

No. 697,659.

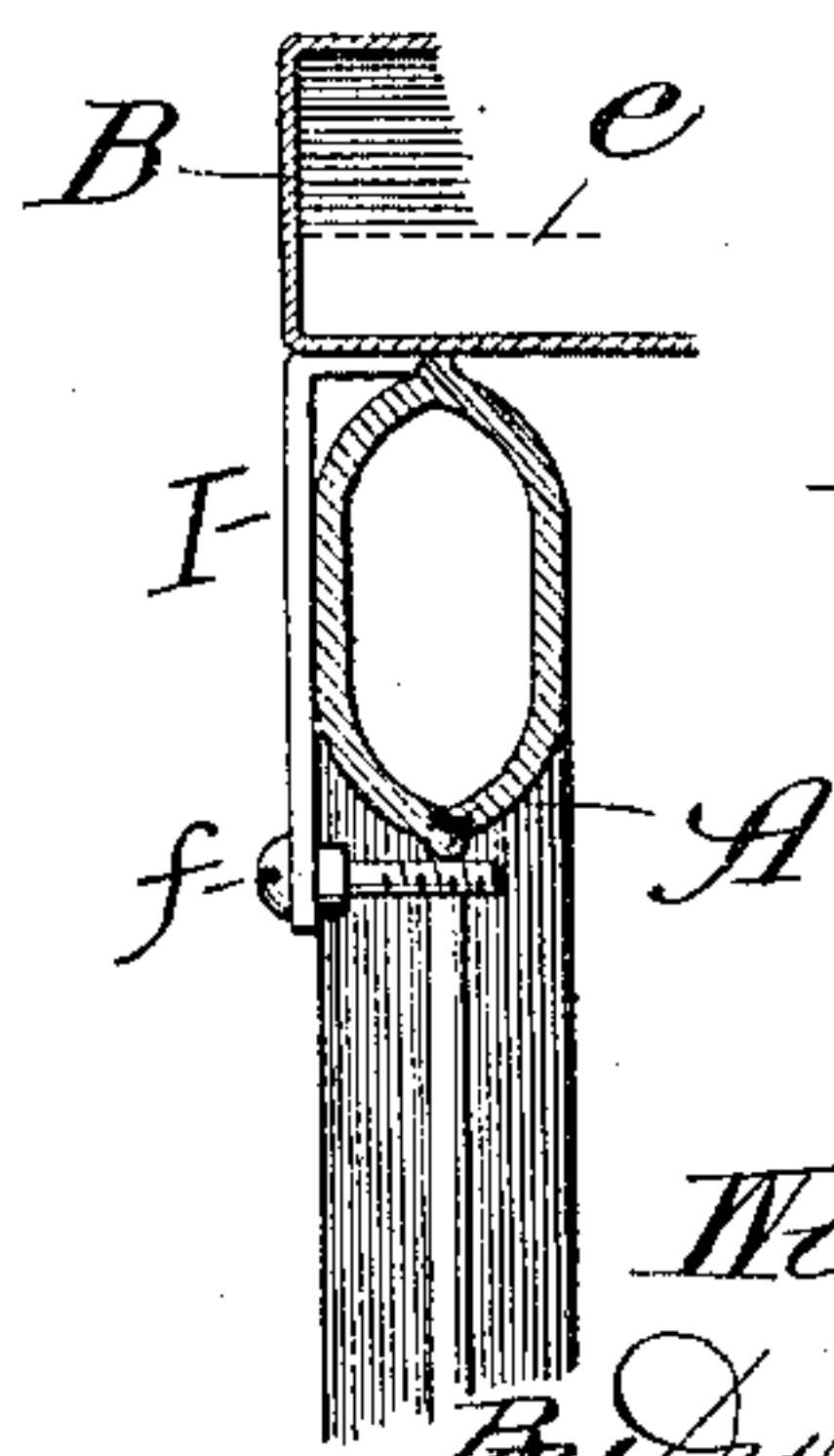
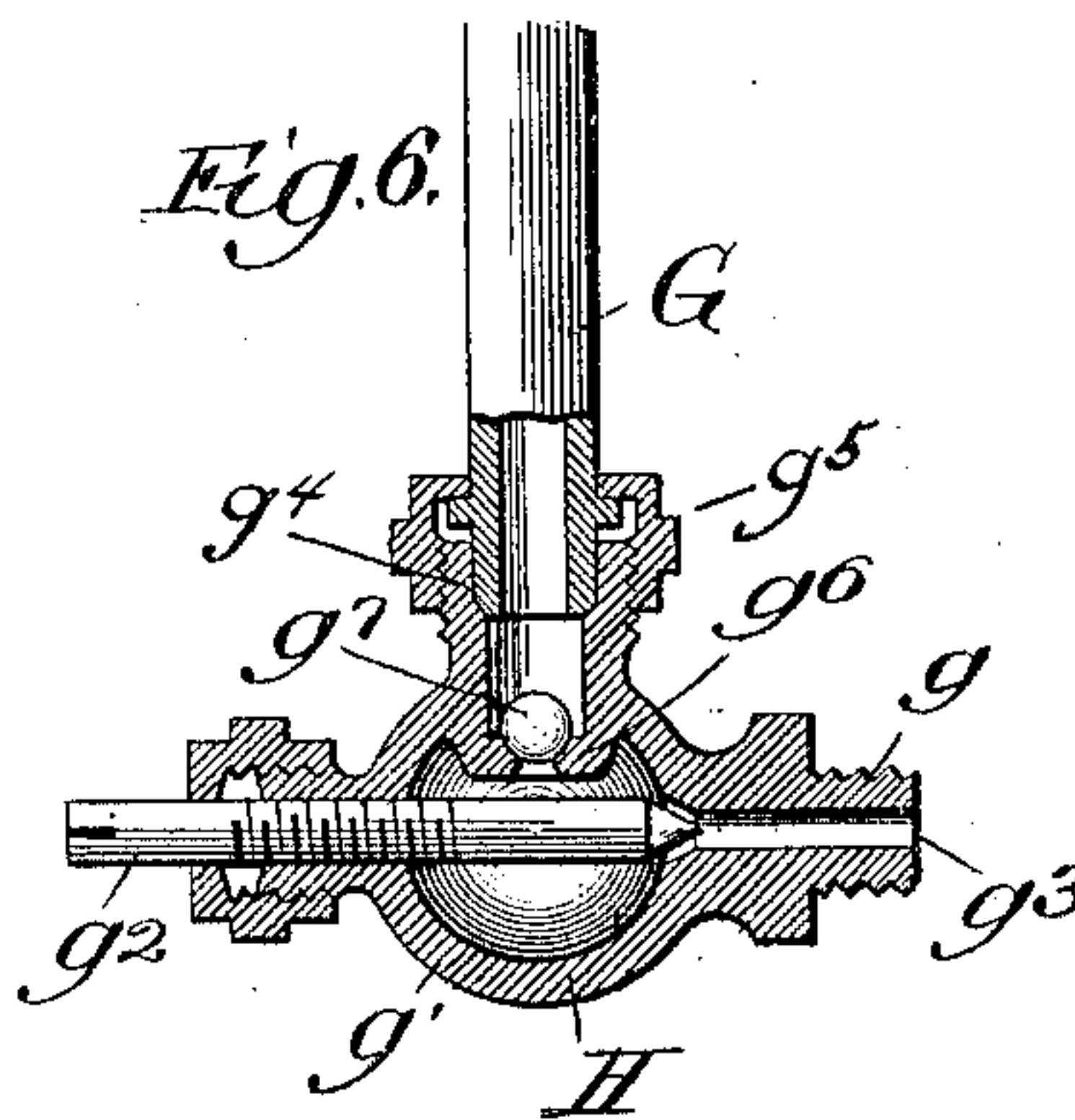
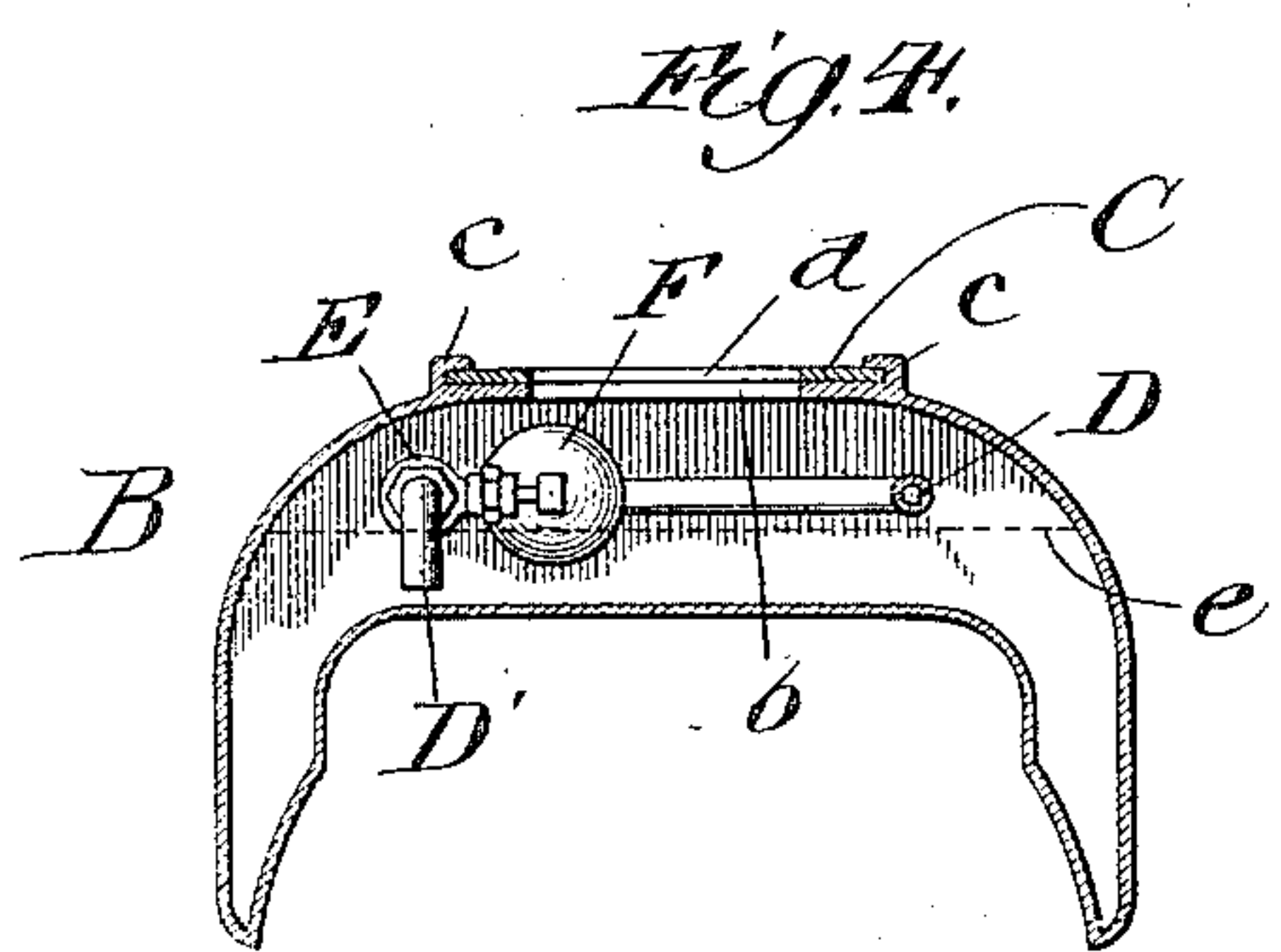
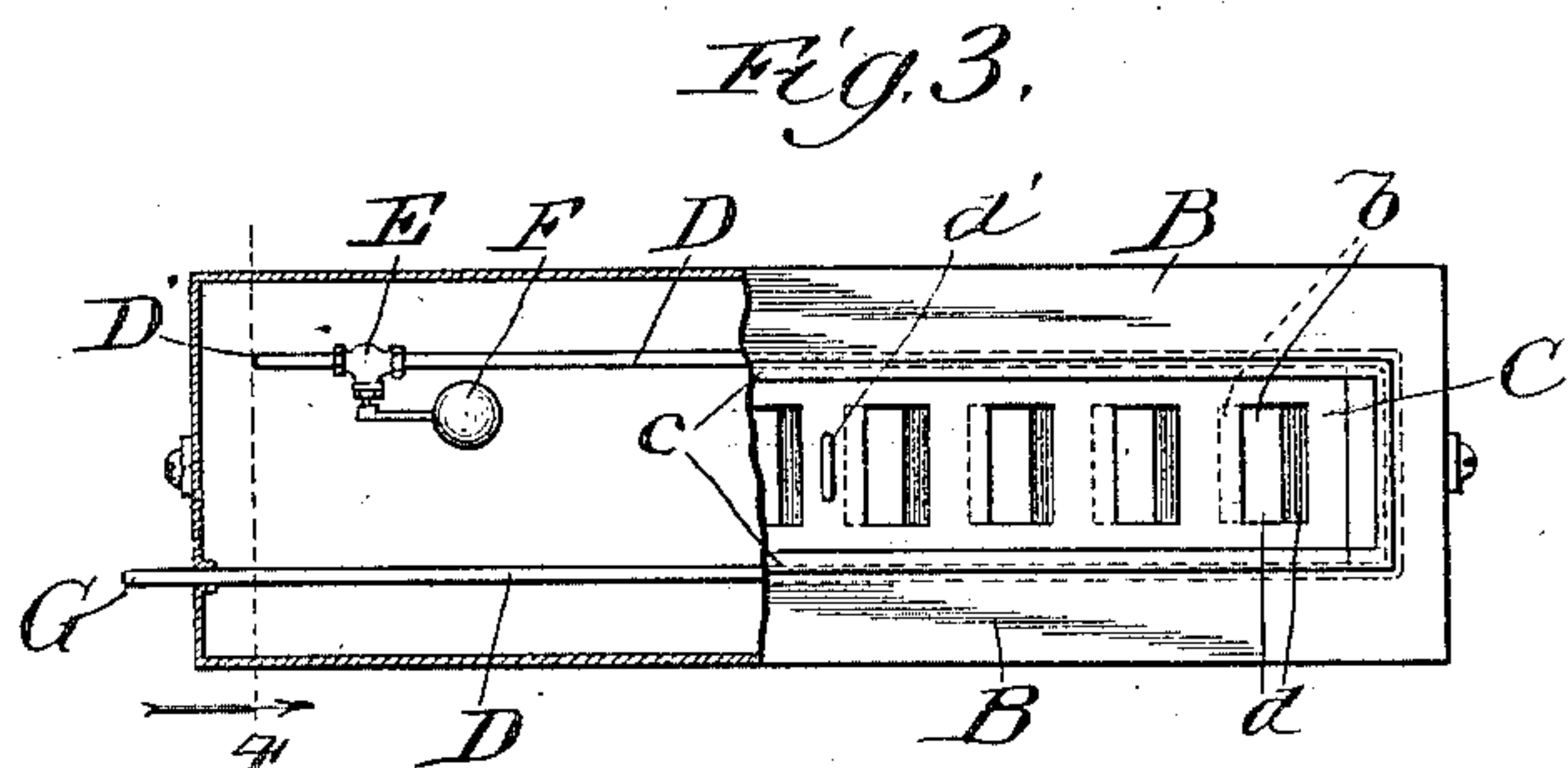
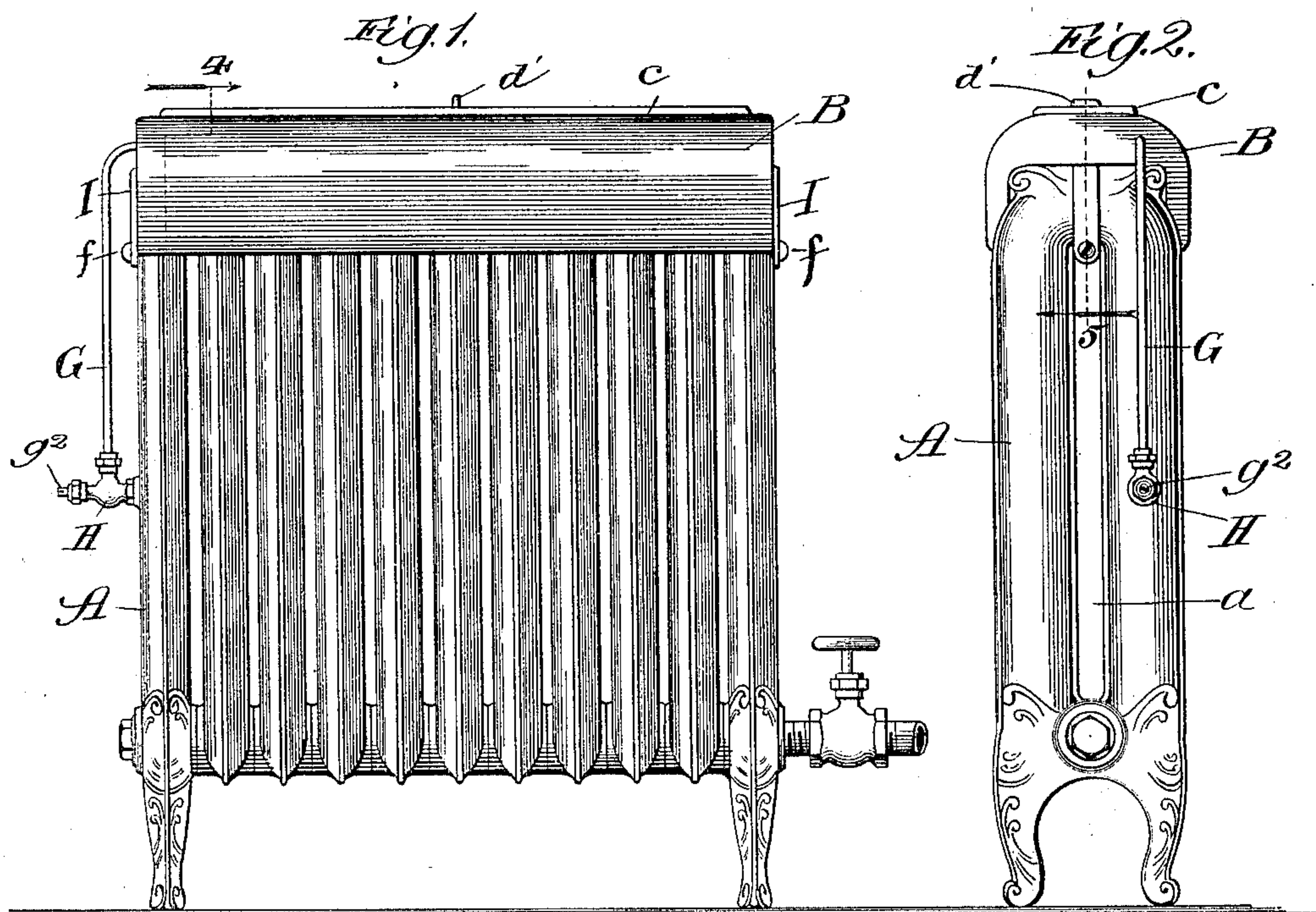
Patented Apr. 15, 1902.

W. W. PRATT.

AUTOMATIC AIR MOISTENING APPARATUS.

(Application filed June 26, 1899. Renewed Sept. 13, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

WILLIAM W. PRATT, OF CHICAGO, ILLINOIS.

AUTOMATIC AIR-MOISTENING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 697,659, dated April 15, 1902.

Application filed June 26, 1899. Renewed September 13, 1901. Serial No. 75,346. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. PRATT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Automatic Air-Moistening Apparatus, of which the following is a specification.

My invention relates particularly to an automatic air-moistening apparatus for attachment to radiators.

My object is to provide improved apparatus of this character capable of receiving steam from a radiator or other source of supply and condensing it in a vessel open to the atmosphere, the supply being automatically regulated.

In its preferred form the water receptacle or evaporator is shaped to rest stably on top of a radiator, and its supply tube or pipe is in communication with the radiator through a valved union or connection, which replaces the commonly-used vent of the radiator.

In the accompanying drawings, Figure 1 is a view in side elevation of a radiator equipped with my improved moistening apparatus; Fig. 2, a view in end elevation of the same; Fig. 3, a plan view, partly in section, of the apparatus; Fig. 4, an enlarged vertical transverse section, as indicated at line 4 of Fig. 1; Fig. 5, an enlarged broken vertical longitudinal section, as indicated at line 5 of Fig. 2; and Fig. 6, a detail of the valved union or connection.

A represents a radiator of common construction provided with a central longitudinal air-space *a*; B, a water vessel or evaporator provided with a longitudinally hollowed or concaved bottom conforming to the radiator-top on which it rests and provided also with a top having a series of openings *b*, flanked by guide-strips *c*; C, a slidable cover moving in the guides *c* and provided with openings *d* and with a lug or knob *d'*; D, a horizontally-disposed pipe within the vessel B, preferably above the water-level *e* and provided with a downturned end *D'*, which extends beneath the water-level; E, a plug-valve controlling the outlet from said pipe; F, a float for operating said valve; G, an extension of the pipe D, projecting through an end of the vessel B and downturned, as shown; H, a valved union joining the pipe G and an end section of the

radiator, and I downward extensions at the ends of the vessel B, provided with screws *f*, projecting into the air-space *a* beneath the upper parts of the end sections of the radiator.

The union H, Fig. 6, is provided with a nipple *g* of suitable size where desired to fit the vent-hole of the radiator. It is also provided with an enlargement *g'*, through which projects a screw-valve *g²* opposite the nipple *g* and controlling the passage *g³* of the latter, and further with an upward extension *g⁴*, connected, by means of a flanged nut *g⁵*, to the pipe G, said part being in turn provided internally with a valve-seat *g⁶*, receiving a ball-valve *g⁷*.

When the valve *g²* is open, steam passes through the pipe G D and condensing collects in the evaporator, the float F being of sufficient weight to open the valve E when not buoyed up by the water. As the water rises, the float gradually closes the valve and at a predetermined position closes the discharge entirely. The slide or cover C may be moved to bring the openings *d* into more or less perfect registration with the openings *b*, thereby to regulate the amount of evaporation. The purpose of the ball-valve is to prevent siphonage in case of a vacuum in the radiator. The purpose of having the pipe end project beneath the normal water-level is to prevent noise of drippage.

Changes in form and location of parts may be made without departure from my invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. In apparatus of the character described, the combination with a radiator, or the like, an evaporator, and a fluid-passage connecting said evaporator and radiator, of means for automatically regulating the flow of fluid through said passage, comprising a valve, and a float within said evaporator connected with and operating said valve, substantially as and for the purpose set forth.

2. In apparatus of the character described, the combination with a radiator, or the like, and an evaporator, of a pipe within said evaporator and in communication with said radiator and serving to conduct fluid from the radiator, a valve controlling the discharge from said pipe, and a float within said

evaporator for moving said valve, substantially as and for the purpose set forth.

3. In apparatus of the character described, the combination with a radiator, or the like, of an evaporator, a pipe within said evaporator above the water-level and in communication with said radiator and serving to conduct fluid from the radiator, a valve controlling the discharge from said pipe, and a float for moving said valve to close it when the water reaches a predetermined level, substantially as and for the purpose set forth.

4. The combination with a radiator, and an evaporator vessel resting on the top thereof and secured thereto, of a pipe within said evaporator and projecting past an end of the radiator, an automatically-operated valve connected with said pipe, and means of communication between said pipe and radiator end, substantially as and for the purpose set forth.

5. The combination with a steam-radiator, or the like, and an evaporator vessel, of a pipe within said vessel having its discharge end below the normal water-level and in communication at its opposite end with said radiator, an automatically-controlled valve for regulating the discharge from said pipe and determining the normal water-level, and a check-valve in the course of said pipe for preventing back siphonage in case of a vacuum in said radiator, substantially as and for the purpose set forth.

6. The combination with a radiator, of an evaporator vessel, a pipe communicating with said vessel and having its discharge end beneath the water-level of said vessel, a float-controlled valve regulating the steam-flow, and a union H joining said pipe to said radiator and provided with a check-valve g^7 and screw-valve g^2 , substantially as and for the purpose set forth.

7. The combination with a radiator of the form described, of an evaporator vessel having a longitudinally-hollowed bottom conforming to the radiator-top and provided at its ends with downward extensions for securing it to the radiator, screws f projecting inwardly from said extensions into the air-space a of the radiator, a pipe within said vessel communicating with said radiator, and a valve for controlling the steam-passage through said pipe, substantially as and for the purpose set forth.

8. The combination with a radiator A, of an evaporator vessel B provided at its top with perforations and guides, a slide provided with perforations capable of registering with said first-named perforations, and valve-controlled pipe communication between said vessel and radiator, substantially as and for the purpose set forth.

WILLIAM W. PRATT.

In presence of—

D. W. LEE,

R. I. SPENCER.