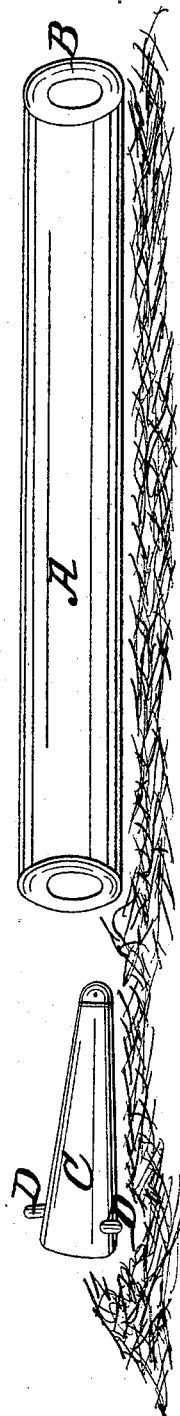


J. Ball,

Coating Drain Tiles.

No. 3,375.

Patented Dec. 15, 1843.



Inventor.
Jonathan Ball

UNITED STATES PATENT OFFICE.

JONATHAN BALL, OF NEW YORK, N. Y.

COATING WATER-PIPES.

Specification forming part of Letters Patent No. 3,375, dated December 15, 1843; Reissued September 15, 1857, No. 496.

To all whom it may concern:

Be it known that I, JONATHAN BALL, of the city of New York, in the State of New York, have invented a new mode of preparing metallic water-pipes to prevent corrosion and poisonous oxidation of the metals of which the pipes may be composed; and I do hereby declare the following to be a full and accurate description thereof.

10 My invention consists in taking hydraulic cement made into a paste of the desired consistency and forcing it into the metallic pipe (see letter "A," in accompanying drawing) in such quantities as may be necessary
15 to prevent the oxidation or corrosion of the metal when spread upon the interior surface of the pipe. (See letter "B," in accompanying drawing.) A small cone of wood or other hard material of one or more inches in
20 length (see letter "C," in accompanying drawing) is then inserted into the end of the pipe into which the cement has been forced. The diameter of this cone should be as much less than the diameter of the bore of the
25 pipe, as will be required for the thickness of the cement. Into this cone a short distance from its base are inserted three or more small spurs (see letter "D," in accompanying drawing) projecting so far as the bore
30 of the pipe will admit, for the purpose of keeping the cone in the center and producing an equal coating upon the pipe. To the apex of this cone is attached a thread or

wire by means of which it is drawn through the pipe, leaving upon its interior surface 35 the required thickness of cement. The base of the cone as it passes through the pipe effectually closes the traces of the spurs and leaves the cement with a smooth surface. The pipes thus prepared before the cement 40 hardens may be bent into any shape required, and in from twenty to thirty-six hours be ready to admit the water under any pressure the metal of the pipe is competent to bear. The water hardens the cement and 45 passes through the pipe as sweet and pure as though it stood in a marble or china vessel. By this means the poisonous effects of the oxidation and corrosion of metals, as well as the disagreeable taste imbibed by 50 water passing in metallic pipes are entirely prevented and avoided.

What I claim as my invention and wish to secure by Letters Patent is—

The application of hydraulic or water 55 cement as a coating upon the interior surface of metallic water pipes to prevent the corrosion and oxidation of the metals of which the pipes are composed; also the means by which it is accomplished as set 60 forth in the accompanying specification.

JONATHAN BALL.

Witnesses:

H. DEWEY,
JEREMIAH SMITH.