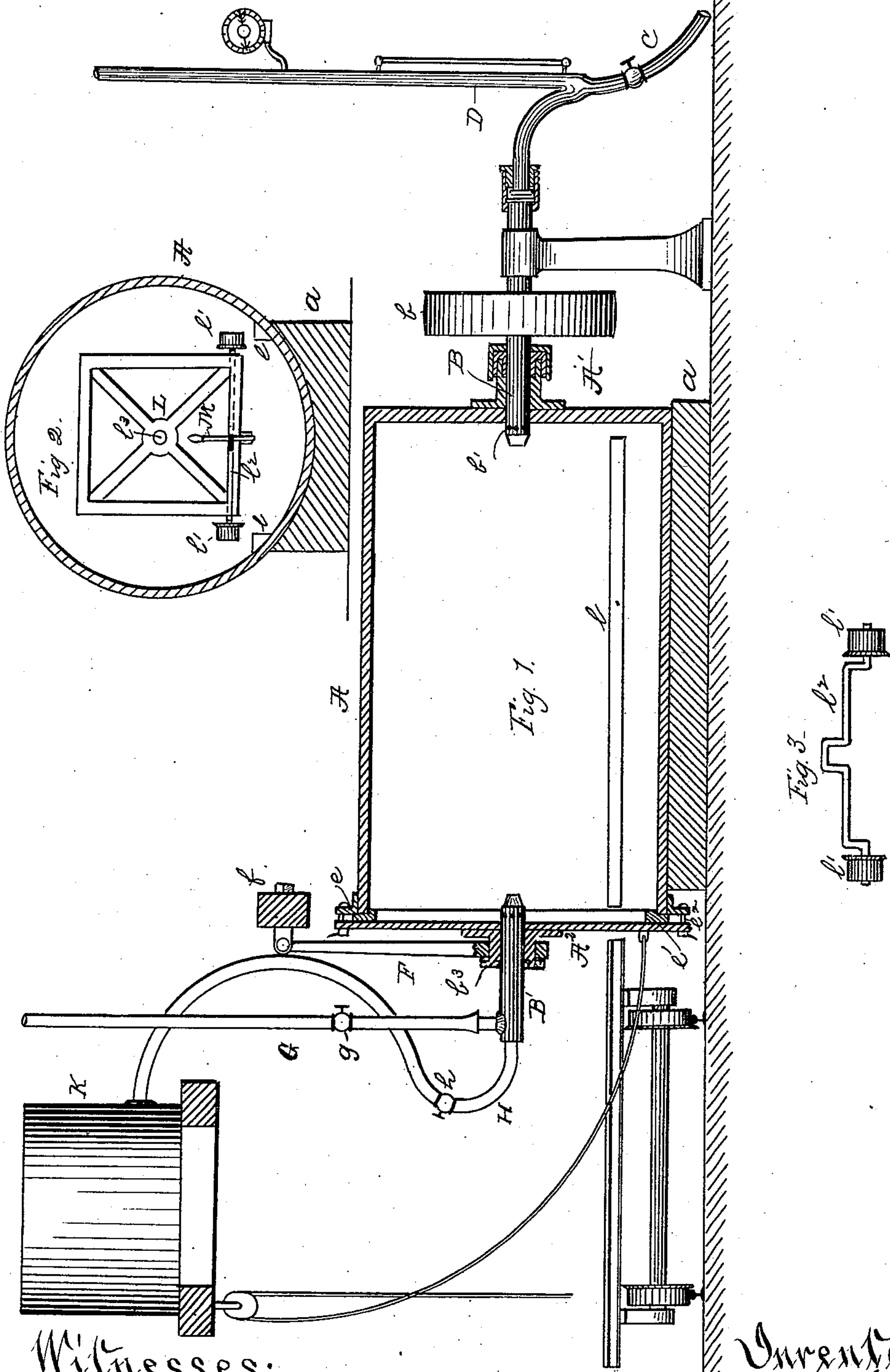


(No Model.)

L. SIMPSON.
APPARATUS FOR TANNING.

No. 313,542.

Patented Mar. 10, 1885.



Witnesses:
J. A. Kerr
H. D. Thomas

Inventor:
L. Simpson

UNITED STATES PATENT OFFICE.

LENOX SIMPSON, OF PITTSBURG, PENNSYLVANIA.

APPARATUS FOR TANNING.

SPECIFICATION forming part of Letters Patent No. 313,542, dated March 10, 1885.

Application filed September 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, LENOX SIMPSON, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Tanning Hides, of which the following is a full, clear, and exact description.

The invention relates to improvements in that class of tanning apparatus in which the hides are revolved in an air-tight vat from which the air is exhausted.

The invention consists in a revolving removable hide-frame, in means for securing said frame in place within the vat, and in various details of construction, all of which will be more fully and at large set forth.

In the drawings, Figure 1 represents a side elevation, partly in section, of the apparatus. Fig. 2 represents a transverse section of the vat, and Fig. 3 a detail of the hide-frame, wheels, and axles.

Similar letters of reference indicate corresponding parts throughout the different views.

A represents a hollow cylinder, of wood or other suitable material, secured to a foundation, *a*, and having one of its ends closed by a fixed head, *A'*, and the other extremity by a movable head, *A''*. The fixed head *A'* has a short revolving shaft, *B*, passed through its center. Said shaft is properly packed to prevent leakage, and has its inner extremity angled for the purpose hereinafter set forth. Outside of the vat the shaft is provided with a pulley or other suitable device, *b*, by means of which it may be revolved.

The liquor may be conducted from the vat in either of two ways, to wit: First, the shaft *B* may be hollow, its inner extremity closed, and provided with radial orifices *b'*, and its outer extremity connected by a suitable joint with the discharge-pipe *C* and exhaust-pipe *D*, as shown in Fig. 1; or, second, the short shaft may be solid and the discharge-pipe connected with the vat at some other part.

The vat *A* is provided upon the outer side of its open end with an angle-ring, *e*, provided with bolt-holes. The head *A''* is provided with other bolt-holes registering with those of the ring. An elastic gasket, *e'*, is interposed

between the vat and head, and bolts *e''* secure head, gasket, and vat together and form an air and water tight joint. Through the center of the movable head passes a pipe, *B'*, having its inner extremity solid and conical. In rear of conical extremity are a series of radial orifices through which the liquor is conducted into the vat. Outside of the head, surrounding the pipe, and preferably made integral with it, is a neck, *b''*, to which is secured an arm, *F*, whose free extremity is hinged to a cross-beam, *f*. By this means the head, when loose, may be swung upward and out of the way. A pipe, *G*, provided with a cock, *g*, connects with feed-pipe *B'*, and allows ingress of air to the vat when desirable. A flexible pipe, *H*, connects the end of pipe *B'* with a supply-tank, *K*, and is provided with a cock, *h*, by means of which the amount of liquor supplied to the vat may be regulated. Within the vat are two longitudinal rails, *l*, on which travels a hide-frame, *L*. The latter is provided with two pairs of wheels, *l'*. Each pair of wheels is carried by a crank-shaft, *l''*, and the two crank-shafts are connected by a horizontal bar. A lever, *M*, connected with the front crank-shaft, and fulcrumed on the frame, allows the four wheels to be simultaneously lowered or raised, and a hook link or other suitable device holds the lever in place when the wheels are raised. At the center of the two ends of the frame are sockets *l'''*, adapted to receive the inner solid ends of the supply and discharge pipes. The socket designed to receive pipe *B* is squared, while that in which the end of pipe *B'* rests is conical. By this means the frame is made to revolve with pipe *B* and upon pipe *B'*.

The operation is as follows: The hides are secured to the frame and the latter run into the vat in the manner described in an application of even date herewith, marked "A." When the frame has reached its proper position, the socket nearest the discharge end of the cylinder will have fitted itself over the inner extremity of the pipe or shaft *B*. Two bolts or rests are then run inward from the sides of the tank beneath the end of the frame. The head is then secured in place (in the manner described in the before-mentioned application) and the bolts or rests withdrawn. The head, in closing, pushes the conical end of

the pipe B' in its socket, and the frame is thus
securely suspended with the cylinder. Liq-
uor is now allowed to flow into the cylinder
until the latter is about half filled, when the
5 frame is revolved, as before described. At in-
tervals the air is exhausted from the cylinder,
(while the frame still continues to revolve,) and
this is continued until the hides are tanned.

What I claim is—

10 1. An exhaust tanning vat provided with a
removable hide-frame having the cranks l^2 ,
carrying wheels l' , substantially as and for
the purposes described.

2. The combination, with the vat A and hide-

frame L, of the revolving pipe B, provided 15
with lateral orifices b' , and having squared in-
ner end, substantially as and for the purposes
set forth.

3. The combination, with the vat A and
hide-frame L, of the revolving pipe B, having 20
squared inner extremity, and the immovable
pipe B', having conical inner extremity, as set
forth.

LENOX SIMPSON.

Witnesses:

J. A. KURTZ,

W. D. THOMAS.