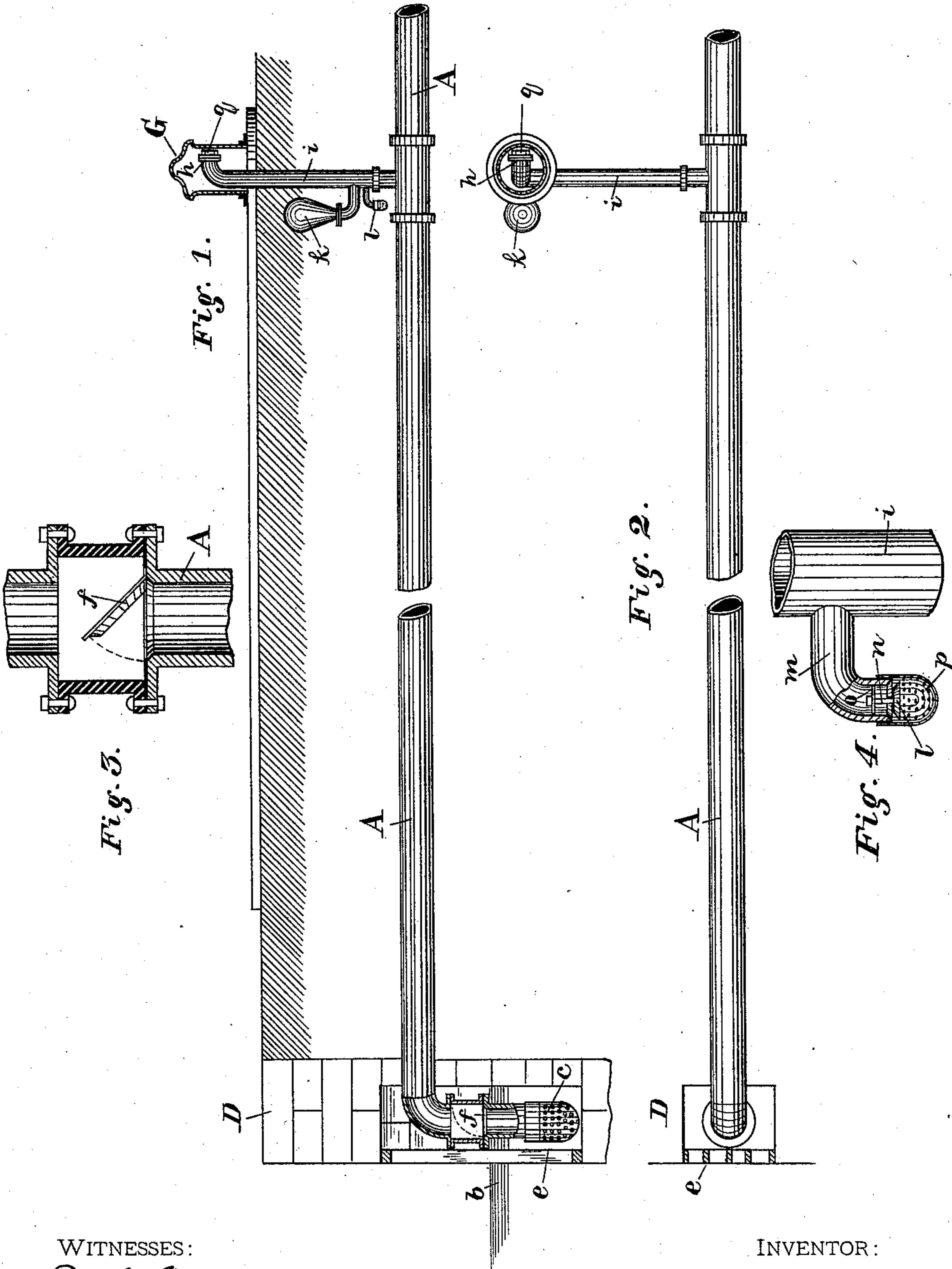


(No Model.)

H. L. McAVOY.  
PNEUMATIC FIRE HYDRANT.

No. 381,805.

Patented Apr. 24, 1888.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## PNEUMATIC FIRE-HYDRANT.

SPECIFICATION forming part of Letters Patent No. 381,805, dated April 24, 1888.

Application filed December 31, 1887. Serial No. 259,450. (No model.)

### *To all whom it may concern:*

Be it known that I, HUGH L. McAVOY, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Pneumatic Fire-Hydrants, of which the following is a specification.

This invention relates to a fire-hydrant for use in cities or villages to render available for extinguishing fires any water other than the usual city water-supply.

The object of the invention is to avoid in case of fire entire dependence on the city water-supply. By use of this invention the waters of a river, harbor, or lake lying along the front or rear of a city may be utilized as readily as the ordinary city water-supply. The ordinary water-supply may at any time be temporarily cut off from a part of a city by the necessity to make new connections or the repair of accidents. The improved fire-hydrant at such a time would be valuable. During the time of fire in a city, if the ordinary water-supply is the only resource, the operation of hydraulic elevators used in all buildings located in the district where the fire may happen to be is interfered with, and often it is impossible to use the elevators. The use of my improved fire-hydrant for extinguishing fires would obviate this difficulty.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the fire-hydrant and attachments as they appear in the ground. Fig. 2 is a top or plan view. Fig. 3 is a detail of the waste-water valve. Fig. 4 is a detail showing the construction of a suitable check-valve.

The letter A designates a pipe, preferably laid underground and leading from a body, *b*, of water, such as a river, harbor, or lake. The terminal of the pipe is provided with a strainer, *c*, and must be submerged. In the present instance it is shown as submerged at a wharf, D, and is protected by grated bars *e*. The pipe has a suitable check-valve, *f*, above the strainer. This valve allows the water to enter the pipe, but prevents it from escaping back. A supply of water will always be in the pipe. Any kind of a check-valve may be used. An ordinary flap-valve, *f*, is shown in the drawings,

the construction of which will be readily understood by any one skilled in the art.

A case, G, of wood or iron, surrounds the screw-nozzle *h*, whereto hose are to be attached. This screw-nozzle *h* is on the end of a branch pipe, *i*, which connects with the pipe A. The branch pipe has a vertical portion, (see Fig. 1,) and is provided with an air-chamber, *k*, which equalizes the flow of water drawn through the pipe by the action of the fire-engine pump. This pipe is also provided with an automatic waste-water valve, *l*, to allow the water in the vertical part of the pipe to escape into the ground after the hydrant has been used. By keeping this part of the pipe empty when the hydrant is not in use there will be no liability of freezing. A waste-water valve of any desired form may be used; but a suitable one is shown in Fig. 4. In this case the waste branch *m* has its discharge end turned downward, and the valve *l* is at the end of the pipe and hangs by a stem, *n*, which moves freely in a cross-bar, *o*, and seats itself by an upward movement and opens by a downward movement. A strainer or guard, *p*, protects the end of the waste branch.

The operation of the hydrant is as follows: When it is desired to use the hydrant, the case G must be lifted from its position to expose or give access to the screw-nozzle *h*. Fire-hose is then to be connected with the said nozzle and lead to a steam fire-engine. Upon starting the engine-pump air will be exhausted from the connecting-hose, and thereupon water will flow through the hydrant on well-known principles. A steam fire-engine receiving its supply of water from this hydrant will do most effective service. When the hydrant is no longer needed for the occasion, the automatic waste-water valve *l* will drain the vertical pipe *i*; but the check-valve *f* will keep the horizontal pipe A full of water, ready for the next emergency. No cocks or hand-operated valves are used.

More than one hydrant may be connected with the pipe A by using a cap, *q*, on the nozzle.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A pneumatic fire-hydrant without cocks or hand-operated valves, comprising the com-

combination of an underground horizontal pipe, A, having its end submerged in water and provided at said end with a check-valve, one or more branch pipes, each having a vertical portion and a nozzle provided with a cap, q, and an automatic waste-water valve attached to the said vertical portion of the branch pipe.

2. In a pneumatic fire-hydrant, the combination of a pipe, A, having its end submerged and provided at said end with a check-valve,

a branch pipe having a nozzle for attachment of a hose and without cocks or hand-operated valves, an air-chamber, and an automatic waste-water valve.

In testimony whereof I affix my signature in the presence of two witnesses.

HUGH L. McAVOY.

Witnesses:

JOHN E. MORRIS,

JNO. T. MADDOX.