(No Model.) 2 Sheets—Sheet 1.

W. B. CORNOG.

HYDRANT AND FAUCET.

No. 502,349. Patented Aug. 1, 1893.

FIG. 1.

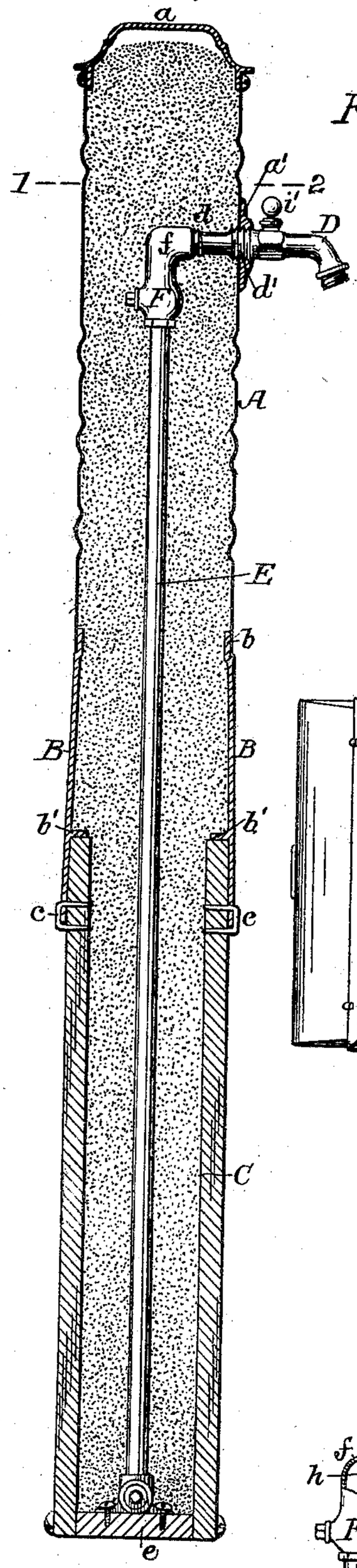

FIG. 2.

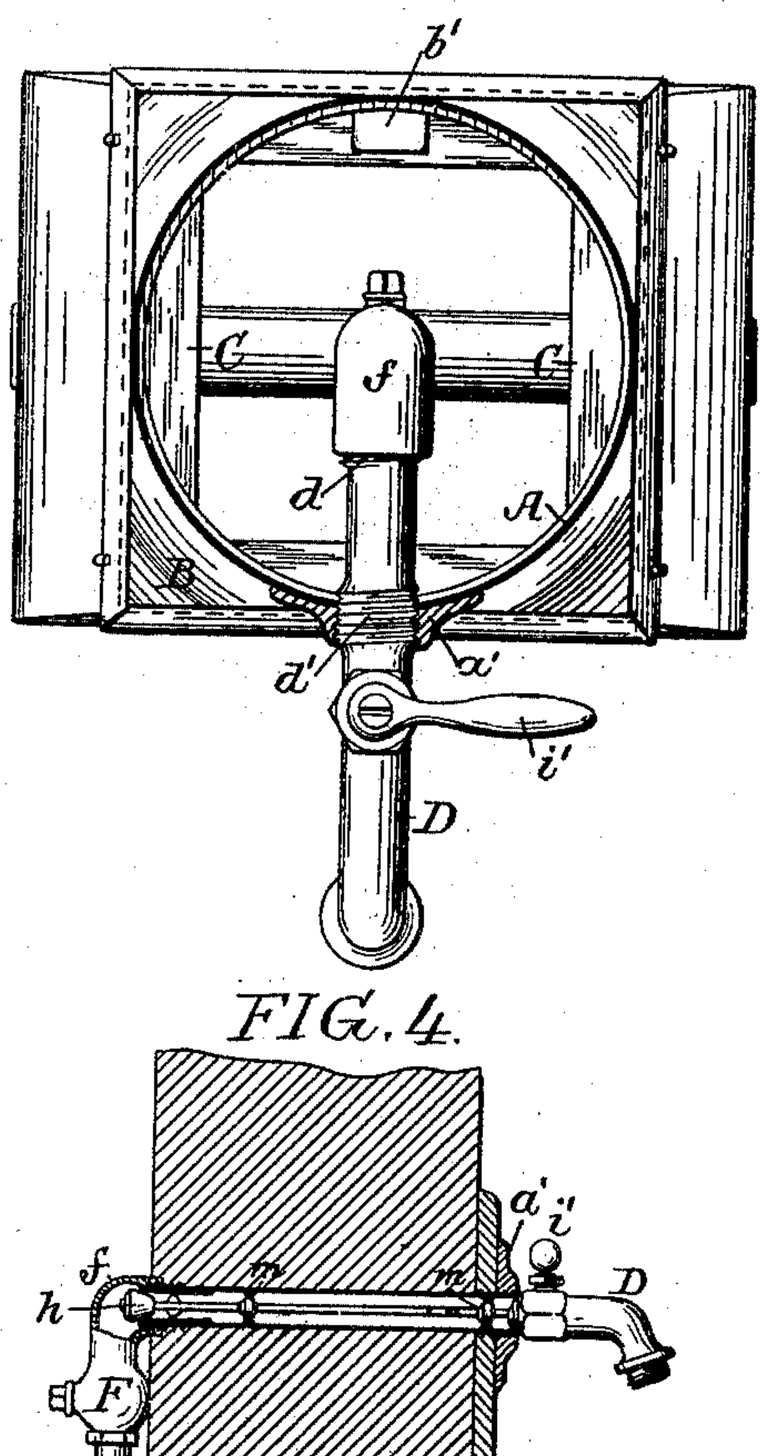

FIG. 3.

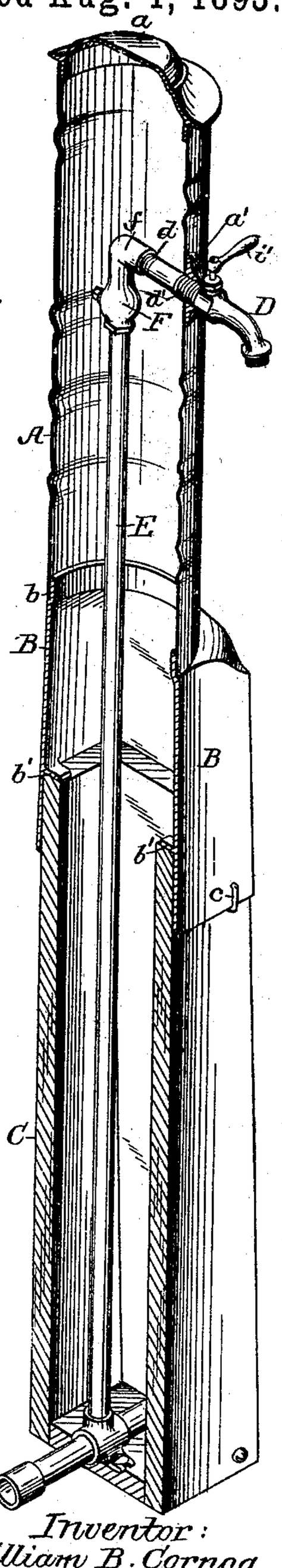

FIG. 4.

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Inventor:
William B. Cornog
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(No Model.) 2 Sheets—Sheet 2.

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FIG. 5.

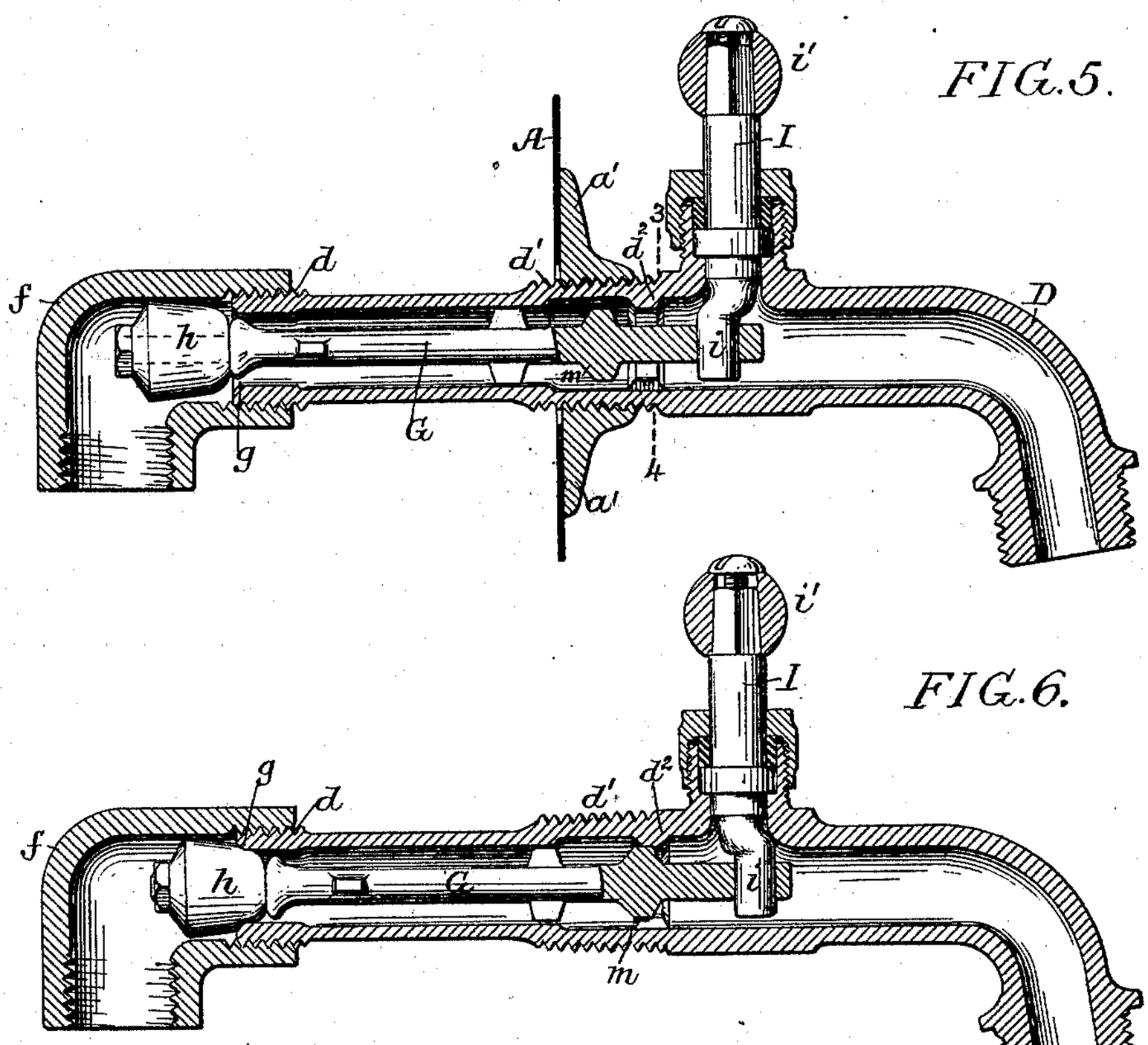

FIG. 6.

FIG. 7.

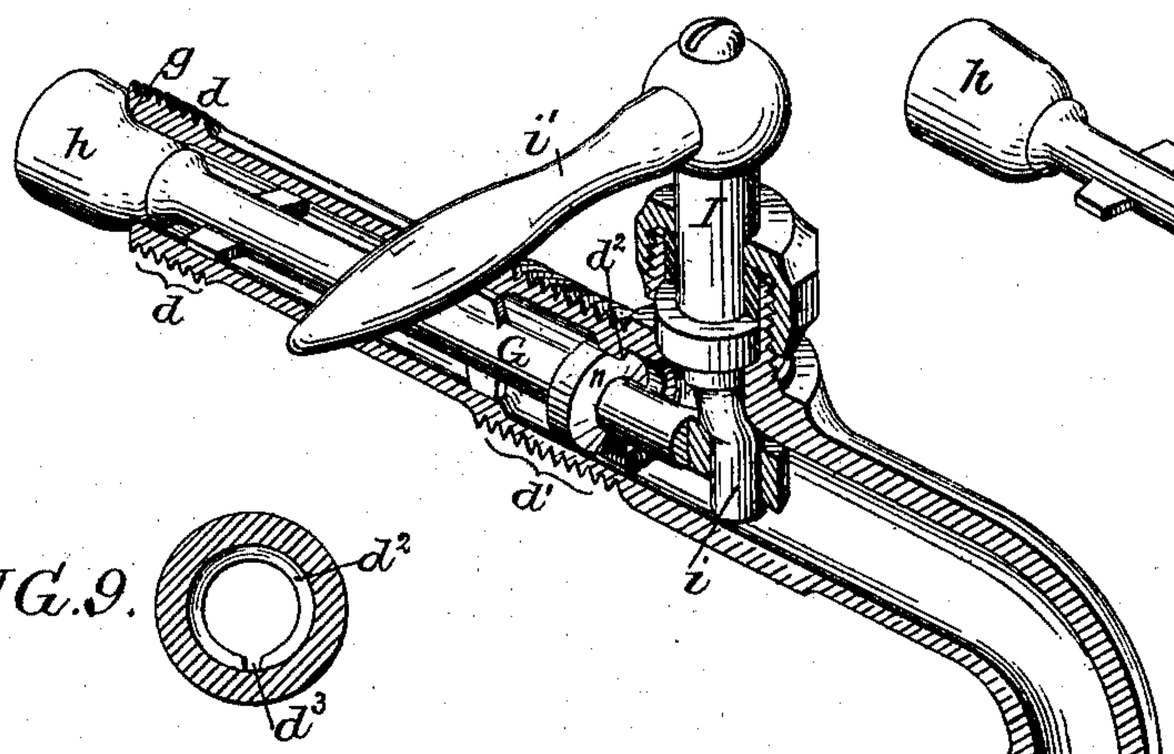

FIG. 8.

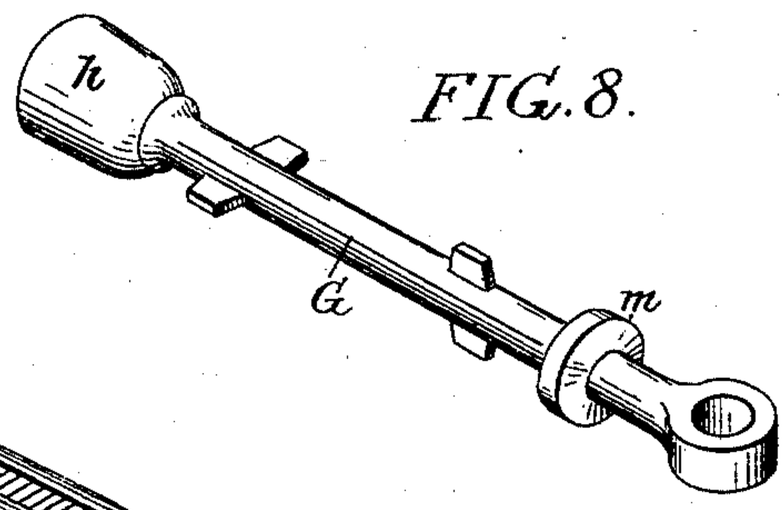

FIG. 9.

Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM B. CORNOG, OF PHILADELPHIA, PENNSYLVANIA.

HYDRANT AND FAUCET.

SPECIFICATION forming part of Letters Patent No. 502,349, dated August 1, 1893.

Application filed April 19, 1892. Serial No. 429,706. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. CORNOG, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Hydrants and Faucets Therefor, of which the following is a specification.

The object of my invention is to construct an outside water supply device, commonly called a hydrant, in such a manner as to obviate the drip or waste under-ground or in a cellar, and so construct the valve mechanism that it will be non-freezable.

A further object of my invention is to provide a hydrant with a weather-proof metallic packing case.

It will be understood in the outset that my invention is not only applicable to "standing" hydrants, but also to what are termed "summer" hydrants, that is, hydrants which project from the wall of the building. The former hydrants are generally arranged with the valve mechanism buried in the ground below freezing point. Consequently in order prevent the water in the stand pipe freezing, the valve is provided with a waste outlet, and the water from the stand pipe, when the valve is turned off, escapes into the ground, and as the stand pipes generally contain about a pint of water, it will be readily understood that the water escaping will soon make the ground around the hydrant damp and soggy, and in order to repair the valve of this hydrant, the surrounding ground has to be dug up. This is not only objectionable on account of the expense, but also in the fact that the yard pavements are in most cases cement, and a break in a cement pavement can never be repaired to make the pavement the same as it originally was. The valves in the summer hydrants as usually constructed, readily freeze, and these summer hydrants are objectionable on this ground.

In the accompanying drawings:—Figure 1, is a sectional view of my improved hydrant. Fig. 2, is a sectional plan view on the line 1—2, Fig. 1, drawn to an enlarged scale. Fig. 3, is a sectional perspective view of the hydrant. Fig. 4, is a view of sufficient of a summer hydrant or wall outlet to illustrate my invention. Fig. 5, is a sectional view of the faucet portion of the valve showing the valve open. Fig. 6, is a view showing the valve closed. Fig. 7, is a sectional perspective view of the faucet portion. Fig. 8, is a detached perspective view of the valve; and Fig. 9, is a section on the line 3—4, Fig. 5.

I will first describe my invention, referring particularly to Figs. 1, 2 and 3, in which A is a sheet metal body preferably fluted, and either riveted or welded, resembling the ordinary wooden hydrant. The body A is mounted on a base B, preferably of cast metal, the base having a flange *b* over which the body A is placed. This body is secured to the flange in any suitable manner. Secured to the base is the wooden ground structure C, shaped the same as the base of an ordinary wooden hydrant. This structure passes inside of the base B and rests against a flange *b'* as clearly shown in Fig. 1, and is secured to the base in the present instance by staples *c*. It will be understood however, that other fastening means may be employed without departing from my invention. The cap *a* of the hydrant is made in the present instance of metal, and is detachably secured to the body in order that it may be readily removed so that access may be had to the cut-off valve when necessary. To the face of the hydrant is secured a face plate *a'* into which is screwed the faucet D. The water supply pipe E passes up through the center of the hydrant, and is provided with a T *e* at its lower end to one end of which can be attached the inlet pipe, the other branch being provided with a plug. At the upper end of the pipe E, I preferably mount a cut-off valve F for cutting off the supply of water to the faucet when repairs are necessary; the faucet can then be removed bodily without cutting off the supply from the building. This valve F however, is not absolutely necessary. On the valve F is formed an L-coupling *f* into which the screw threaded portion *d* of the faucet D is attached. The screw threaded portion *d'* is screwed into the face plate *a'* and it will be noticed on referring to the drawings that the portion *d* is smaller than the portion *d'* of the faucet, so that the portion *d* will readily pass through the opening in the face plate A, and the two threads being of the same pitch the faucet can be readily screwed into place. I so arrange it that the threaded portion *d'* is somewhat longer than the threaded portion *d*, so that this latter threaded portion will seat

itself forming a water tight joint, as a water tight joint is essential at this point, but is not essential in coupling the faucet to the face plate. The valve seat *g* is at the rear end of the faucet, as shown in Fig. 5, the valve stem G having a reciprocating motion and is provided with a valve *h* which is of the "Fuller" type. When the valve is drawn forward as shown in Fig. 6, it closes against the seat, and when moved in the opposite direction, it is forced off the seat allowing the water to flow. In the outer end of the valve stem is an opening through which passes the crank *i* of the stem I, which is provided with a suitable handle *i'* for opening and closing the valve.

In Fig. 4, I have illustrated what is termed as a "summer" hydrant, that is a hydrant which simply consists of a stand pipe on the inside wall of a building, and having an extension which passes through the wall, to which is secured the faucet, but these hydrants as usually made, freeze readily and are therefore objectionable. The hydrant shown in Fig. 4, is made in the same as heretofore with the exception that the valve is not exposed to the atmosphere. The valve casing D being simply extended preferably of a length sufficient to carry the valve and its seat back to the inner side of the wall, the face plate *a'* to which the faucet is secured, being mounted on a suitable splash board.

Turning again to Figs. 5 and 6, I would describe particularly the construction of the faucet by which the water at the valve is prevented from freezing. In the ordinary construction of a faucet, the air that would enter through a nozzle would be sufficient to freeze the water around and back of the valve, notwithstanding the fact that the valve was mounted in a packed casing, and the main object of my invention is to prevent this freezing of the water at the valve. As shown in Fig. 1, the hydrant is packed with sawdust or other non-conducting material, and in Fig. 4, the supply pipe is arranged at the inside of the wall. The faucet stem is of a sufficient length to couple to the stand pipe coupling, and the valve stem is of a corresponding length, the valve being mounted on the end of the stem, so that it is at a central point in the body of the hydrant shown in Fig. 1, surrounded by packing; and at the inner side of the wall shown in Fig. 4. On the valve stem is an air check *m*, which is simply an enlargement in the form of a piston, and is near the forward end of the stem. This air check passes into the reduced portion d^2 of the faucet casing, as shown in Fig. 6, thus checking the free flow of air through the casing to the water valve *h*. In the reduced portion d^2 is a groove d^3 to allow the entrapped water between the air check and the water valve to escape through the nozzle, but this opening is not sufficient to allow the cold air to materially affect the water back of the valve *h*. In some instances I may use two or more air checks without departing from my invention, and I prefer to use two checks when the casing is long as shown in Fig. 4. Thus by the arrangement of a piston check, the valve *h* will always come to its seat, owing to the fact that the piston check *m* slides within the reduced portion d^2, and does not seat against it. Thus by the above construction I am enabled to make a non-freezable hydrant either of the standing type or of the wall type, the former having a stand pipe incased within packing, the water valve being at the upper end of the stand pipe near the nozzle, but in the center of the packing, thus preventing waste, and obviating the necessity of digging up the hydrant when the valve is to be repaired. The faucet can be removed by simply unscrewing it from the casing and stand pipe and after it has been repaired the faucet can be coupled without disturbing the body portion of the hydrant. I find that the cost of a hydrant of this construction is about the same as the cost of an ordinary wooden hydrant.

It will be understood that the valve need not necessarily be of the "Fuller" type, but any valve may be used providing an air check is placed between it and the mouth of the nozzle.

I claim as my invention—

1. The combination in an outside water supply device, of the faucet casing, the water valve, an air check valve between the water valve and the nozzle of the faucet, and means for permitting the drainage of water from the space between said valves, substantially as described.

2. The combination of the faucet casing, the valve stem having a water valve at one end, and provided with an air check valve adapted to fit into a flanged portion on the interior of the faucet casing between the water valve and the nozzle, and means for permitting the drainage of water from the space between the two valves, substantially as described.

3. The combination of the faucet casing, the valve stem and water valve thereon, piston air check carried by said valve stem, an internal flange on the faucet casing into which the piston air check moves, with a drip opening in the internal flange to allow the entrapped water between the air check and the water valve to escape, substantially as described.

4. In a hydrant structure, the combination of the sheet-metal body, a cast metal base upon which the body is mounted, with a wooden ground structure secured to the base, and a supply pipe and valve, substantially as described.

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

WILLIAM B. CORNOG.

Witnesses:

HERBERT PUSEY,

HENRY HOWSON.