

N. DOLESE.
VACUUM VALVE FOR STEAM HEATING.
APPLICATION FILED JAN. 27, 1908.

900,153.

Patented Oct. 6, 1908.

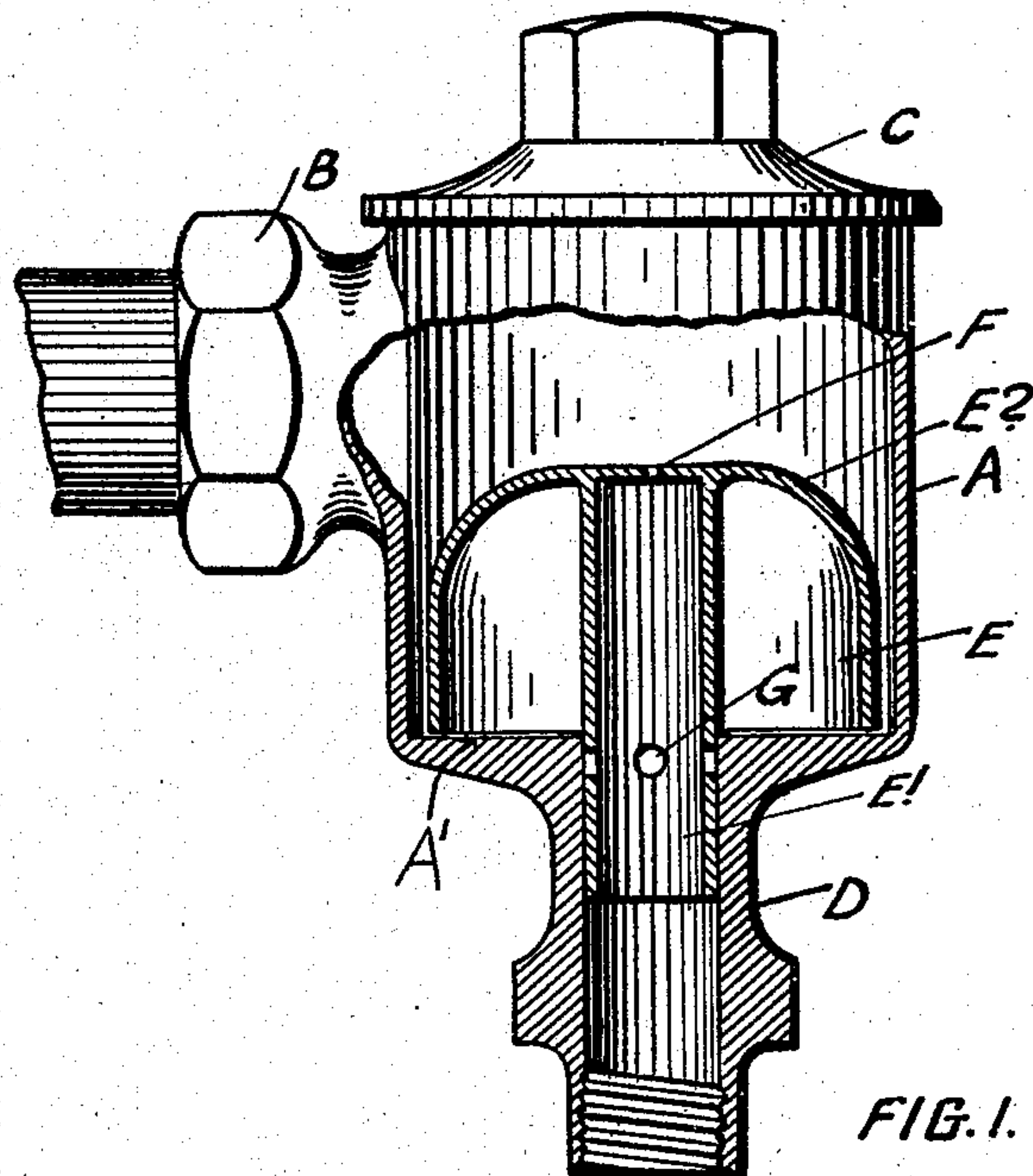


FIG. 1.

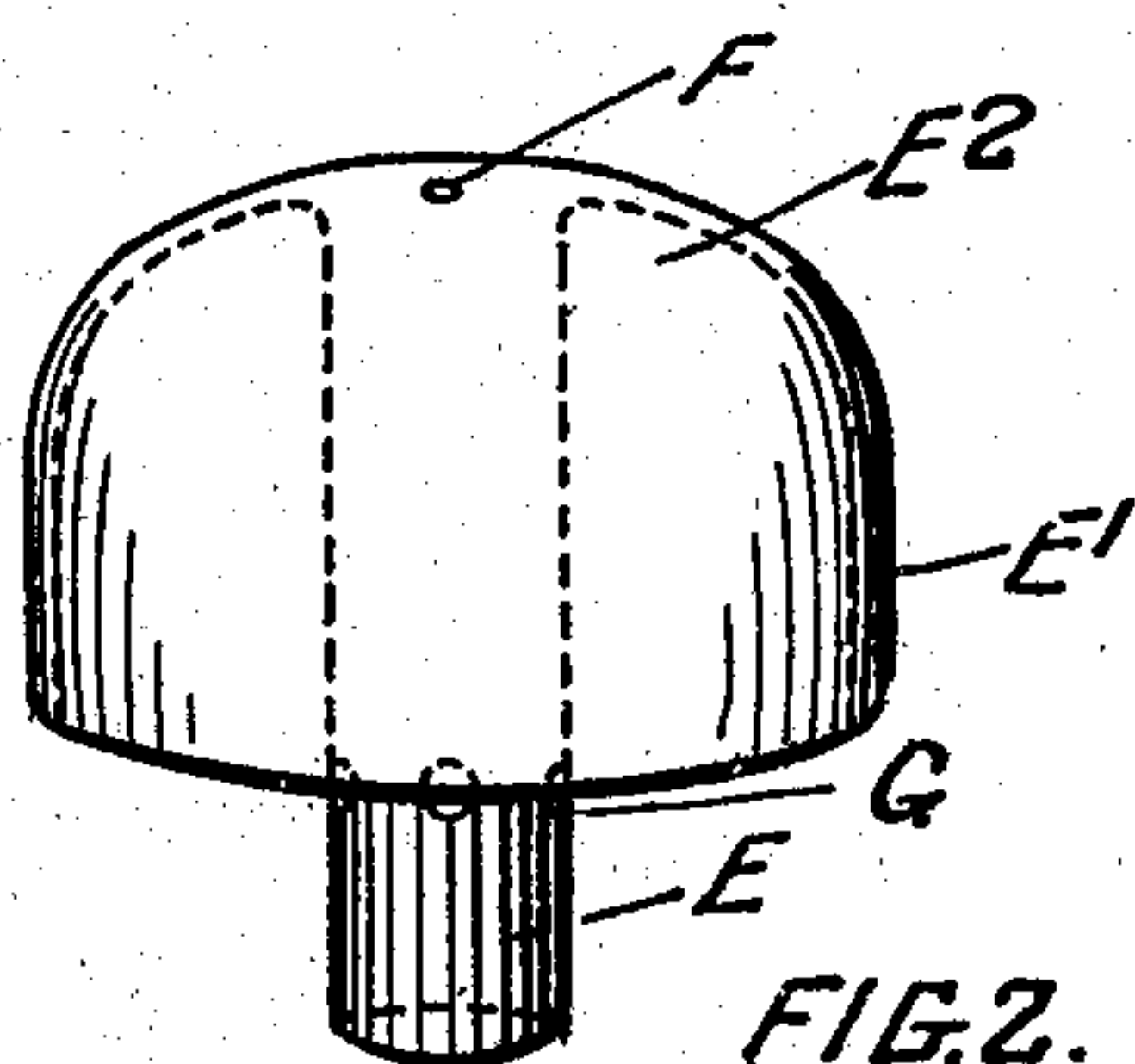


FIG. 2.

WITNESSES.
J. E. Boyce
H. M. Dennett

INVENTOR
N. DOLESE,
By *J. B. Fithertonbaugh*

UNITED STATES PATENT OFFICE.

NICHOLAS DOLESE, OF TORONTO, ONTARIO, CANADA.

VACUUM-VALVE FOR STEAM-HEATING.

No. 900,153.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed January 27, 1908. Serial No. 412,881.

To all whom it may concern:

Be it known that I, NICHOLAS DOLESE, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Vacuum-Valves for Steam-Heating, of which the following is the specification.

My invention relates to improvements in vacuum valves for steam heating, and the object of the invention is to devise a vacuum valve for steam heating, which will not allow of any steam to pass yet will allow of condensation passing as it accumulates and thereby insure a vacuum in the return and vacuum pump at all times, and, therefore, an absolutely noiseless heating system.

A further object is to dispense with the use of cold water for condensing, insure a perfect vacuum through the entire system and consequently a uniform heat.

Still further objects are to make the device simple, self adjusting, of a minimum number of parts, of a maximum capacity, easy of access and automatic in its operation.

To effect these objects I have constructed my valve with a main receptacle or casing provided with a suitable connection at the side to the return of the radiator, and a suitable discharge at the bottom, a valve proper provided with a hollow stem fitting in the vertical discharge orifice and a hollow open bottom cap for the hollow stem having a minute central orifice in the center of the float and stem and radial orifices in the stem below the bottom edge of the top, the said valve operating as hereinafter more particularly explained.

Figure 1, is a sectional view of my improved vacuum valve. Fig. 2, is a perspective detail of the valve.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the main body or casing of the valve having its bottom flat so as to provide a valve seat.

B is the connection to the return pipe of the radiator or the like, which extends from the upper end of the valve casing as indicated.

C is a screw cap located at the top of the casing.

D is the hollow depending stem forming part of the casing.

E is the valve comprising the central tube E' and the float E² attached to or forming part of the central tube and being rounded as indicated and extending downwardly in a cylindrical form and adapted to engage the said seat. The cap E is open at the bottom as indicated.

F is a central orifice located above the center of the tube in the top E and G is a series of holes made in the tube E' beneath the level of the bottom edge of the float E and the seat A' on which it rests.

The operation of my valve is as follows. A vacuum is maintained in the valve casing continually by means of the usual vacuum pump, which is connected in the usual manner to the discharge stem D of the casing, by reason of the orifice F in the top E². As soon as any condensation from the radiator or the like passes by the return B into the valve casing it will flow down the sides of the float and when sufficient is accumulated will raise the valve E, the air under the hollow cap being sufficient to form a float. As soon as the holes G rise to the level of the seat of the valve the water accumulated passes down through the holes into the stem D and the valve resumes its seat. It will thus be seen that the action of my valve will be continuous and will be necessarily noiseless all water accumulating being discharged rapidly.

What I claim as my invention is:

The combination with a casing having an inlet and a depending hollow stem, and a flat seat located at the bottom of the casing, of a valve comprising a central tube projecting down into the hollow stem and making a close fit therewith and having openings therein normally below the valve seat, and a dome shaped float connected to the top of the tube and having an opening therein putting the tube in communication with the casing, the lower edge of said float being flat and adapted to engage with the seat said depending tube and dome being so connected as to prevent the passage of air from the dome to the tube.

NICHOLAS DOLESE.

Witnesses:

B. BOYD,
R. COBAIN.