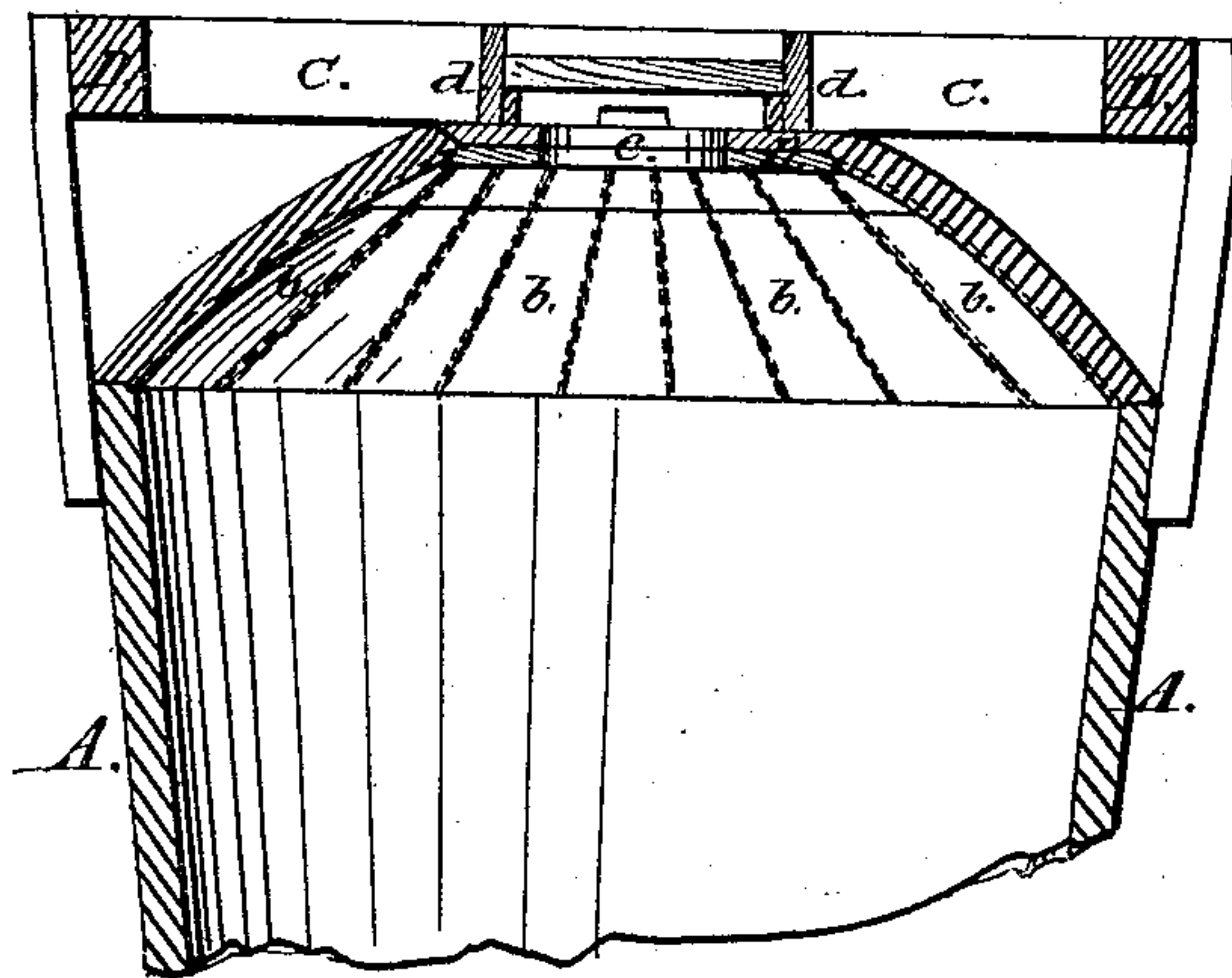


*T. M. Bush.*

*Cistern Top.*

*N<sup>o</sup> 88,272.*

*Patented Mar. 30, 1869.*



*Witnesses:*  
*Geo. Rothwell*  
*Phil. F. Larnier*

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# United States Patent Office.

T. M. BUSH, OF HASTINGS, MICHIGAN.

Letters Patent No. 88,272, dated March 30, 1869.

## IMPROVED CISTERN-TOP.

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, T. M. BUSH, of Hastings, in the county of Barry, and State of Michigan, have invented a new and useful Improvement in the Construction of Cistern-Tops; and I do hereby declare the following to be a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains, to make and use the same, reference being had to the accompanying drawing, forming part of this specification, and in which my invention is represented by a vertical central section.

Heretofore, in the construction of cisterns, it has been customary to close the top of the same with an arching of brick, or a covering of planks.

The former mode is objectionable, on account of the time employed in its execution, together with the attendant cost and difficulty.

The plank covering is unsatisfactory, because the decay of the material necessitates its frequent removal and renewal. Besides, a plank covering cannot be rendered water-tight; therefore surface-drainage will percolate through the covering of planks and soil, and thus enter the cistern to vitiate its contents. And, further, when the planks composing the covering begin to rot, decayed, worm-eaten portions of the same will become detached and fall into the cistern, thus leaving openings, through which earth and other extraneous matters can fall in, and vermin or rats enter the cistern.

To remedy these defects, and provide a covering, or cistern-top which shall be water-tight and inexpensive, as well as exceedingly durable, and easily and readily constructed, is the object of my invention; and

It consists in constructing the tops of cisterns of cement, laid on a temporary covering of short boards, which are taken out as soon as the cement has set.

In the centre of the top is a curb, having an opening in it. This curb is put in place so as to retain the removable plank covering, and the cement top laid on around it.

The cement covering rests on top the walls of the cistern.

My invention will be better understood from the following description, taken in connection with the accompanying drawing.

In the drawing—

A A represent the walls of the cistern, which are usually made of cement.

A cement composed of gravel, sand, and water-lime has been found excellent for this purpose. About the construction of the walls there is nothing peculiar.

I construct the top of the cistern as follows:

A narrow flange is first formed all around the inner edge of the top of the walls A A. If the cistern be located under a house, or other building, (of which D D may represent the sills,) the curb B is secured to the under side of the joists, represented at C C.

This curb is made of two wooden circles of the same size, having the edges bevelled on one side. These circles are secured together, the bevelled sides being face to face, so as to form a V-shaped groove, *a*, on the periphery, extending entirely around. As above

stated, this curb is affixed to the under sides of the joists C C.

If the cistern be situated elsewhere than under a building, temporary joists may be provided for the attachment of the curb until the top is finished, when they may be removed.

The curb having been fixed in place, a temporary covering of short boards, *b b*, is laid down. These boards are laid closely side by side, their upper ends resting in the groove *a* of the curb, and their lower ends supported on the flange, which is formed on the inside of the walls A A, at the top.

The cement (which may be composed of the same ingredients as that of which the walls A A are made, or any other which will answer the same purpose,) is now laid on the temporary covering of boards, in a plastic state, and extending from the top of the wall A to the curb B, into the groove *a* of which it enters, so as to make a strong and water-tight joint therewith.

When the cement has become sufficiently set, or hardened, the underlying sectional covering of boards is readily removed, piece by piece.

A round opening, *e*, is left in the curb, large enough to admit a man. This is covered by any suitable removable lid.

*d d* are cross-pieces, between the joists C C, at the sides of the openings *e*.

formed, to admit air to the interior of the cistern.

Through these pieces ventilating-apertures are formed. To prevent the entrance of vermin or insects, these openings may be covered with wire gauze.

When the cistern is built outside a building, the cement top is covered with earth up to the curb.

The eduction-pipe may enter the cistern at any desired point in the top.

It will be seen that by my invention, a covering is produced which is as durable as the walls of the body of the cistern.

It can be constructed by any one of ordinary intelligence, at small expense, and, when finished, is not liable to the objections brought against brick or plank coverings.

One of the main advantages of this construction is, that it is water-tight. This feature is very important and valuable when the cistern is situated in a barn-yard, the foul drainings of which frequently find their way through a plank covering, and render the water contained in the cistern almost, if not entirely unfit for use.

Having thus described my invention,

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

A cistern-top, made of cement, laid on a removable covering of boards, around a central curb, B, so as to form tight joints therewith and with the main walls, all constructed in the manner substantially as described.

T. M. BUSH.

Witnesses:

GEO. W. ROTHWELL,  
PHIL. F. LARNER.