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No. 749,563.

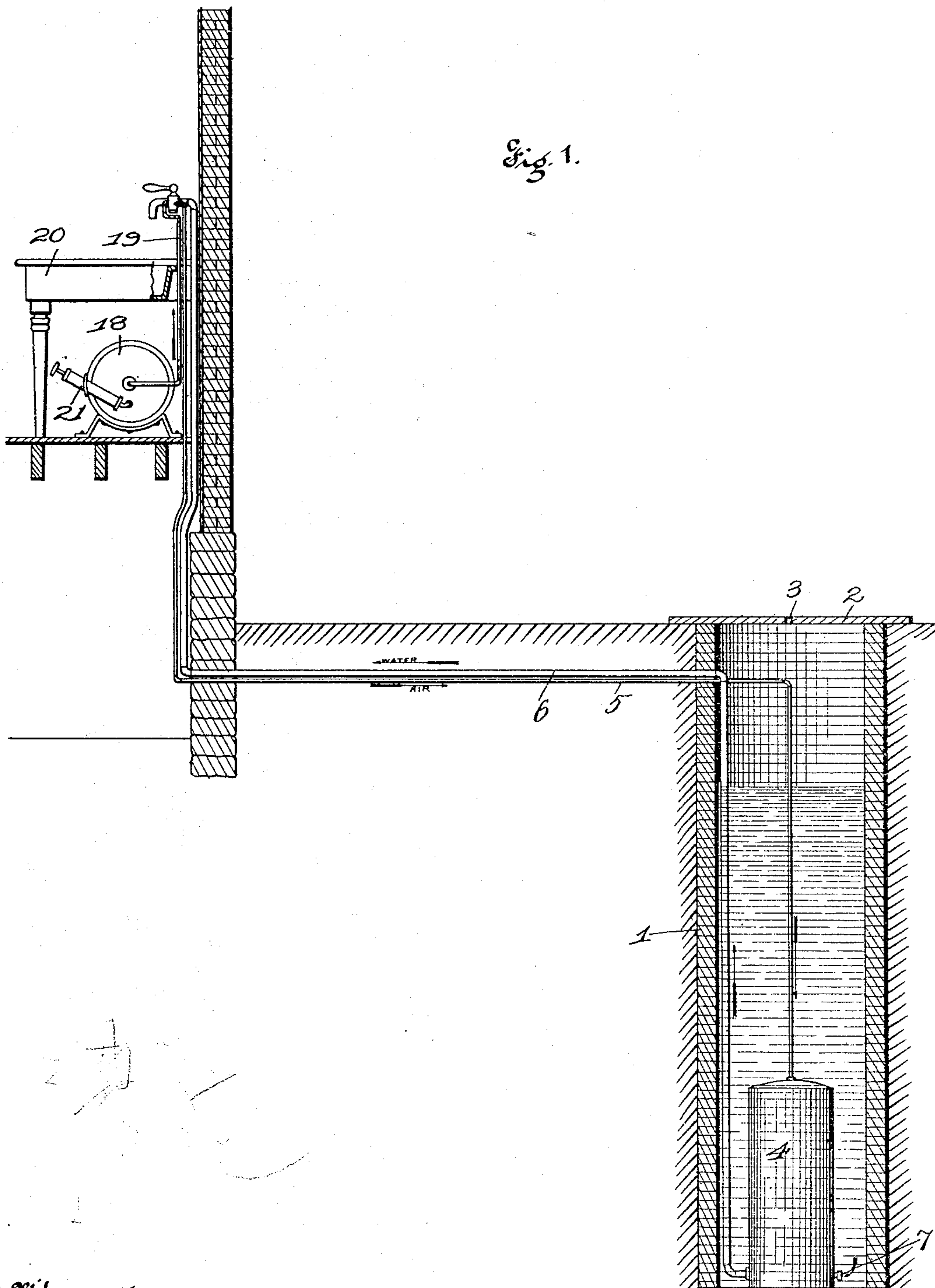
PATENTED JAN. 12, 1904.

J. JOHNSON & E. HITZ.  
HYDRANT SYSTEM FOR COUNTRY HOUSES.

APPLICATION FILED OCT. 20, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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John Johnson & Emil Hitz.  
By Higdon & Longenecker Attys.

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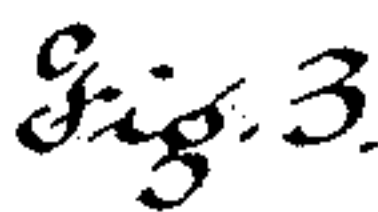
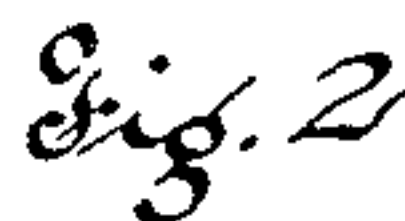
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2 SHEETS—SHEET 2.



Inventors  
John Johnson & Emil Kitz.  
by Heddon & Longan, Hesperis Attys.



## UNITED STATES PATENT OFFICE.

JOHN JOHNSON AND EMIL HITZ, OF ST. LOUIS, MISSOURI.

## HYDRANT SYSTEM FOR COUNTRY HOUSES.

SPECIFICATION forming part of Letters Patent No. 749,563, dated January 12, 1904.

Application filed October 20, 1903. Serial No. 177,823. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN JOHNSON and EMIL HITZ, citizens of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Hydrant Systems for Country Houses, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to improvements in hydrant systems for country houses; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The object of our invention is to provide an improved apparatus of the class above mentioned and which shall be especially efficient in delivering water from wells or other reservoirs located at considerable distance from the house.

A further object is to provide an improved system of controlling-faucets whereby water may be delivered upon the different floors of a building without interfering with the delivery of water upon any floor.

In the drawings, Figure 1 is a sectional elevation of an apparatus embodying our invention. Fig. 2 is a side elevation of our improved air and water controlling faucet. Fig. 3 is a sectional plan view of same, taken on the line 3-3 of Fig. 2.

1 indicates the well, cistern, or other water supply, in the present instance located below the surface of the ground and provided with a cover 2, having a vent-opening 3.

Located upon the bottom of the well 1 and secured in position in any suitable manner is an air-tight tank 4, with the upper end of which an air-pipe 5 communicates and with the lower portion of which a water-delivery pipe 6 communicates. A common check-valve 7 is also located at the lower end of the said tank 4.

8 indicates the casing of our combined air and water faucet, which in the present instance is provided with a tapered bore having opposite water-ports 9, which communicate with the interior of the water-pipe 6 during the act of drawing water.

Mounted within the tapered bore of the casing 8 is a plug 10, having the usual handle 11 at its upper end and secured within the casing by means of the usual nut 12 and washer 13. Formed in said plug is a water-port 14, which registers with the ports 9 in the casing when it is desired to draw water from the faucet. The faucet is provided with the usual spout 15. The water-port 14 is located a little to one side of the center of the plug 10, and formed in said plug is an air-port 16, which is flaring at its inner end. Said air-port 16 registers at its outer end with the reservoir-port 17, formed in said casing 8. Extending from the reservoir-port 17 to an air-reservoir 18 is the reservoir-pipe 19, which is adapted to convey air under pressure from said reservoir to the faucet. Said reservoir 18 may be of any suitable form of construction and is located in any suitable compartment of the house, preferably in an out-of-the-way place under the sink 20, as shown. Air is compressed within said reservoir by means of any common air-pump, such as 21. The air-pump may be run by hand or other power. Formed in the casing opposite the flaring inner end of the plugged air-port 16 are the two ports 22 and 23, the latter of which we term the "exhaust-port," while said port 22 is what we call the "tank-port." The exhaust-port opens into the atmosphere; but the tank-port is connected with the tank 4 by means of the air-pipe 5.

The operation is as follows: The reservoir 18 should first be supplied with air under suitable pressure, depending upon the height to which the water is to be forced from the well. The tank 4 in the well normally stands full of water, the same having entered by way of the check-valve 7, which opens inwardly in the usual manner. When it is desired to draw water from the faucet, the handle 11 is placed in a position in which it is shown, thereby placing the reservoir-port 17 in communication with the air-port 16, and air from the reservoir flows through the reservoir-pipe 19 to the reservoir-port 17 and thence to the air-port 16 and thence to the tank-port 22 and thence by way of the air-pipe 5 to the well-tank 4. Air from the pipe 5 entering said tank



forces the water downwardly therein and out through the water-pipe 6, and the water passes upwardly through said pipe to the casing 8 and thence passes through the ports 9 and water-port 14 and makes its exit through the faucet-spout 15. When it is desired to cut off the flow of water from the faucet, the handle 11 is turned at a right angle, and this will locate the water-port 14 at a right angle to the ports 9, and thereby cut off the flow of water. Such movement will also locate the flaring end of the air-port 16 in such position that it will cover both the tank-port 22 and the exhaust-port 23, and thereby place said tank-port in communication with said exhaust-port, and air from the reservoir will thereupon be exhausted by passing from said reservoir through the air-pipe 5. The well-tank 4 will then be again filled with water, and the air therein will be forced out by the pressure of water above said tank. The last-named movement of the handle 11 will also cut off the supply of air from the air-reservoir 18.

We do not limit ourselves to the exact construction herein described, as it is obvious that the same may be modified within the skill possessed by ordinary workmen without departing from the scope of our invention.

What we claim is—

30 1. The improved hydrant system for country houses, comprising a submerged tank having water inlet and exit connections at its lower end and an air-inlet at its upper portion, a combined air and water faucet located in a dis-

tant apartment and having a water-controlling 35 handle, a water-pipe extending from said faucet to the water-exit of said tank, an air-controlling device operated by the same faucet-handle which controls the flow of water from said tank, a compressed-air reservoir, a pipe 40 connecting said reservoir to said faucet, and a pipe connecting said faucet to the top of the submerged tank, substantially as described.

2. The improved hydrant system for country houses, comprising a submerged tank having 45 water inlet and exit connections at its lower end and an air-inlet at its upper portion, a combined air and water faucet located in a distant apartment and having a water-controlling handle, a water-pipe extending from said faucet 50 to the water-exit of said tank, an air-controlling device operated by the same faucet-handle which controls the flow of water from said tank, a compressed-air reservoir, a pipe connecting said reservoir to said faucet, a pipe 55 connecting said faucet to the top of the submerged tank, and an exhaust-port in said faucet adapted to be thrown into communication with said air-pipe by the movement of said handle, substantially as specified. 60

In testimony whereof we have signed our names to this specification in presence of two subscribing witnesses.

JOHN JOHNSON.  
EMIL HITZ.

Witnesses:

M. G. IRION,  
JOHN C. HIGDON.