

No. 657,562.

Patented Sept. 11, 1900.

H. F. NEUMEYER.
WALL HYDRANT.

(Application filed June 18, 1900.)

(No Model.)

Fig. 1.

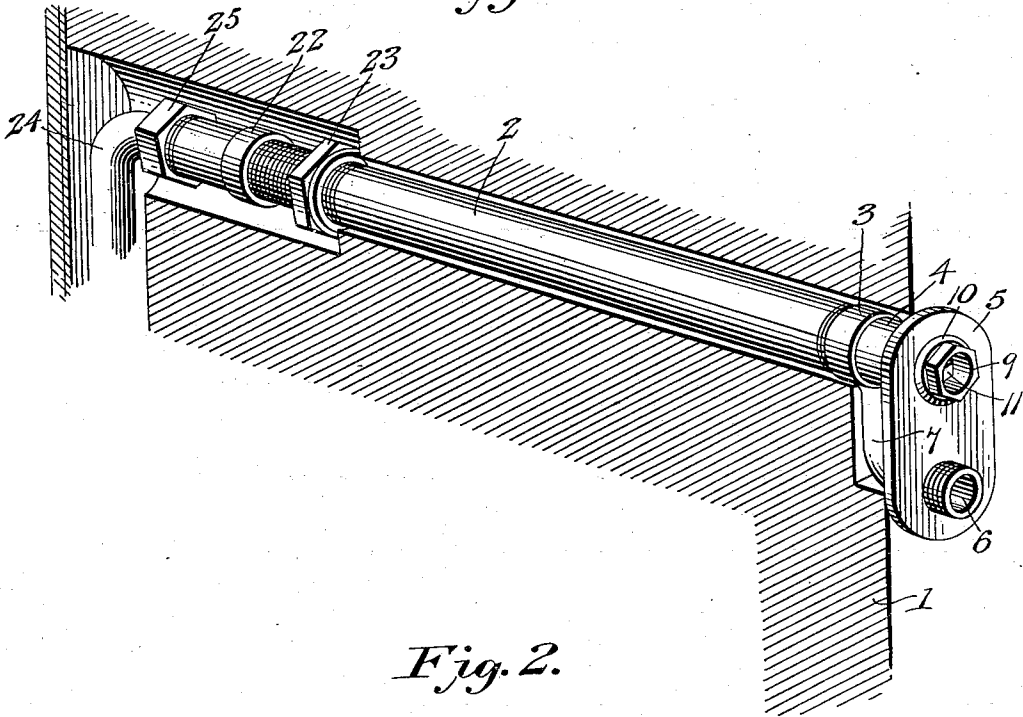


Fig. 2.

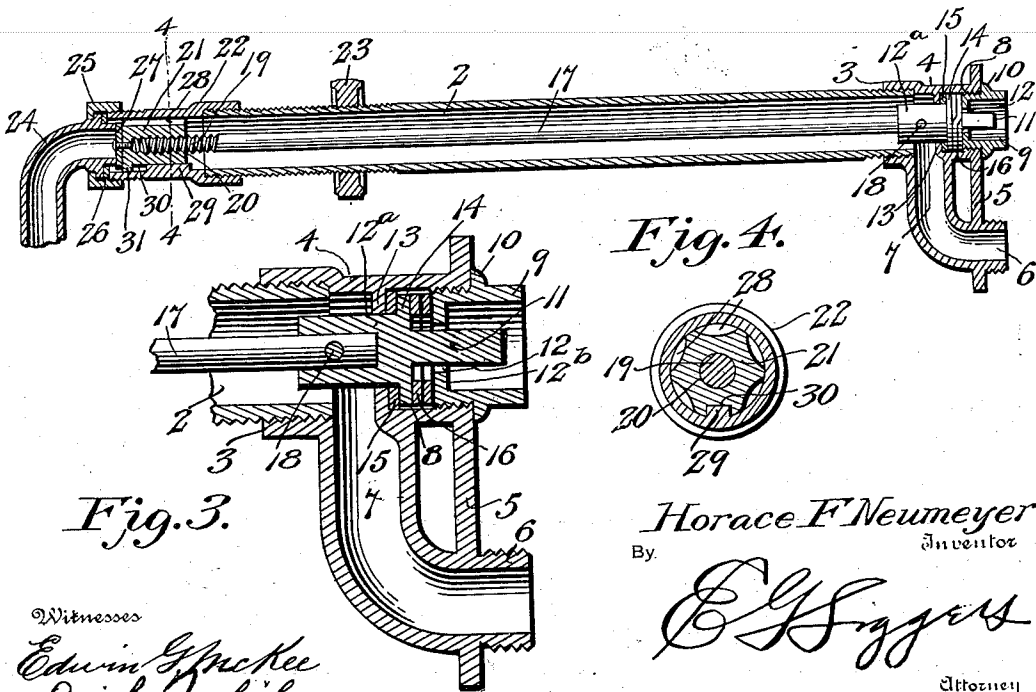
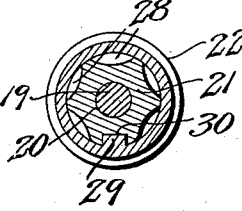


Fig. 3.

Fig. 4.



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WALL-HYDRANT.

SPECIFICATION forming part of Letters Patent No. 657,562, dated September 11, 1900.

Application filed June 18, 1900. Serial No. 20,738. (No model.)

To all whom it may concern:

Be it known that I, HORACE FALK NEUMEYER, a citizen of the United States, residing at Macungie, in the county of Lehigh and State of Pennsylvania, have invented a new and useful Wall-Hydrant, of which the following is a specification.

My present invention relates to a novel wall-hydrant designed primarily to facilitate the attachment of a hose to the water-pipes of a house for the washing of sidewalks and streets, the watering of lawns, &c.

The objects of the invention are numerous, but are, primarily, to render the hydrant anti-freezing, to maintain absolutely water-tight connections at the valve or plunger and around the plug, and to simplify the construction and arrangement of the elements of the device in a manner to facilitate its attachment to the wall of a building and to enable it to be easily repaired.

To the accomplishment of these ends the invention consists in the construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and embraced within the scope of the appended claims.

In said drawings, Figure 1 is a sectional view through a wall and illustrating my device in perspective. Fig. 2 is a central longitudinal section through the hydrant complete. Fig. 3 is an enlarged sectional view through the face-casting and immediately-connected parts on a somewhat-enlarged scale, and Fig. 4 is a transverse sectional view on the line 4 4 of Fig. 2.

Referring to the numerals of reference employed to designate corresponding parts in the several views, 1 indicates a wall through which extends a horizontally-disposed wall-pipe 2, constituting the body of my hydrant. The outer end of this pipe is threaded for attachment to the internally-threaded pipe connection 3, constituting a feature of a face-casting 4. The casting 4 comprises, in addition to the connection 3, a face-plate 5, designed to lie flat upon the outer surface of the wall, and a hose-nipple 6, extended from the face-plate and communicating with the connection 3 through a way 7, which latter is an integral section of piping of compara-

tively-small diameter extending in the rear of the face-plate 5 to the connection 3. The face-casting is also provided with a cylindrical plug-socket 8, coaxial with the wall-pipe 2 and closed by a hollow face-nut 9, screwed into the outer end of the socket and having its insertion therein limited by an annular flange 10, which bears against the face-plate when the nut is screwed home. The face-nut is designed for the protection of the key-post 11, extending through an opening 12 in the bottom wall of the nut and formed as an integral part of a rotary plug 12^a, extending through the bottom wall 13 of the plug-socket 4 and provided between said wall and the wall 12^b of the nut with an annular flange or head 14, urged against a leather or other compressible packing-ring 15 by a spiral spring 16, interposed between the plug and a face-nut. The packing-ring 15 fits snugly upon the plug and is normally compressed against the wall 13 of the plug-socket in a manner to form a water-tight connection between the plug and the opening in the wall 13 through which said plug passes. In this manner the escape of water from the wall-pipe around the plug is absolutely prevented, which eliminates the objectionable corrosion of the connection between the face-nut and casting, which corrosion ordinarily serves to render it exceedingly difficult to disorganize the elements of the hydrant for the purpose of repair.

The plug 12^a is designed to be rotated by the application of the usual key to the key-post 11 and is recessed axially from its inner end for the reception of the adjacent extremity of an elongated plug-stem 17, retained in the plug by a pin 18, passing transversely through the wall of the plug and through the inserted end of the stem. At its rear or inner end the stem 17 is threaded, as indicated at 19, for engagement with the internally-threaded socket 20 of a reciprocatory plunger 21, movable within a plunger-cylinder 22, which latter is screwed upon the threaded inner end of the wall-pipe 2, the threads of the latter being preferably extended to a considerable distance from the inner end of the pipe to facilitate the adjustment of a locking-nut 23, which serves to draw the face-plate 5

rigidly against the outer face of the wall. The plunger 21 is designed to be reciprocated within the cylinder 22 by the rotation of the stem 17 to open or close the inner end of the bend 24, constituting a continuation of a water-supply pipe, and coupled to the rear end of the cylinder 22 by a coupling 25, between which and the bend 24 is interposed suitable packing 26. The end of the plunger 21, which is presented to the inner end of the bend, constituting a valve-seat, is covered by a compressible disk 27, which when the plunger is urged to its closed position, as shown in Fig. 2 of the drawings, is compressed against the valve-seat to effectually close the inner end of the wall-pipe or, more properly speaking, the hydrant against further ingress of water. In order to provide for the passage of water around the plunger when the latter is urged away from the valve-seat, said plunger is provided with a peripheral series of longitudinal grooves or passages 28, and its rotation within the cylinder is prevented by an internal longitudinal guide-rib 29, formed in the inner face of the cylinder 21 and engaging a longitudinal groove 30, formed in the periphery of the plunger and closed at one end to form a stop 31, which serves to limit the retraction of the plunger by engagement with the end of the rib 29. It will be seen that this rib constitutes means or a device for limiting the longitudinal movement of the plunger and for preventing axial movement thereof within the casing.

It will now be observed that the spring 16, mounted within the plug-socket, will serve at all times to exert a pressure upon the plug for the purpose of compressing the packing-ring or gasket 15 to insure a water-tight connection around the plug of the hydrant and that this same force will be exerted when the plug is closed to effect a water-tight connection between the plug and the inner end of the pipe 24 and, further, that when the plunger is retracted by the rotation of the plug the engagement of the stop 31 with the rib 29 will serve to cause the stem to be drawn longitudinally when further effort is made to rotate the plug, the effect of this being to exert an additional force tending to compress the gasket 15 to effect a connection even more complete at the plug end of the hydrant when the water is passing therethrough to the hose-nipple 6. It will also appear that when the hydrant is closed the closure will be effected at the inner end of the wall-pipe, from which latter the water will be drained through the hose-nipple 6 to prevent freezing by the removal of water from all exposed portions of the hydrant.

From the foregoing it will be seen that I have produced a simple and efficient wall-hydrant by means of which the various objects of the invention may be attained; but although the construction illustrated and described appears at this time to be entirely satisfactory and preferable I wish to reserve

the right to effect such changes, modifications, and variations of the construction and arrangement of parts as may be comprehended within the scope of the protection prayed.

What I claim is—

1. A wall-hydrant comprising a wall-pipe having a cylinder and a plug-socket at its opposite ends, a non-rotary reciprocatory plunger within the cylinder, and a rotary plug in the plug-socket, said plug and plunger being operatively connected.
2. A wall-hydrant comprising a wall-pipe, a valve-seat located at one end of the pipe, a plug-socket adjacent to the opposite end thereof, a plunger in operative relation with the valve-seat, a plug for operating the plunger, and a spring disposed to urge the plunger against the valve-seat.
3. A wall-hydrant comprising a wall-pipe having a valve-seat disposed adjacent to one end and a plug-socket adjacent to its opposite end, a plunger arranged to seat upon the valve-seat, a plug located in the plug-socket and operatively connected with the plunger, packing interposed between the plug and its socket, and a spring arranged to exert constant pressure upon the plug to compress the packing for the purpose of insuring a water-tight connection around the plug.
4. In a wall-hydrant, the combination with a wall-pipe and cylinder, of a supply-pipe coupled to the cylinder, a reciprocatory plunger within the cylinder and arranged to seat against the end of the supply-pipe, means for preventing the rotary movement of the plunger and for limiting its reciprocatory movement, and plunger-actuating mechanism located at the end of the wall-pipe opposite the cylinder.
5. In a wall-hydrant, the combination with a wall-pipe, a cylinder located at one end of the pipe, and a supply-pipe coupled to the cylinder, of a reciprocatory plunger within the cylinder and arranged to seat against the end of the supply-pipe, a rotary plug located at the opposite end of the wall-pipe, said plug being provided with a stem having a threaded engagement with the plunger, whereby the reciprocation of said plunger is effected by the rotation of the plug.
6. In a wall-hydrant, the combination with a wall-pipe, a cylinder located at one end thereof, and a supply-pipe coupled to the cylinder, of a plunger located within the cylinder and provided with a threaded socket, a rotary plug located at the opposite end of the wall-pipe and provided with a plug-stem having a threaded extremity engaging the socket of the plunger.
7. In a wall-hydrant, the combination with a wall-pipe, a cylinder located at one end thereof, a supply-pipe coupled to the cylinder, a reciprocatory plunger controlling the supply-pipe and provided with passages through which water may pass to the wall-pipe and with a longitudinal recess, a rib projecting into the recess from the cylinder, and

a rotary plug located at the opposite end of the hydrant and having an operative connection with the plunger.

8. In a wall-hydrant, the combination with
5 a wall-pipe and cylinder, of a plunger within the cylinder provided with a series of peripheral passages and with a longitudinal recess closed at one end; a rib extending from the interior of the cylinder into the recess of the
10 plunger and designed to cooperate with the closed end of the recess for the purpose of limiting the reciprocatory movement of said plunger, and means for operating the plunger.

9. In a wall-hydrant, the combination with
15 a wall-pipe and valve mechanism, of a plug-socket adjacent to one end of the wall-pipe, a plug mounted in the plug-socket and operatively connected with the valve mechanism, a face-nut screwed into the socket, and a spring
20 interposed between the contiguous faces of the plug and nut for the purpose of urging said plug in a direction to effect a water-tight connection.

10. In a wall-hydrant, the combination with
25 a wall-pipe, valve mechanism and a plug-socket disposed at one end of the pipe, of a plug located within the plug-socket and provided with a head, packing interposed between the head of the plug and the bottom
30 wall of the socket, a face-nut screwed into the opposite end of the socket, and a spring interposed between the face-nut and the plug for the purpose of urging the latter in a direction to compress the packing.

35 11. In a wall-hydrant, the combination with a wall-pipe and valve mechanism located at one end thereof, of a face-casting located at the opposite end thereof, said casting comprising a face-plate, a hose-nipple and a pipe
40 connection located out of alinement and at opposite sides of the face-plate, a port extending between the connection and nipple, a plug-socket, a rotary plug within the socket and operatively connected with the valve

mechanism, a face-nut screwed into the plug- 45 socket and projecting beyond the face-plate, and a spring interposed between the plug and face-nut to urge the plug firmly upon its seat.

12. In a wall-hydrant, the combination with
50 a wall-pipe, a cylinder located at one end thereof, and a pipe-bend coupled to the cylinder and having one end extended therein; a plunger within the cylinder provided with a compressible disk arranged to close the end of the pipe-bend, said plunger being also provided with peripheral recesses, a longitudinal
55 groove and a threaded socket, a guide-rib extending from the cylinder into the groove, a threaded plug-stem engaging the socket of the plunger, a face-casting located at opposite
60 end of the wall-pipe and formed with a hose-nipple in communication with the wall-pipe, and a plug-socket in axial alinement with said pipe, a rotary plug within the plug-socket provided with an annular head and
65 with a key-post, a gasket between the annular head of the plug and the bottom wall of the plug-socket, a face-nut screwed into the outer end of the plug-socket and apertured for the reception of the key-post, and a spring
70 interposed between the face-nut and the adjacent wall of the plug.

13. A wall-hydrant comprising a wall-pipe having a cylinder and plug-socket at its opposite ends, a reciprocatory plunger within
75 the cylinder, a rotary plug in the plug-socket, and a plug-stem having threaded engagement with the plunger to convert the rotary movement of the plug into reciprocatory movement of the plunger. 80

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HORACE FALK NEUMEYER.

Witnesses:

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