

**977,426.**

Fig. 1.

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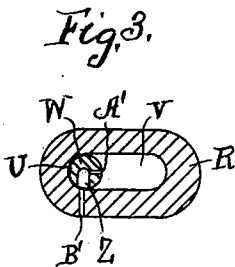


Fig. 3.

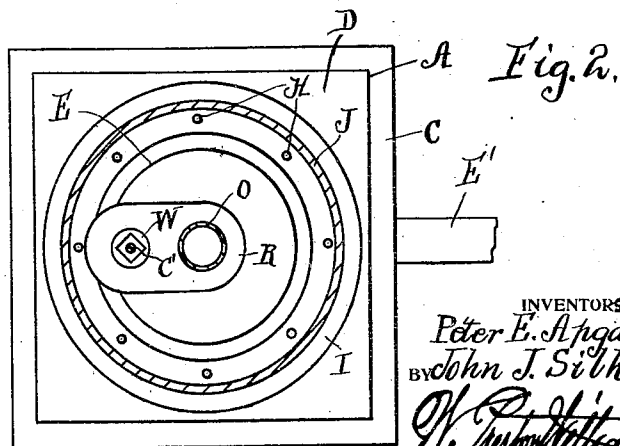


Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## HYDRANT.

977,426.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed October 1, 1909. Serial No. 520,521.

*To all whom it may concern:*

Be it known that we, PETER E. APGAR and JOHN J. SILK, citizens of the United States, residing at Camden, in the county of Camden and State of New Jersey, and Philadelphia, county of Philadelphia, and State of Pennsylvania, respectively, have invented a new and useful Improvement in Hydrants, of which the following is a specification.

Our invention relates to a new and useful improvement in hydrants, and has for its object to provide an exceedingly simple and effective device of this character, whereby the different parts thereof especially the valve casing or cock and fittings may be removed without the necessity of taking out the hydrant casing.

Another object of the invention is to so construct the parts that by turning upon the top, the stand pipe will turn the valve casing so that the same may be readily and quickly removed.

A still further object of the invention is to provide for the out flowing of the water from the stand pipe so as to prevent it from freezing.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, we will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a sectional side elevation of our improved hydrant. Fig. 2, a section at the line  $x-x$  of Fig. 1 looking in the direction of the arrows, and Fig. 3, a section of the valve casing or cock at  $y-y$ .

In carrying out our invention as here embodied, A represents a stand, which is preferably square in shape, and is formed to produce the side walls B provided with flanges C which rest upon the ground a suitable distance below the surface thereof, and when the dirt is placed upon the same these flanges will prevent the stand from being withdrawn. The stand is also provided with a top D formed integral with the side walls and the central portion of said top is thicker than the rest, as indicated by E, and

this thickened portion is provided with communicating threaded openings F and G, the threads in G being right hand ones. Between the side walls and the thickened portion E are formed the holes H for a purpose to be hereinafter described.

On the upper surface of the top D is formed the ridge I, inside of which is placed the hydrant casing J, on the upper edge of which is mounted the top K, said top being provided with a nut L. In said top is formed a passageway M, in one end of which is mounted the spout N, the other end being provided with left hand threads, and in which is mounted the stand pipe O, its ends being provided with left hand threads P and Q.

R denotes a valve casing or cock provided with an inlet S with which is formed the threaded extension T, which is mounted in the opening G in the enlarged portion E of the stand A, said inlet S leading to the conical valve opening U, and from this opening above the inlet S leads the outlet V, in the end of which is mounted the stand pipe O. In the valve opening U is placed the valve W provided with a slot Z sufficiently long to communicate with both the inlet S and the outlet V, and leading from this slot at right angles thereto is an opening A' so that when the slot is turned away from the inlet and outlet, or the water is shut off, the opening A' communicates with the outlet V.

In the valve casing or cock R is formed an opening B' approximately the same size as the opening A' and this hole is at right angles to the outlet V and leads from the valve opening U to the outer portion of the valve casing or cock R.

C' is the key attached to the upper end of the valve W and which passes through the top K and has attached to its upper end the lever D' so that the key may be turned.

E' is a pipe which is threaded into the opening F and leads from the water main to the hydrant.

The operation of the device is as follows: By turning the lever D' the key C' will cause the valve W to turn until the slot Z therein communicates with the inlet and outlet S and V, at which time the water will flow into the slot, then upward through the outlet V, the stand pipe O, the passage-way M in the top K and out of the spout N.

To turn off the water the lever D' is turned in the opposite direction which will cause the slot Z to be turned away from the inlet and outlet but will bring the opening A' into communication with the outlet so that the water in the stand pipe O may gradually run back into the slot Z and as this is communicating with the opening B' in the casing or cock R the water will pass out through said opening B' and drop down upon the top D of the stand A, from which place it will run through the openings H, drop to the ground and gradually soak into the same.

When it is desired to remove the valve casing or cock R for any reason, a wrench may be placed upon the nut L which will turn the top K, causing the stand pipe O to turn the valve casing or cock R which will unthread the extension T from the opening G, at which time the parts may be lifted out. While this operation is taking place the stand pipe O will remain threaded into the valve casing or cock R and the top K because the threads thereon are opposite to the ones on the extension T. By reversing this action the parts may be placed in position.

Of course we do not wish to be limited to the exact details of construction here shown, as these may be varied within the limits of the appended claims without departing from the spirit of our invention.

Having thus fully described our invention what we claim as new and useful, is—

1. In combination with a hydrant of the character described, a valve casing having a vertical valve opening therein also provided with oppositely disposed inlet and outlet leading to and from said valve opening and also having an opening leading from the valve opening at right angles to the outlet, and a valve having a slot therein adapted to communicate with the inlet and outlet and provided with an opening at right angles thereto which communicates with the outlet when the slot is turned away from the inlet and outlet.

2. In combination, a stand, a hydrant casing, a top provided with a passage-way, a spout mounted in said passage-way, a valve casing having a vertical valve opening therein, also provided with oppositely disposed inlet and outlet leading to and from said valve opening and also having an opening leading from the valve opening at right angles to the outlet, a valve having a slot therein adapted to communicate with the inlet and outlet and provided with an opening at right angles thereto which communicates with the outlet when the slot is turned away from the inlet and outlet, an extension formed with the valve casing threaded into the stand, a supply pipe also threaded into said stand, a stand pipe threaded into

the passage-way in the top and the outlet in the valve casing, and a key attached to the valve and passing through the top.

3. In combination, a stand formed to produce side walls, flanges and a top, the central portion of which is thickened and which is provided with communicating right hand threaded openings, the narrowest part of said top provided with a plurality of holes, a ridge formed with the upper surface of said top, a hydrant casing mounted inside of said ridge, a top having a nut formed therewith and provided with a passage-way, a spout mounted in one end of said passage-way, a valve casing having a vertical valve opening therein, also provided with oppositely disposed inlet and outlet leading to and from said valve opening and also having an opening leading from the valve opening at right angles to the outlet, a valve having a slot therein adapted to communicate with the inlet and outlet and provided with an opening at right angles thereto which communicates with the outlet when the slot is turned away from the inlet and outlet, an extension formed with the valve casing communicating with the inlet, said extension threaded into the upper opening in the top of the stand, a stand pipe having left hand threads on both ends threaded into the outlet in the valve casing and into the passage-way in the top, a key attached to the valve passing through the top, a lever attached thereto, and a supply pipe threaded in the lower opening of the top of the stand.

4. In combination with a water system, a hydrant, a valve casing provided with oppositely disposed vertical inlet and outlet, acting as the axial center of the casing, and a valve mounted in said casing to one side of the center whereby said casing may be revolved by the key which is attached to the valve.

5. In combination with a hydrant, a water system running through the center of said hydrant, a valve casing having a vertical valve opening and oppositely disposed vertical inlet and outlet leading to and from said valve opening, said inlet and outlet being connected with the water system, a valve provided with an opening for simultaneously forming a communication between the inlet and outlet, and a key for rotating the valve or revolving the casing about its axial center.

In testimony whereof, we have hereunto affixed our signatures in the presence of two subscribing witnesses.

PETER E. APGAR.  
JOHN J. SILK.

Witnesses:

W. HAMILTON ROSE,  
NELLIE HOUCK-TAY.