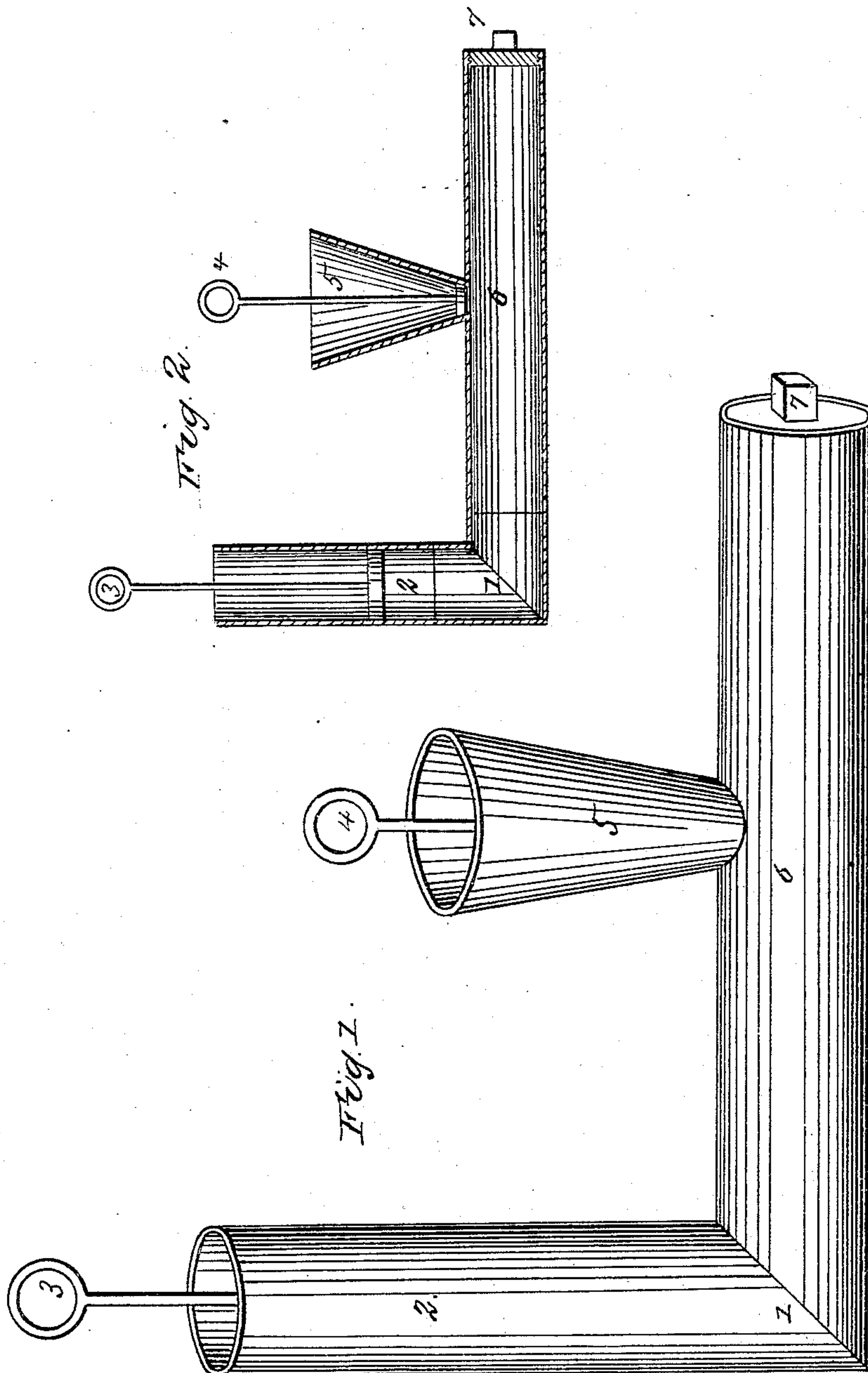


C. BROWN  
Preserving Wood.

No. 83,758.

Patented Nov. 3, 1868.



Witnesses  
W. L. Cochran  
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# United States Patent Office.

CHARLES BROWN, OF ALBEMARLE COUNTY, VIRGINIA.

*Letters Patent No. 83,758, dated November 3, 1868.*

## IMPROVED PROCESS OF PRESERVING TIMBER FROM DECAY.

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, CHARLES BROWN, of the county of Albemarle, in the State of Virginia, have invented a new and improved Mode of Preserving Timber, or preventing its decay; and I hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

The nature of my invention consists in filling the pores of the wood with a certain material or materials, to be hereafter mentioned, which renders the timber almost like stone, for durability, and which I call "lapidifying" wood.

To enable others to understand my process, reference must be had to the drawing, which represents an iron vessel, in which the wood is to be treated—

Figure 1 being an elevation of the same, and Figure 2, a longitudinal vertical section.

The wood to be used, such as railroad-ties, fence-posts, ship-timber, &c., should first be shaped as desired, and well dried, freed from all sap or moisture, and can be introduced into the body of the vessel 6 through the opening in the lower end, closed by a screw-plug 7 after the introduction of the wood. Previous to putting in the wood, I prepare the material to be used for preserving it.

In my experiments, I have taken sandstone, (emery,) which abounds in the red lands of Virginia, and reduced the same to a very fine powder, bolted, as flour is done, so fine that it may be suspended in water kept in moderate motion. When a sufficient quantity is used, the water is drained off, and the emery dried.

It of itself can be used, but an addition of ten or twelve per cent. of caustic lime or carbonate of iron makes it better. All these materials should be well dried before mixing.

The caustic lime I prefer made from the blue limestone, the gray containing too much magnesia, which weakens the cement; and shell-limestone contains too much animal matter, not decomposed by burning.

After mixing the emery and the lime or carbonate of iron, in the desired proportions, I make it into a thick mortar, and put it into the hopper 5.

Hydraulic lime does well as one of the ingredients, if used before it sets; but this property makes it rather undesirable.

It will be seen the lower end of the hopper is securely closed, and in such manner as to be readily opened, to permit its contents to enter chamber 6, where the wood to be treated rests.

4 forms a stopper for the bottom of hopper 5. This stopper may screw in or out, or the handle of it may be constructed to do so.

The leg 6 is connected with the arm 2, by means of an elbow, 1, or all three may be made in one piece.

6 may have a solid end, and the wood may be entered through an opening in elbow 1.

The arm 2 may be used as a pump, by which to exhaust the air in the vessel, 3 representing a plunger or valve. The air can be exhausted by applying any air-pump suited to such purpose.

After the air shall have been exhausted; the cement or emery in hopper 5 is permitted to enter the exhausted receiver, and the pores of the wood are instantly filled, and the wood becomes heavy and hard, unfit to be dressed by edge-tools, preventing depredations from worms, almost indestructible by fire and exposure, being almost impervious to water.

All sandstones, as the grindstone, may be cemented with the carbonate of iron.

I commenced my experiments in preserving wood nearly fifty years ago, and had a piece buried, treated as described, twenty years, without decay, whereas a piece not treated, buried alongside of it, rotted in three years.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent of the United States, is—

Preserving or "lapidifying" wood, in the manner and with the material or materials substantially as described.

CHARLES BROWN.

Witnesses :

H. BENSON,  
JAMES LOBBAN.