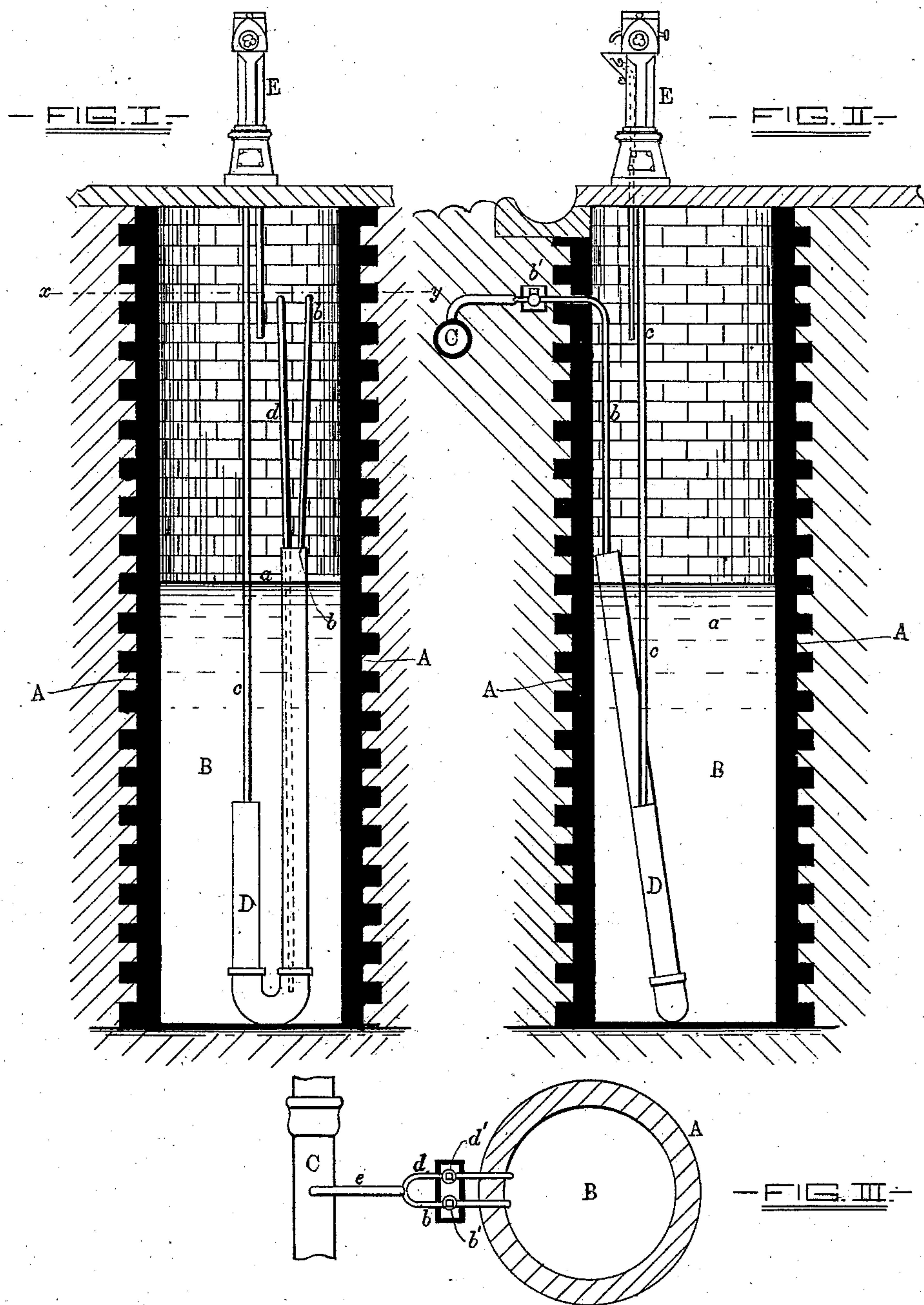


G. F. BLINSINGER.  
Refrigerating Apparatus for Hydrants and Street  
Fountains.

No. 225,098.

Patented Mar. 2, 1880.



WITNESSES

Geo. A. Boyden  
Harry P. Albough

INVENTOR

George F. Blinsinger  
by H. H. W. Hoffman  
att'y



# UNITED STATES PATENT OFFICE.

GEORGE F. BLINSINGER, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-THIRD OF HIS RIGHT TO EDWIN L. JONES, OF SAME PLACE.

## REFRIGERATING APPARATUS FOR HYDRANTS AND STREET-FOUNTAINS.

SPECIFICATION forming part of Letters Patent No. 225,098, dated March 2, 1880.

Application filed January 16, 1880.

*To all whom it may concern:*

Be it known that I, GEORGE F. BLINSINGER, of the city of Baltimore and State of Maryland, have invented certain Improvements in Refrigerating Apparatus for Hydrants and Street-Fountains, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to improved means for utilizing for refrigerating purposes the water of wells in cities and other places which, although of suitable temperature for drinking, has become unfit for use from its proximity to sewers or privy-vaults, or from other causes too numerous to mention, as will hereinafter fully appear.

In the description of my said invention which follows reference is made to the accompanying drawings, and to the letters of reference marked thereon.

Figures 1 and 2 are vertical sections of a well provided with my improvements as seen from different points of view. Fig. 3 is a section of the well on dotted line *x y*.

Similar letters of reference indicate similar parts in all the views.

A is the wall of the well B, which is here shown as directly below the sidewalk of a street. C, Fig. 1, is the water-main, located below the surface of the street-pavement or road-bed. D is a return-pipe situated in the well with a portion thereof submerged in the well-water, the surface of which is divided by a line marked *a*. One end of the return-pipe D is connected, by means of a smaller pipe, *b*, to the main C, and the other end of the said return-pipe is in communication with a hydrant or street-fountain, E, by means of another small pipe, *c*. A third small pipe, *d*, leads from the main to a point near to the bottom of the return-pipe D, for a purpose hereinafter described.

The preferred manner of connecting the pipes *b* and *d* to the main is by means of a pipe, *e*, of, say, double the capacity of the pipes *b* and *d*, and the said pipes are provided with suitable cocks *b'* and *d'*. The waste from the

hydrant or fountain may pass to the well, as shown.

When this apparatus is in use the cock *b'* is open, and the water from the main C consequently passes through the pipe *b* and the return-pipe D to the hydrant or fountain.

To properly effect the refrigeration of the water delivered to the hydrant, it is necessary to retard its progress through the submerged portion of the return-pipe. I therefore construct the return-pipe, or the portion thereof submerged in the cool water in the well, of a greater capacity than the pipe *b*—that is to say, of greater cross-section, as illustrated in the drawings.

To cleanse the return-pipe of mud or sediment which may collect in the same, the cock *b'* is closed, and the one *d'* opened when water from the main is conducted directly to the sediment through the pipe *d*, and disturbs it sufficiently to admit of its being carried off by merely opening the hydrant.

I am aware that it is not new to conduct water from a main to a point in the earth below the main, and thence to a hydrant through an enlarged pipe, with the object of cooling the water; also, that conical pipes have been driven in the earth and supplied with water from a water-main, and the hydrant supply-pipe submerged in the water; but in the first of these devices practically no refrigeration of the water supplied to the hydrant is effected, as the earth immediately in contact with the pipe answers the purpose of a heat-retaining covering instead of a heat-conductor, as does the well-water in my invention. In the other apparatus the same objection regarding the action of the earth also applies, and unless the water in the drive-pipe is supplied with ice, or it is refrigerated by other artificial means, it cannot reduce the temperature of the hydrant-supply below that of the main.

In view of the above-described devices, however, I do not claim, broadly, a return-pipe extending below the water-main; but

I claim as my invention—

1. In combination with the water-main C and the hydrant or street-fountain E, the pipes *b* and *c* and return-pipe D, the said return-pipe being of greater area of cross-section than

the pipe *b*, and partially submerged in the water of a well having no connection with the water of the main C, substantially as and for the purpose herein specified.

- 5 2. In combination with the partially-submerged return-pipe D and the pipes *b* and *c*, connecting the same with the water-main C, and the hydrant or street-fountain E, the cleansing-pipe *d*, adapted to carry a secondary

stream of water from the main to a point near 10 to the lower end of the said return-pipe, for the purpose of dislodging mud or sediment contained therein, substantially as herein specified.

GEORGE F. BLINSINGER.

Witnesses:

JNO. T. MADDOX,

HARRY V. ALBAUGH.