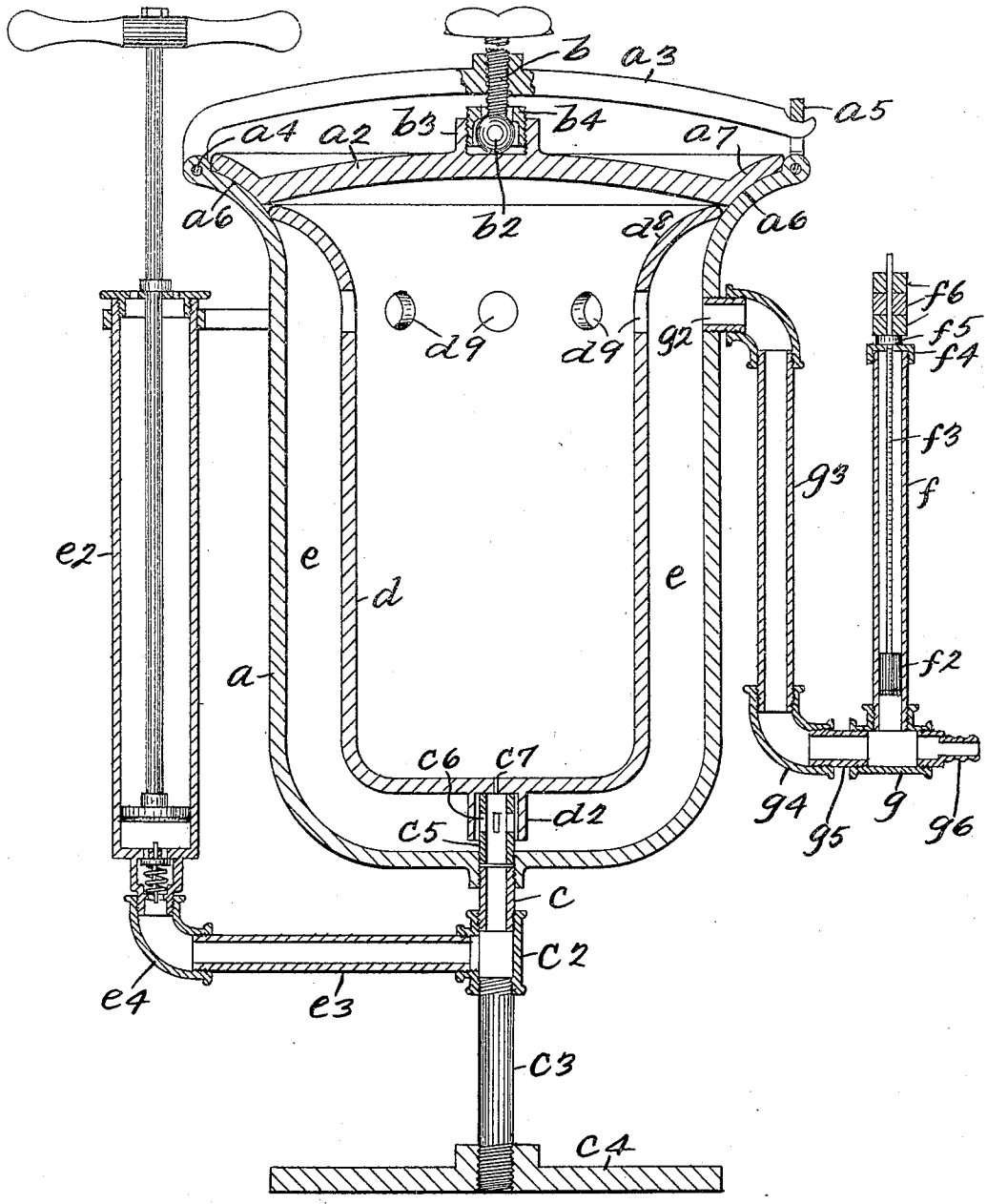
No. 792,000. PATENTED JUNE 13, 1905.

C. P. BRADY.

DEVICE FOR TESTING WATER PIPES.

APPLICATION FILED NOV. 19, 1904.



WITNESSES

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No. 792,000. Patented June 13, 1905.

UNITED STATES PATENT OFFICE.

CHARLES P. BRADY, OF NEW ROCHELLE, NEW YORK.

DEVICE FOR TESTING WATER-PIPES.

SPECIFICATION forming part of Letters Patent No. 792,000, dated June 13, 1905.

Application filed November 19, 1904. Serial No. 233,521.

To all whom it may concern:

Be it known that I, CHARLES P. BRADY, a citizen of the United States, residing at New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Devices for Testing Water-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.

This invention relates to devices for testing the water-pipes in dwellings and other buildings by means of what is known as the "smoke test;" and the object thereof is to provide an improved device of this class which may be conveniently and quickly applied for the purpose of making such a test whenever necessary.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters, said drawing being a sectional side elevation of a device embodying my invention.

In the practice of my invention I provide a main outer receptacle a, which is open at the top and provided with a cover a^2, held in place by a transverse arm a^3, pivoted or hinged at one side, as shown at a^4, and adapted to be connected with a link, catch, or similar device a^5 at the opposite side. The arm a^3 is provided centrally with a screw b, which passes therethrough and is provided at its lower end with a ball b^2, supported centrally of and on the cover a^2 by means of a collar or neck b^3, formed on said cover and having a hollow screw-threaded plug b^4, through which the screw b passes, and by means of this construction the cover a^3 may be firmly secured in place, so as to make a perfectly gas-tight connection, and in order to facilitate this operation the top of the receptacle a is flared outwardly, as shown at a^6, and the cover a^2 is provided with a correspondingly-formed flange or rim a^7.

In the bottom of the receptacle a and centrally thereof is secured a tube c, which is connected with an ordinary coupling c^2, in which is secured a standard c^3, having a base c^4, and the tube c communicates with a tube c^5 within the bottom portion of the receptacle a, and extending upwardly into said receptacle and placed in the main outer receptacle a is a supplementary receptacle d of similar form, having a bottom neck d^2, in which the tube c^5 loosely fits, and the tube c^5 is provided with side ports or passages c^6, and the bottom of the receptacle c is also preferably provided with a small port or passage c^7, which communicates with the tube c^5 and through the tube c^5 with the tube c and coupling c^2. The upper part of the inner supplemental receptacle d is also flared outwardly, as shown at d^8, and closely fits the top portion of the receptacle a just below the cover a^2, and the top portion of the receptacle d is provided with ports or passages d^9, and around the receptacle d is a space or chamber e, which also extends below said receptacle d and separates the receptacles a and d, and the ports or passages d^9 place the chamber e and the chamber or space within the receptacle d in communication.

Connected with the coupling c^2 is an ordinary air-pump e^2, this connection being made by means of a tube e^3 and an ordinary elbow-coupling e^4, and by means of the air-pump e^2 air may be forced into the chamber e and also into the interior of the receptacle d.

At one side of the main outer receptacle a is placed a gage which comprises a glass tube f, in which is placed a piston f^2, having a rod f^3, which passes up through the tube f and out through a cap f^4, secured to the upper end of said tube, and the rod f^3 above the cap f^4 is provided with a collar f^5, and placed on the rod f^3 above the collar f^5 are a plurality of weights f^6, any desired number of which may be employed, and the rod f^3 is provided with a scale which is read above the cap f^4 as the rod f^3 is forced upwardly through said cap in the operation of the device. The pressure-gage is connected with a coupling g, which is connected with the top portion of the main outer receptacle a, as shown at g^2, by means of a tube g^3, an elbow-coupling g^4, and a short connecting-pipe g^5, which connects the couplings g and g^4, and connected with the coupling g opposite the pipe g^5 is an ordinary attaching-nozzle g^6, by means of which this device may be connected with the water-pipes

of a building at any point in the usual manner in order to make a test of said pipes, a flexible hose or any other connecting device being employed for this purpose.

In the use of this device the usual chemicals or other substances intended to produce a smoke are placed in the inner receptacle c. The cover a^2 of the main outer receptacle a is then secured in place, and air is pumped into the chamber d by means of the air-pump e. In this operation the air and smoke intermingle through the ports or passages c^9, and the air and smoke is forced through the water-pipes throughout the building, and any leakage in said pipes may be quickly determined by the escape of the smoke therethrough. In this operation the amount of pressure in the test-pipes and in the water-pipes is measured by the gage f, the piston f^2 being raised by the pressure of air in the lower end of the tube in which said piston is placed, and it will be understood that the amount of pressure necessary to operate the piston f^2 may be regulated as desired by adding to the number of weights f^6 or decreasing the number of said weights.

This device may also be used as a fumigator and in making sanitary tests and for other and similar purposes, and changes in and modifications of the construction herein 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 a main outer casing closed at the bottom and open at the top and provided with a removable cover, a supplemental inner casing placed concentrically in the main outer casing and between which and the main outer casing is a chamber in communication with the interior of the supplemental inner casing, an air-pump in communication with the main outer casing and a pipe connected with the main outer casing and provided with an attaching-nozzle, substantially as shown and described.

2. A device of the class described, comprising a main outer casing closed at the bottom and open at the top and provided with a removable cover, a supplemental inner casing placed concentrically in the main outer casing and between which and the main outer casing is a chamber in communication with the interior of the supplemental inner casing, an air-pump in communication with the main outer casing and a pipe connected with the main outer casing and provided with an attaching-nozzle and a pressure-gage, substantially as shown and described.

3. In a device of the class described, a main outer casing open at the top and provided with a removable cover, a supplemental casing supported therein, and between which and the main outer casing is a chamber which is in communication with the supplemental casing, an air-pipe in communication with the interior of both of said casings, and a discharge-pipe connected with the main outer casing near the top thereof and provided with a pressure-gage and an attaching-nozzle, substantially as shown and described.

4. A device of the class described, comprising a main outer casing, a supplemental inner casing centrally therein and in communication with a space between said casings, an air-pump communicating with said space and with the supplemental inner casing, and an escape-pipe connected with the main outer casing and provided with an attaching-nozzle, substantially as shown and described.

5. A device of the class described, comprising a main outer casing closed at the bottom and open at the top and provided with a removable cover, a supplemental casing placed concentrically in the main outer casing and in communication therewith, an air-pump in communication with the main outer casing, and a pipe connected with the main outer casing and provided with a pressure-gage and an attaching-nozzle, said supplemental inner casing being also provided with a flaring top which fits within the top portion of the main outer casing, 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 17th day of November, 1904.

CHARLES P. BRADY.

Witnesses:

F. A. STEWART,

C. J. KLEIN.