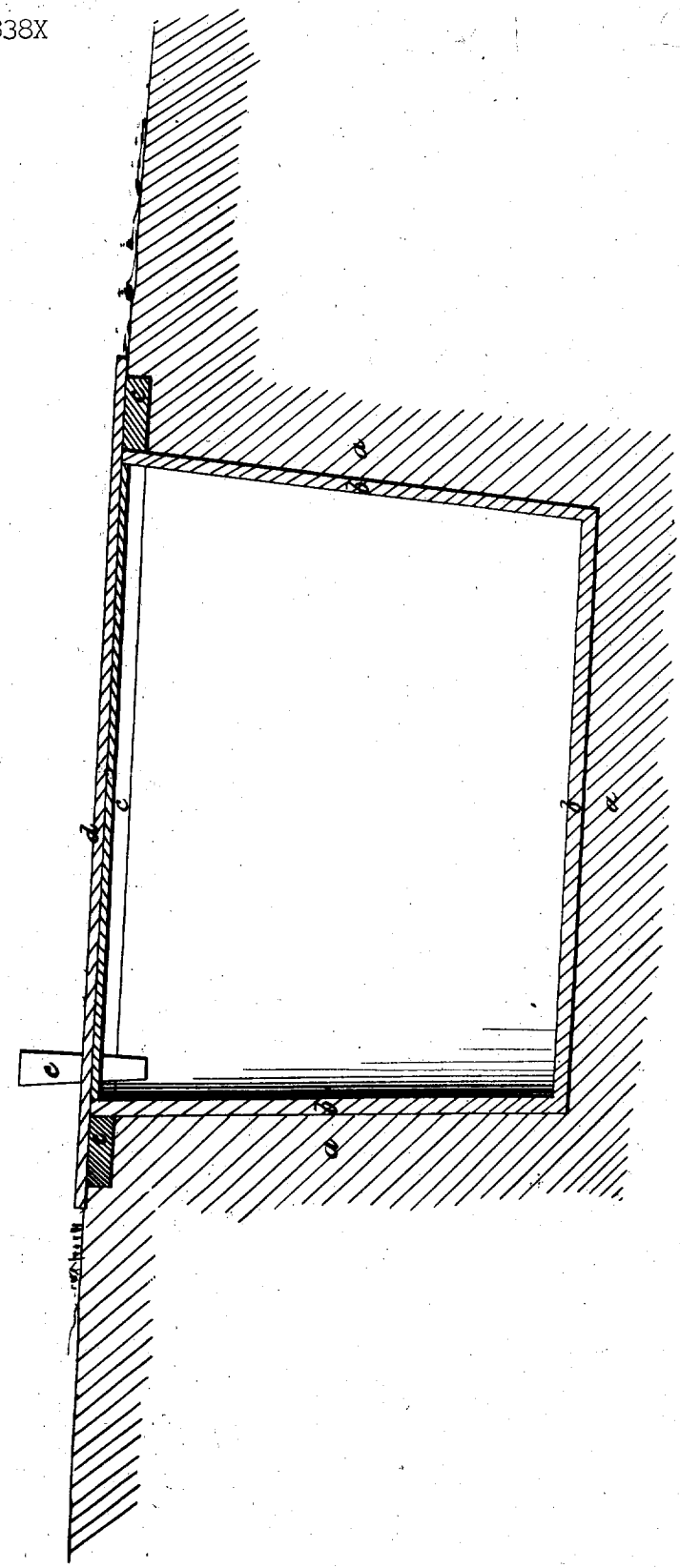
H. J. Shumway.

Cistern.

Patented Nov. 19, 1833.

*7838X



7838X Nov 19, 1833 407

Horace J. Shumway of Van Buren N. York
Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Horace J. Shumway himself of his improvement in making Water Cisterns, Cider Vaults, Salt Vats or reservoirs, fish ponds &c.

To all whom these presents shall come, Be it known that I Horace J. Shumway of the town of Van Buren in the County of Onondaga, and State of New York, have invented a new and useful improvement in making Water Cisterns, Cider Vaults or Cisterns, Salt Vats or Reservoirs, Fish Ponds, Damms Vats, and such other cisterns vats vaults, Reservoirs &c as may be necessary for holding large quantities of liquids, and that the following is a full and exact description of the operation of building and constructing said cisterns vats vaults Reservoirs ponds &c above mentioned, as invented or improved by me viz. First for constructing cisterns vats vaults or Reservoirs or ponds which may be required to be built below the surface of the earth, dig or excavate the earth forming a hole of the required shape and dimensions, then if by reason of springs stone or other causes a smooth and even surface of wall and bottom is not obtained, other earths as sand clay, loam, or gravel, or a mixture of these is to be used to fill the cavities and thus form a smooth and even surface of bottom and wall. This done the bottom and wall is to be spread or plastered over with this mortar formed as aforesaid, viz Water Lime and sand and water mixed together in the proportions now used (or such other proportions as the nature of the earth in which the cistern, vat vault, Reservoir or Pond is to be built or reconstructed may seem to require) to form a cement. If by reason of springs or other causes a greater consistency of mortar is required than can be easily obtained by the mixture of the water lime and sand

7838X

and water, gravel may be used, mixed either mixed in while making the mortar or sprinkled on to the stone after having been placed or spread on and partially or wholly imbedded while the mortar is yet green or soft. This done and the first coat having obtained a sufficient hardness or consistency to receive a second, it should be immediately applied and the gravelling repeated, and so on until the wall shall have attained the required thickness. Cisterns Vats. Vaults or Reservoirs, thus formed either with or without the gravel, and which require to be covered with either wood or stone are to be done by first preparing a foundation for the covering, to rest upon on the outside of the wall of cement so that the covering may not rest upon the wall of cement, then put on the covering, which is to be so nicely fitted to the top of the wall that by plastering upon the underside of the covering there may be a continuation of the walls all over the whole exterior of the Cistern Vat. vault. or reservoir.

If the above covering is made of wood a coat of mortar ought to be spread over the whole outside to prevent decay. In the cover there may be left a hole or a tube inserted through which the liquid is to pass into the Cistern vault, vat, &c as above. and also another hole of any convenient size out of which to draw the liquid and if large this ought and is to be protected by a curb and this curb covered with a lid. A drain may also be necessary, and for this purpose a small aperture or opening should be left or a tube inserted in such a manner as to prevent any waste of the cement. In construct or build any of the above named articles, which shall or may be required to be built upon or above the surface of the earth a frame or mould will be necessary, and when made of wood the outside should be protected from frost and decay by a coat of Plaster or otherwise, and the inside may be plastered without (and with the use of gravel) with a mortar made as aforesaid. The foundation

advantages which this method of constructing or building cisterns
vaults, vaulted reservoirs and ponds which are to be sunk be-
low the surface of the earth, by plastering upon the bare
walls of earth instead of first lining the hole or excavation
with stone, brick or wood, as is now practiced in construc-
ting water cisterns, are numerous, but the principle of which
are cheapness and durability. Wood thus exposed will soon
decay and leave the wall unsupported. Brick by contraction
and expansion cracks the walls, and at the same time like
stone are expensive. The principal grounds and claims
for and upon which your Petitioner prays and requests Letters
Patent are the following viz. 1st For plastering upon the earth-
y walls instead of plastering upon stone Brick and wood as
heretofore and now practiced in building and constructing of cisterns for
holding rain water which may pass through a roof spout before pas-
sing into the cistern by which the water is fit for all uses 2d For
applying the use of said cement to the constructing and building
of cider cisterns or vaults Tanners Vats, salt vats or reservoirs
Fish ponds and other vaults and reservoirs for holding large
quantities of liquids, for which the said cement has not been used
or known. 3d For the use of gravel to stiffen or harden the mor-
tar which has not been heretofore used in the manner specified
above or in any other to form a cement, or stiffen the mortar,
In Witness whereof I have hereunto subscribed my
name & day of November A.D. 1838.

Witnesses
Chas. L. Allen } Horace J. Stunning.
John R. Hickox }

(1058 words)

(Patented Nov. 19. 1839)