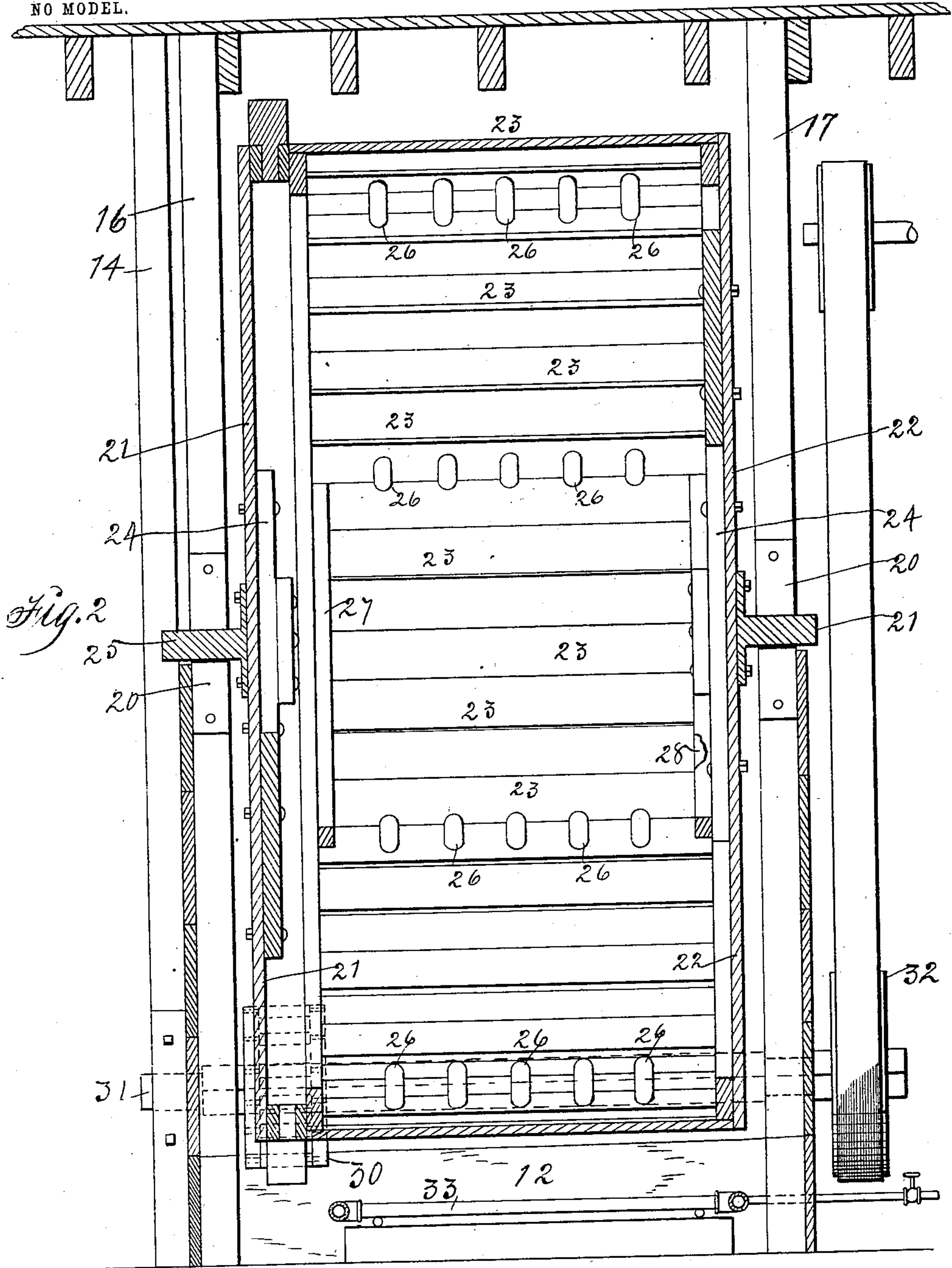
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J. R. Lowry. {  
L. H. Orrig. { By Thomas G. Orrig, Attorney.



# UNITED STATES PATENT OFFICE.

SAMUEL D. CASTLE, OF CALLENDER, IOWA, ASSIGNOR OF ONE-HALF TO  
JACOB BAYER, OF DES MOINES, IOWA.

MACHINE FOR CLEANING, SOFTENING, AND DRYING TANNED HIDES FOR ROBES.

SPECIFICATION forming part of Letters Patent No. 730,815, dated June 9, 1903.

Application filed February 2, 1903. Serial No. 141,623. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL D. CASTLE, a citizen of the United States, residing at Cal-  
lender, in the county of Webster and State  
5 of Iowa, have invented a new and useful Ma-  
chine for Cleaning, Softening, and Drying  
Tanned Hides for Robes, of which the follow-  
ing is a specification.

My object is to save time and labor in fin-  
10 ishing hides after they are tanned in a vat,  
especially hides with hair on and adapted to  
be used for robes.

Heretofore cleaning the hair from foreign  
substances, beating the fiber to make them  
15 soft, and drying them have required much  
time and manual labor in handling the hides  
and subjecting them to such different pro-  
cesses; and my invention consists in a machine  
adapted for doing all such work simultane-  
20 ously and is constructed as hereinafter set  
forth, pointed out in my claims, and illus-  
trated in the accompanying drawings, in  
which—

Figure 1 is a side elevation thereof from  
25 which parts of the exterior wall are broken  
away. Fig. 2 is a vertical sectional view that  
shows the interior construction and the posi-  
tions of the different operative parts relative  
to each other and a driving-shaft.

30 The numerals 10 and 11 designate the par-  
allel sides, and 12 and 13 the ends, of a wall  
resting on a floor for inclosing a cylindrical  
rotatable cage adapted for inclosing wet hides  
as they come from vats. One of the ends of  
35 the wall is removable and fastened by means  
of hooks and eyes or in any suitable way.  
Fixed to the outside of the rear end portion  
of the parallel sides are uprights 14 and 15,  
that are preferably connected with the joist  
40 of a ceiling in a building or otherwise sup-  
ported to be retained stationary. At the cen-  
tral portion are uprights 16 and 17, fixed to  
the sides of the wall, as shown in Fig. 1, in  
a similar manner, and at their sides are fixed  
45 uprights 18, in alinement with each other, that  
terminate above the wall, where they are  
bolted to the uprights 16 and 17, and between  
them in transverse openings are fixed metal  
bearings 20 to support trunnions.

50 A cylindrical and rotatable cage for inclos-  
ing and carrying hides is composed of mating

closed sides 21 and 22 and cross-pieces 23,  
fixed to the sides by nailing or in any suit-  
able way in such a manner that there will  
be spaces between the parallel edges of the 55  
cross-pieces for the passage of water and heat.  
The sides are reinforced by fixing boards 24  
to their inside faces to support metal trun-  
nions 25, fixed to their outsides and centers  
by means of bolts or in any suitable way in 60  
such a manner that the trunnions will extend  
through the bearers 20 as required to mount  
and rotate the cage within the fixed wall.  
From a plurality of the cross-pieces in the  
cage project inward fixed studs 26, that are 65  
rounded at their ends and adapted to pound  
the fiber of hides when inclosed and car-  
ried upward to fall downward upon the studs.  
A number of the cross-bars 23 of the cage are  
fixed to segments 27 and 28 to serve as a re- 70  
movable door through which access is gained  
to the cage for putting in and taking out hides.  
One side of the cage has teeth 29, adapted to  
be engaged by a lantern-wheel 30, fixed to a  
shaft 31, mounted in bearings fixed to the up- 75  
rights 14 and 15, as shown in Fig. 1, or in any  
suitable way. A belt-wheel 32 is fixed to the  
other end of the shaft and connected with a  
driving-shaft, as shown, or in any suitable  
way as required to impart a slow rotary mo- 80  
tion to the cage when hides are placed there-  
in. Coils of pipes 33 are located under the  
rotatable cage and connected with a steam-  
generator in any suitable way in such a man- 85  
ner that steam and hot water can be circu-  
lated through the coils of pipe to radiate heat  
that will rise within the wall to warm the  
hides and to evaporate moisture as required  
to facilitate drying the hides at the same time  
that they are subjected to pounding by fall- 90  
ing upon the studs and cross-pieces of the ro-  
tating cage as required to beat dirt and dust  
from the hair and to soften the fiber of the  
tanned hides.

The steam-pipe 34, leading to the genera- 95  
tor, is provided with a valve 35 for regulating  
the passage of steam.

Having thus stated the purpose of my in-  
vention and its construction and operation,  
its practical utility will be readily understood 100  
by persons familiar with the art to which it  
pertains, and



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

1. A machine for cleaning, softening and drying tanned hides comprising a wall, a rotatable cage mounted on the wall and provided with studs on the inside and teeth on its outside, a rotatable shaft and a wheel at one end of the shaft to engage the teeth projecting from the cage, coils of pipe located under the wheel and adapted to be connected with a supply-pipe and steam-generator and means for rotating the shaft and the cage, arranged and combined to operate in the manner set forth.
2. A machine for cleaning, softening and drying tanned hides comprising a rotatable cage having fixed studs projecting inward

from cross-bars fixed to the circumferences of the sides of the cage, trunnions fixed to the centers of the sides of the cage, teeth projecting outward from the periphery of the cage, a wall surrounding the cage provided with bearings to admit the trunnions of the cage, a rotatable shaft having a fixed wheel to engage the teeth on the cage, means for rotating the shaft and pipes located under the cage to circulate steam and radiate heat, arranged and combined to operate in the manner set forth.

SAMUEL D. CASTLE.

Witnesses:

JACOB BAYER,  
THOMAS G. ORWIG.