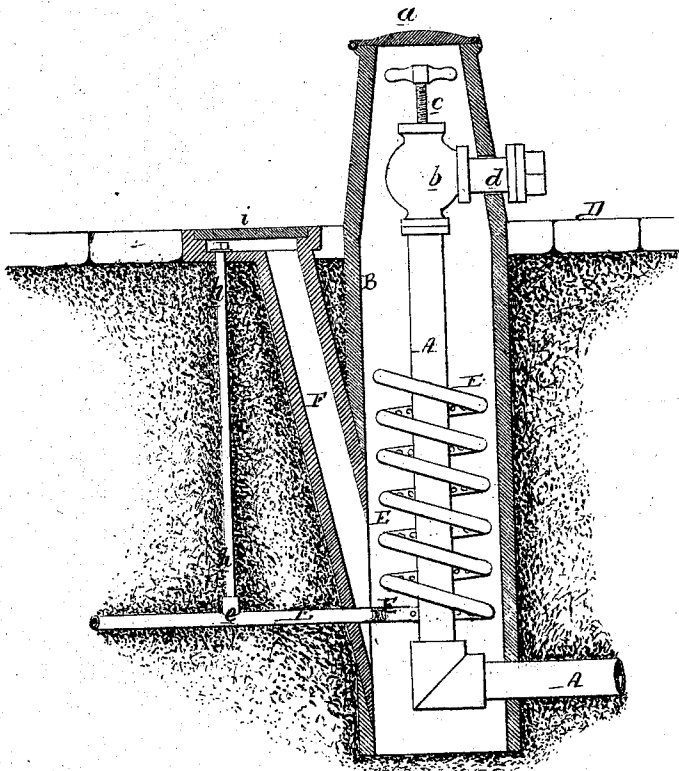


*J. C. Moore,*

*Hydrant.*

*No. 105830.*

*Patented July 26, 1870.*



*Witnesses* } *Wm. A. Steel*  
*John Parker*

*J. C. Moore*  
*By his attys*  
*Horton & Son*

# United States Patent Office.

JAMES C. MOORE, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 105,830, dated July 26, 1870; antedated July 16, 1870.

## IMPROVEMENT IN THAWING DEVICES FOR HYDRANTS AND FIRE-PLUGS.

The Schedule referred to in these Letters Patent and making part of the same

I, JAMES C. MOORE, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improvement in Hydrants and Fire-Plugs, of which the following is a specification.

### *Nature and Object of the Invention.*

My invention consists in the combination, as described hereafter, of a perforated pipe or a perforated casing, to which gas can be admitted, with the pipe of a hydrant or fire-plug, so that when the water in the said pipe becomes frozen it can be rapidly thawed by being exposed to a number of flames, as described hereafter.

### *Description of the Accompanying Drawing.*

The figure in the annexed drawing represents a vertical section of a hydrant or water-plug pipe with my improvement.

### *General Description.*

A represents the pipe for a hydrant or water-plug, and B the metal casing for the same, which projects above the pavement D, as usual, and which is furnished at the top with a hinged lid, a.

The pipe has the usual valve-chest b and screw-spindle c, for operating the same, a branch, d, from the said pipe, projecting through the casing, and having at the end the ordinary screw-plug.

E is a gas-pipe, the cock e of which is operated by a rod, h, extending through a plate, i, the rod being provided with a suitable head for receiving a screw-key, and the head being covered with a detachable plate, i, which is level with the surface of the pavement.

A tube, F, communicating with the interior of the

casing B, extends from the latter to the space beneath the detachable plate i, for a purpose described hereafter.

The gas-pipe E extends through the casing B, and is coiled round the pipe A, as shown in the drawing, the inside of the coil, which is at a short distance from the pipe A, being perforated throughout with a number of small holes.

When the water in the pipe A becomes frozen, the plate i is removed, and the rod h turned, so that the gas may pass to the coil, the gas being ignited by passing a torch through the tube F, or through the top of the casing B.

A number of flames or jets is thus caused to play on the pipe A, and as these jets are arranged in a circle round and below the top of the pipe, a constant current of hot air will be caused to ascend round the upper part of the pipe, so that the ice in the latter is thawed rapidly, after which the gas may be turned off, and the plate i replaced.

Although a perforated coil is to be preferred in most cases, it will be evident that the pipe may be surrounded with an annular perforated casing, to which the gas is admitted.

### *Claim.*

A series of gas-jets, arranged around the vertical water-pipe A, as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES C. MOORE.

Witnesses:

W. B. SAURMAN,  
HARRY SMITH.