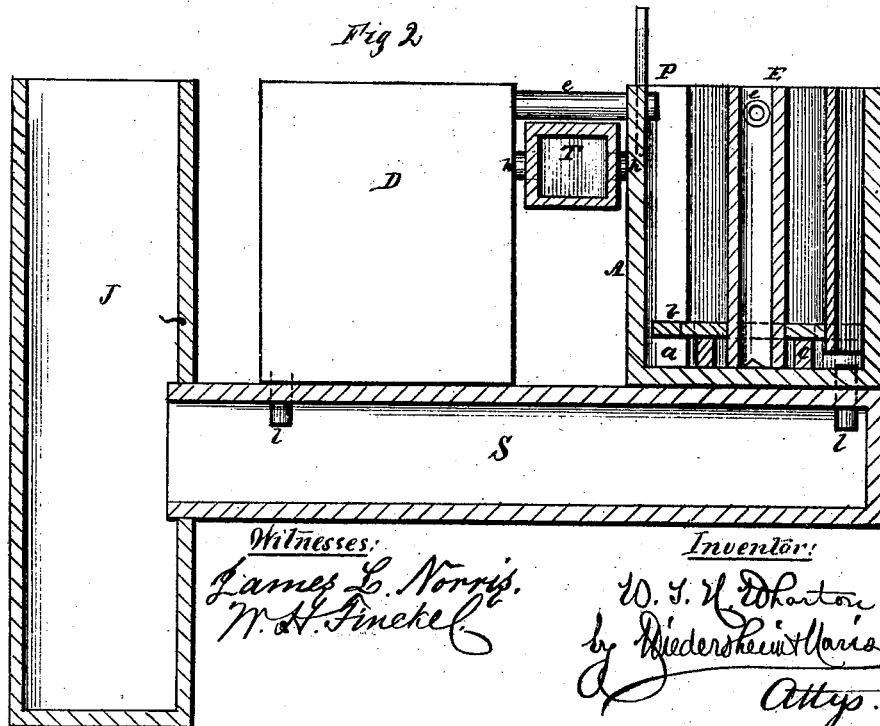
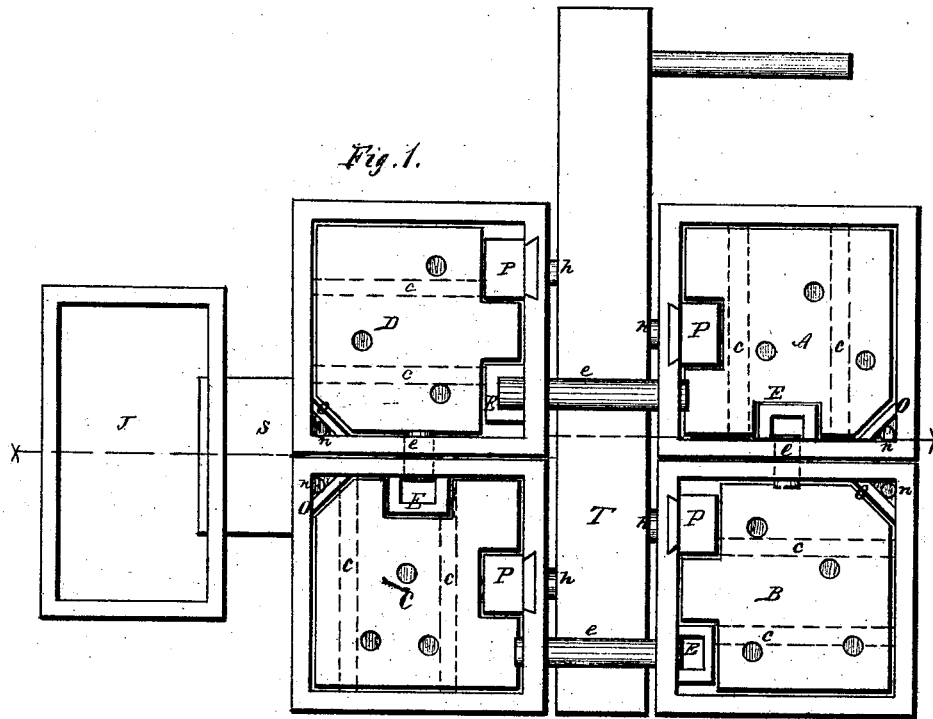


W. T. H. Wharton,

Leaching Apparatus.

No. 110,317.

Patented Dec. 20, 1870.



Witnesses:  
James L. Norris.  
W. H. Finckel.

Inventor:  
W. T. H. Wharton  
by Wiedersheim & Harris  
Attys.

# United States Patent Office.

WILLIAM THOMAS HARRIS WHARTON, OF FAYETTEVILLE, TENNESSEE.

Letters Patent No. 110,317, dated December 20, 1870.

## IMPROVEMENT IN LEACHES FOR TANNING.

The Schedule referred to in these Letters Patent and making part of the same.

### *To all whom it may concern:*

Be it known that I, WILLIAM THOMAS HARRIS WHARTON, of Fayetteville, in the county of Lincoln and State of Tennessee, have invented a new and useful Improvement in Leaches for Tanning; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing forming a part of this specification, in which drawing—

Figure 1 is a top or plan view of my improved leach for tanning, and

Figure 2 is a section of the same, taken through the line *x x*.

### *Nature and Object of this Invention.*

My invention relates to that class of devices known as tanners' leaches; and

It consists in the novel and peculiar combination and arrangement of certain parts in such a manner as to dispense with the old system of pumping.

In the drawing—

A, B, C, and D represent four leaches or boxes, made of wood or other suitable material, arranged, preferably, in the form of a square, two on each side of a pipe or tube, T, and supported upon a main trunk, S, which communicates with a junk, J.

When the leaches or boxes are arranged in a line, they are connected by means of a trunk on each side, using, thus, two trunks instead of one, as when arranged in a square.

The leach or box A, which is the first that receives the water from a fountain or hydrant, is made, preferably, square, and is provided with a bottom, *a*, as usual.

Within this leach or box A is formed or otherwise secured, a false perforated bottom, *b*, resting on suitable bearings or supports, *c c*, so as to leave or form a space between the two bottoms.

This false perforated bottom acts as a strainer, preventing foreign substances from entering and stopping the flow of the fluid through the hydrants.

E is a hydrant extending from the bottom *a* to or near the top of the leach or box A, near the top of which leach or box, communicating with the hydrant E, is an opening for the reception of a pipe, *e*, which connects together and communicates with the leach or box B.

One or more apertures may be formed at or near the bottom of the hydrant, between the false perforated and real bottoms, so as to allow the fluid to pass down through the bark into the open space, to rise in the hydrant as the same rises in the leach, so as to conduct it, through the pipe *e*, into the leach or box B.

These leaches or boxes A, B, C, and D are connected together, and communicate with each other

through the pipes *e e e e*, as the leaches A and B, above described, and are constructed in like manner, each containing a false perforated bottom and hydrant.

T is a trunk, located near the top of the leaches, and conveys the liquid from either of the leaches, through pipes, *h h h h*, into the tan-yard.

These four tanks or leaches are situated two on each of the trunks T, each being provided with an additional hydrant, P P P P, closed at the top, otherwise the same as those heretofore described.

These hydrants extend from the top to the bottom of the tanks or boxes A, B, C, and D, and are connected, by means of pipes, *h h h h*, with the trunk T. These pipes *h h h h* conduct the fluid from the tanks or boxes into the trunk T, and from thence the fluid is conveyed out into the tan-yard.

These hydrants P P P P are regulated by means of gates, which extend up above the top of the tanks or boxes, the same being raised or lowered when it is desired to cut off the liquid or allow it to flow into the trunk T in order to pass into the vats.

S is the main trunk, upon which the four tanks or boxes rest, running horizontal with the trunk T.

The tanks or boxes communicate with this trunk S by means of tubes or pipes, *ll*, passing through the bottom of the tanks or boxes into the main trunk, and which conveys the waste fluid into the junk J, hereinafter mentioned.

The tubes or pipes *llll*, which connect the leaches or boxes with the main trunk, are opened and closed so as to cut off or allow the waste fluid to pass into the trunk by means of rods, *n n n n*, extending to about the top of the leaches or boxes.

These rods are placed or secured within casing, O O O O, the bottom of which casings are provided with openings, for the passage of the fluid into the main trunk S through the pipes *llll*.

These rods cut off or allow the passage of the fluid into the main trunk by simply rising or lowering within the orifice O O O O.

One end of the main trunk is closed; the other being open, is adjusted or secured into an opening or orifice formed in the junk J.

This junk J is closed at one end and open at the other, and extends into the ground, so as to be of a size sufficient to contain as much fluid as either of the leaches or boxes, which, when the waste fluid is conveyed from either of the leaches or boxes, the same may be cleaned out and be filled up with new bark, and the waste liquor which has been received into the junk and is still of value, may, by means of a pump, be re-conveyed back into either of the leaches or boxes.

The bark is first placed in the leaches or tanks A.

B, C, and D in the space formed between the false perforated and the real bottom. The water or fluid is then introduced into the leach or tank A by means of a fountain or hydrant, and, passing through the perforated false bottom, it ascends in the hydrant E as the water rises in the leach or tank, until it reaches the opening near the top of the leach or tank, when it is conducted into the leach or box B through the pipe *e*; likewise, from B to C, and from C to D, and from D it is discharged into the vats until the strength of the liquor in D is partially exhausted. The bark in A is then shifted, the water is put on at B, and allowed to pass regularly around to A, where it is discharged into the vats. The bark in B is then shifted, and the water put on at C, whence it passes to B, and is discharged into the vats. This process is continued, as long as may be necessary, with each successive leach or box.

If desired to pass the fluid through all the leaches, the stop-cocks, which may be arranged on the pipes, may be left open, and the fluid will pass through the trunk T into the vat or tan-yard after the fluid has been allowed to pass through all the leaches.

The top of the leaches may be on a level with the ground or tan-yard, and the fluid conveyed to the vats without the use of pumps or labor of any kind. This is due to the additional hydrants and the main trunk, all other leaches heretofore requiring to be elevated, or the use of pumps, to force the fluid out of the leaches or tanks, or the leaches raised so that the fluid would flow to the vats.

When the leaches or tanks are placed below the ground they will last many years, at the same time are more convenient, saving a vast amount of labor by dis-

pensing with elevating the bark in order to get it into the leaches or tanks.

In all other leaches now in use, the waste liquor is pumped out of them below the ground; by my improvement such is dispensed with.

Having thus described my invention,

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

1. The leaches A, B, C, and D, provided with false perforated bottoms, and connected together by means of the pipes *e e e e*, substantially as described.

2. The trunk T, arranged at or near the top of the leaches A, B, C, and D, and communicating with the same through the medium of the pipes *h h h h*.

3. The leaches A, B, C, and D, formed with the hydrants O O O O, and the additional hydrants P P P P, the latter of which are provided with stops or gates, and operating in connection with the trunk T, substantially as described.

4. The main trunk S, supporting the leaches A, B, C, and D, and communicating with the same through the pipes or tubes *l l l l*, for the purpose described, substantially as set forth.

5. The junk J, provided with an orifice to receive the main trunk S, which supports and communicates with the leaches A, B, C, and D, substantially as and for the purpose described.

To the above I have signed my name this 28th day of May, 1870.

WILLIAM THOMAS HARRIS WHARTON.

Witnesses:

D. S. THOMAS,  
O. D. EVANS.