

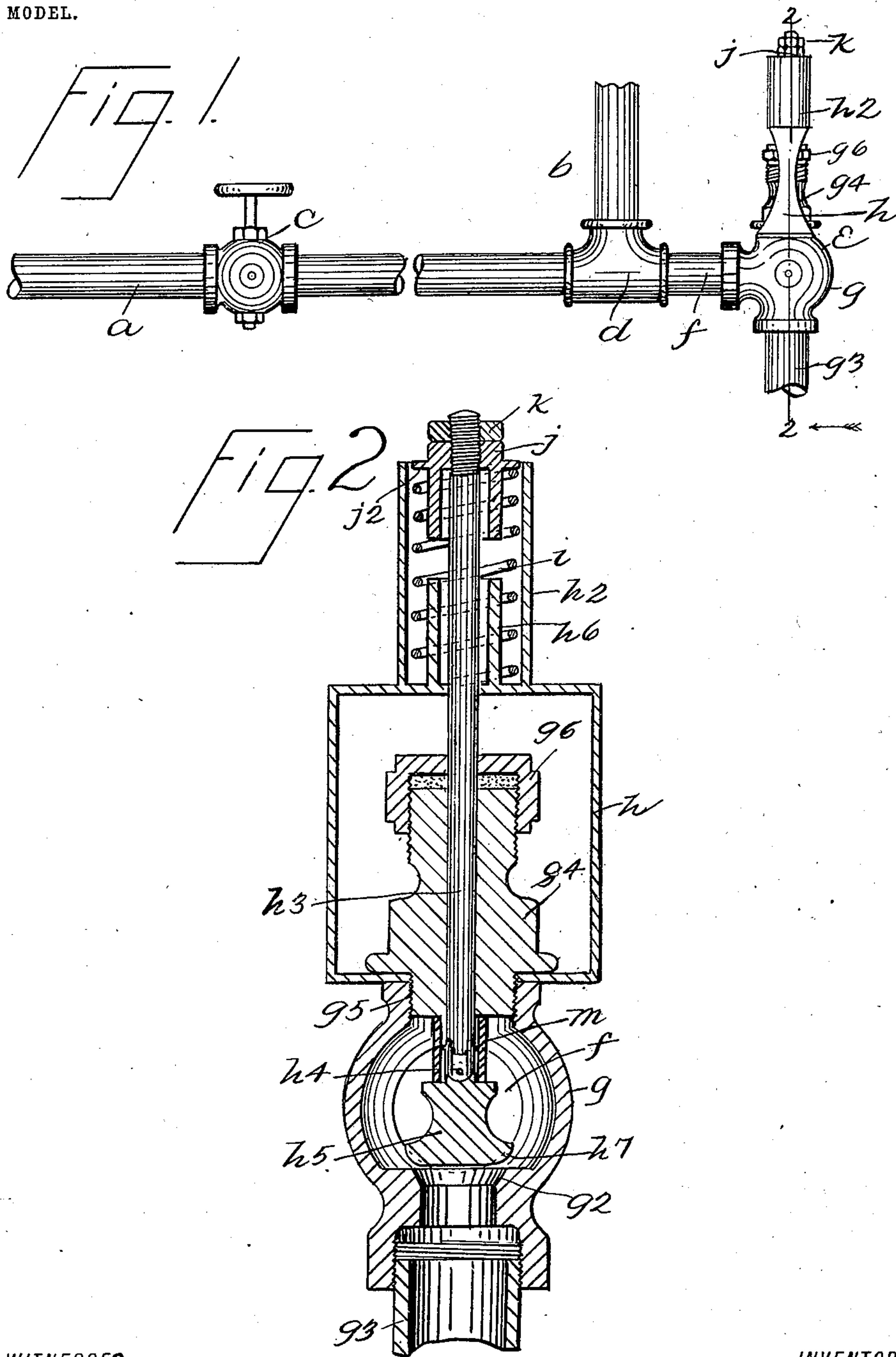
No. 731,063.

PATENTED JUNE 16, 1903.

J. J. MAY.  
DRAIN VALVE FOR WATER SUPPLY PIPES.

APPLICATION FILED JAN. 16, 1903.

NO MODEL.



WITNESSES

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## UNITED STATES PATENT OFFICE.

JOHN J. MAY, OF STATEN ISLAND, NEW YORK.

## DRAIN-VALVE FOR WATER-SUPPLY PIPES.

SPECIFICATION forming part of Letters Patent No. 731,063, dated June 16, 1903.

Application filed January 16, 1903. Serial No. 139,265. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. MAY, a citizen of the United States, residing at Staten Island, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Drain-Valves for Water-Supply Pipes, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved drain-valve for water-supply pipes which may be connected with water-supply pipes wherever necessary and which is particularly adapted for use in connection with water-supply pipes in houses and other buildings and by means of which water may be drained at all times from the main water-pipe of a house, the valve being preferably connected with the street-main or street-main connection.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a side elevation of a part of a street-main or street-main connection, a house supply-pipe, and showing also my improved drain-valve connected therewith; and Fig. 2, a section on the line 2 2 of Fig. 1.

In the drawings forming part of this specification I have shown at *a* a water-main or street-pipe connection by which the main is connected with a house, and at *b* the ordinary house supply-pipe by which the water is supplied to a house and the various parts thereof. The pipe or connection *a* is provided with the valve *c* in the usual manner, and the connection between the pipe *a* and *b* is made in the form of construction shown by means of a coupling *d*.

My improved drain-valve is shown at *e* and is connected with the coupling *d* by a pipe *f*. The drain-valve *e* comprises a casing *g*, the bottom portion of which is provided with a valve-seat *g*<sup>2</sup>, and connected with the casing *g* is a pipe *g*<sup>3</sup>, by means of which the drain-water may be conveyed to any desired point. Connected with the top of the casing *g* is a head *g*<sup>4</sup>, this connection being preferably

made by means of a screw-thread, as shown at *g*<sup>5</sup>, and the upper end of the head *g*<sup>4</sup> is screw-threaded and provided with a screw-threaded cap *g*<sup>6</sup>, and secured to the casing *g* by the head *g*<sup>4</sup> is a frame or support *h*, the top of which is provided with a vertically-arranged casing *h*<sup>2</sup>. Passing vertically through the head *g*<sup>4</sup> and through the top of the frame *h* and into the casing *g* is a valve-rod *h*<sup>3</sup>, the lower end of which is loosely connected at *h*<sup>4</sup> with a valve *h*<sup>5</sup>, which is adapted to be seated on the valve-seat *g*<sup>2</sup>, and the frame *h* is preferably provided at the top thereof and within the casing *h*<sup>2</sup> with a thimble *h*<sup>6</sup>, through which the rod *h*<sup>3</sup> passes and around which is placed a spiral spring *i*, and screwed onto the upper end of the rod *h*<sup>3</sup> is another thimble or cap *j*, having a flange or rim *j*<sup>2</sup>, which bears on the spring *i*, and the upper end of the rod *h*<sup>3</sup> is also provided with a set-nut *k*. The valve-rod *h*<sup>3</sup> is loosely movable through the head *g*<sup>4</sup>, and the shape of the valve *h*<sup>5</sup> is such that it is provided at the bottom thereof with an annular projecting portion *h*<sup>7</sup>, and when the water is allowed to pass into the casing *g* at full pressure it will depress the valve *h*<sup>5</sup> onto the valve-seat *g*<sup>2</sup> and the water cannot escape through the valve-casing *g*. At this time the water will be free to flow up through the pipe *b* under normal pressure to all parts of the house; but if at any time it is desired to drain the pipe *b* and other pipes of the house system all that is necessary is to close the valve *c*. The pressure will not then be sufficient to close the valve *h*<sup>5</sup>, and the spring *i* will at once raise said valve and the water will be free to flow out through the casing *g*, as will be readily understood. It will be apparent that the tension of the spring *i* may be regulated as desired, and the closing-head *g*<sup>4</sup> of the valve-casing *g* may be of any desired form or construction, and in the form of construction shown I place on the valve *h*<sup>5</sup> a sleeve *m*, designed to limit the upward movement of the valve *h*<sup>5</sup>.

My improved drain-valve is simple in construction and comparatively inexpensive, and changes in and modifications of the construction thereof, as herein shown and described, may be made without departing from the spirit of my invention or sacrificing its advantages.



Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A device of the class described comprising  
5 ing a valve-casing open at the bottom and the top and at one side, a removable plug or head for closing the top opening, a valve mounted in said casing and adapted to be depressed  
10 onto the valve-seat in the bottom thereof, a valve-rod connected with said valve and passing upwardly and loosely through said plug or head, and a spring supported above said  
15 said valve slightly above its seat, substantially as shown and described.

2. A drain device for water-pipes, comprising a valve-casing open at the bottom and top  
20 and at one side, a removable plug for closing the top opening, a valve mounted in said casing and adapted to be depressed onto the valve-seat in the bottom thereof, a valve-rod connected with said valve and passing upwardly and movable through said plug, a  
25 frame secured to the valve-casing by means of said plug and through which the valve-rod also passes, a spring mounted on said frame and a cap connected with the valve-rod and

between which and said frame said spring operates to hold the valve in an open position, 30 substantially as shown and described.

3. A drain device for water-pipes adapted to be connected with the end of a water-pipe, said device comprising a valve-casing open at the top, at the bottom and at one side, a detachable plug for closing the top opening, a  
35 frame secured to the valve-casing by said plug, a valve within the valve-casing and adapted to close the bottom opening therein, a valve-rod loosely connected with said valve  
40 and passing upwardly through said plug, a spring attachment connected with said frame and operating in connection with the valve-rod to hold the valve in an open position and means for limiting the upward movement of  
45 said valve and valve-rod, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 15th  
50 day of January, 1903.

JOHN J. MAY.

Witnesses:

F. A. STEWART,  
C. E. MULREANY.