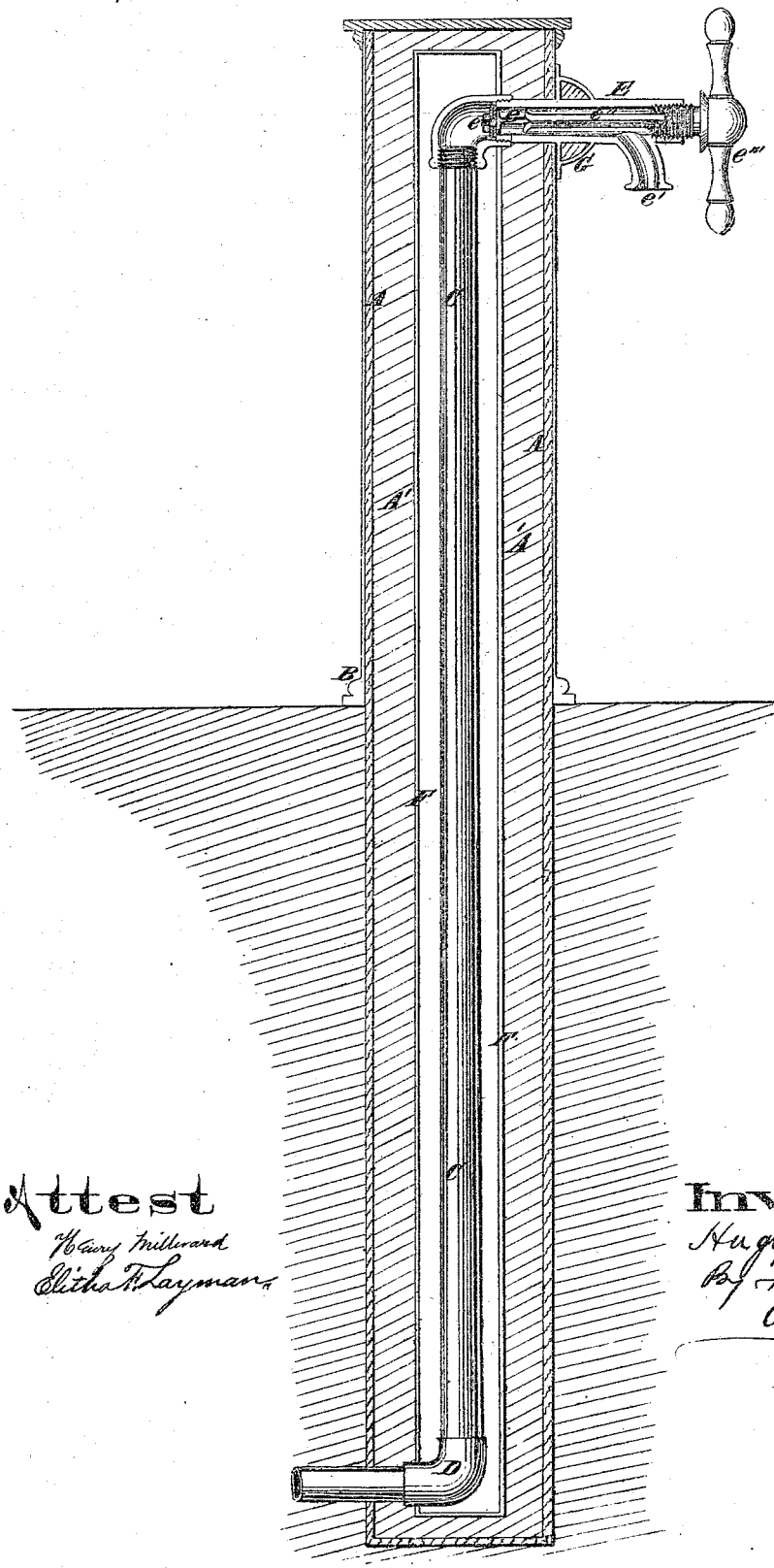
HUGH MERRIE.

Improvement in Non-Freezing Hydrants.

No. 115,882. Patented June 13, 1871.



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HUGH MERRIE, OF CINCINNATI, OHIO.

IMPROVEMENT IN NON-FREEZING HYDRANTS.

Specification forming part of Letters Patent No. 115,882, dated June 13, 1871.

To all whom it may concern:

Be it known that I, HUGH MERRIE, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Hydrants; and I hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawing making part of this specification.

Nature and Objects of Invention.

My invention consists of a hydrant whose stop-valve is located above the point of discharge, and in the interior of hermetically-sealed cases of non-conducting material, the supply-pipe being surrounded by the cases, and thus fully protected against frost, while at the same time no water is permitted to waste in the operation of the hydrant.

Description of the Accompanying Drawing.

The accompanying drawing represents a vertical section of my improved hydrant.

General Description.

A is the stock, preferably of wood. It may be surrounded by a casing of iron, B, for protection and ornament. The stand-pipe C is connected to the water-supply pipe by the elbow coupling D, and is surmounted by the stop-valve E. This stop-valve is so constructed and attached that the valve *e* is located at or near the center of the hydrant, and at a point above the discharge-opening *e'*. This construction permits the water contained in the stop-valve between the points *e* and *e'* to escape freely when the valve *e* is closed. The valve is operated by long screw-threaded stem *e''* and handle *e'''*. A metallic or wooden shell or casing, F, surrounds the pipe C, this casing being of such size as to leave an annular space between the pipe and casing, for the occupancy of common air, which, being closely confined, and circulation thereby prevented, is preserved always at the temperature of the water in the pipe of the underground supply. A good non-conducting material, A', such as hydraulic cement, is filled in between the casing A and casing F, which hermetically seals the air in the chamber between the pipe C and casing F, and prevents a conduction of heat from the interior of the hydrant to the exterior air in cold weather.

The pipe C, below the valve *e*, is always full of water, none being allowed to waste as in other hydrants.

In consequence of the provision of the air-casing F and shell of non-conducting material between the cases A and F, the pipe C is fully protected against frost, even in the coldest weather.

An exterior shell, G, filled with non-conducting material, forms an extended protection for the discharge-pipe.

Claims.

1. In combination with a hydrant, the double case A, extending below the surface of the earth, and filled with hydraulic cement, A', or similar non-conducting material, substantially as and for the purpose set forth.

2. The combination of the hydrant C, hermetically sealed air-chamber F, and double case A, extending below the surface of the earth, and filled with hydraulic cement A', or similar non-conducting material, substantially as and for the purpose set forth.

In testimony of which invention I hereunto set my hand.

HUGH MERRIE.

Witnesses:
J. L. WARTMANN,
E. F. LAYMAN.