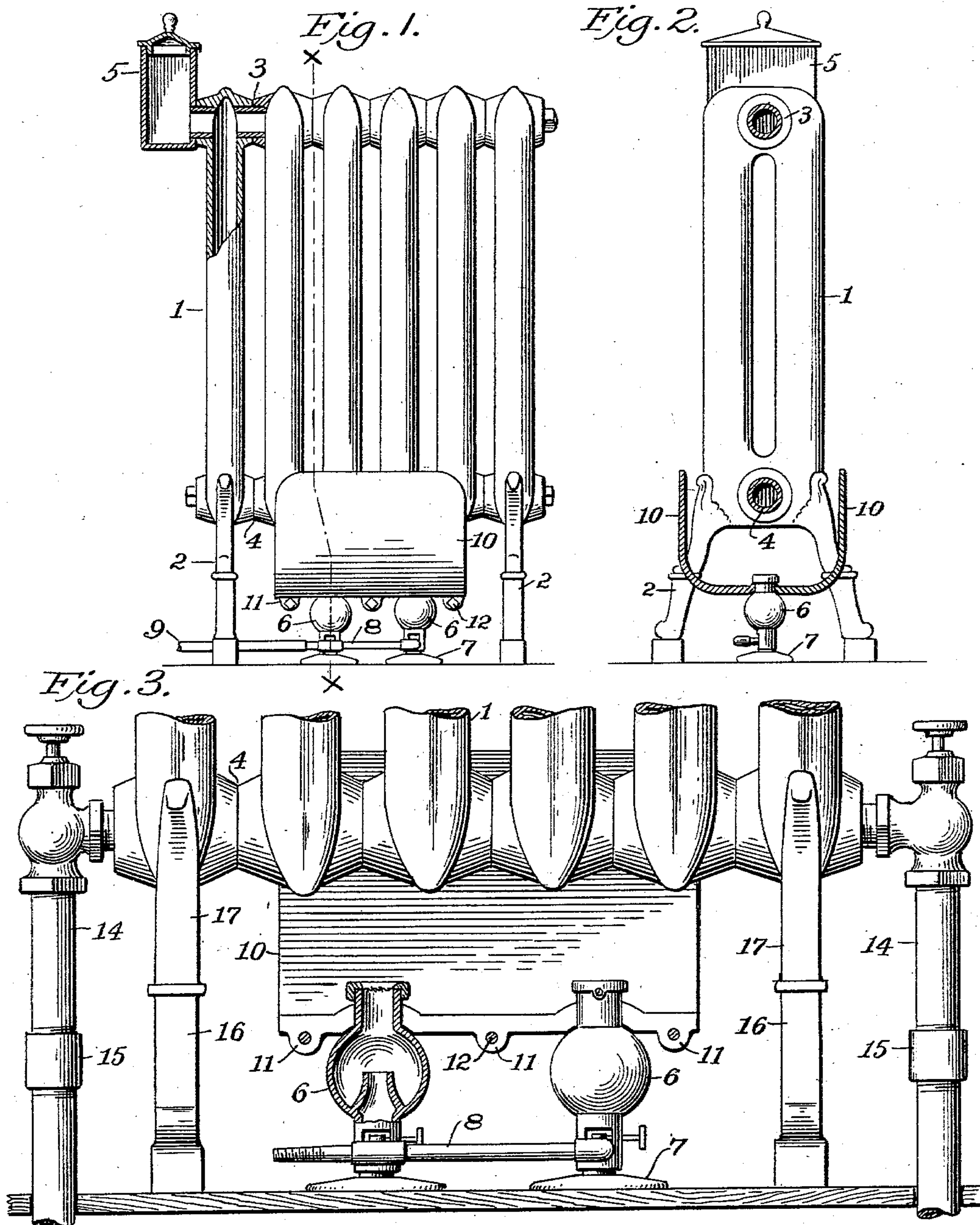


No. 752,987.

PATENTED FEB. 23, 1904.

J. J. LAWLER.
HOT WATER RADIATOR.
APPLICATION FILED OCT. 23, 1902.

NO MODEL.



WITNESSES:

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JAMES J. LAWLER, OF MOUNT VERNON, NEW YORK.

HOT-WATER RADIATOR.

SPECIFICATION forming part of Letters Patent No. 752,987, dated February 23, 1904.

Application filed October 23, 1902. Serial No. 128,398. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. LAWLER, a citizen of the United States, residing at 314 South Third avenue, Mount Vernon, county of Westchester, and State of New York, have invented a new and useful Improvement in Hot-Water Radiators, of which the following is a specification.

My invention relates to hot-water radiators which may be independent or transitory—that is, capable of being moved about from one location to another—and also to radiators connected with the hot-water service in a house and placed stationary, the object being to so arrange the radiator that the water contained therein can be heated by gas in such a manner that it will be operative and effective.

In late spring and early fall it is frequently desired to heat one or more rooms only before the boiler or heating apparatus in the cellar is started for the whole house. My invention accomplishes this purpose.

Reference being had to the accompanying drawings, Figure 1 is a side elevation, partly in section. Fig. 2 is a sectional end view on line X X of Fig. 1. Fig. 3 is an enlarged side view of an altered hot-water radiator, showing detail of burners and shield.

Similar reference-numbers refer to similar parts in the several views.

I will first describe my improved transitory or independent radiator, Figs. 1 and 2. 1 is a radiator of conventional make having legs 2 somewhat longer than is usually had. The sections of the radiator have coincident adjacent openings at top 3 and bottom 4, the sections being connected by nipples, as usual. When thus connected, an even circulation of the water is maintained. 5 is an expansion-tank connected up near the top of the radiator, as shown. 6 6 are atmospheric gas-burners, preferably mounted on a stand or stands 7 and connected up together by a gas-pipe 8. 9 is a gas-tubing to supply the gas from a fixture. (Not shown.) 10 is a protecting-shield in halves, both being exactly alike and being curved outwardly and upwardly, so as to extend on opposite sides of the radiator to protect the flame against drafts, to give direction to the flame, and also to prevent any article,

such as a lady's dress, from coming in contact with the flame. This shield is provided at the meeting edges of the sections thereof with lugs 11, through which screws 12 may be passed and the two halves of the shield fastened directly on the gas-burners, openings being provided for the passage of the upper part of the burners. This shield may be fastened to the radiator in any suitable way without departing from the spirit of my invention; but I prefer to fasten it directly on the burners.

I will now describe my invention as applied to a stationary radiator connected with the pipes of a hot-water-heating system. In order to get the desired height for the atmospheric burners, I disconnect the radiator 1 and insert a lengthening-piece 14 and coupling 15, as shown in Fig. 3. I place an extra leg 16 under each of the two legs 17 on each side of the radiator, set the radiator on these legs, and connect up the service as it was before the radiator was disconnected. When the required number of radiators are so altered as described, the pipes and the entire system are filled with cold water in the same manner as if the entire house-service was to be put in operation. The gas-burners 6 and protecting-shield 10 are then placed at each altered radiator, the burners are connected with the gas-supply pipe, and my improved radiators are ready for operation.

The operation is as follows: When the independent radiator has been filled with cold water via the expansion-tank, enough water should be used so that it will just cover the bottom of the tank. The gas is turned on and the burners are lighted. The heat warms the water contained in the radiator, and as it continues to heat it begins to circulate and slowly fills the expansion-tank.

The operation of the stationary radiator is substantially the same, except that there is no expansion-tank on the radiator, the water circulating within the radiator, the valves being left open and any expansion of the water being forced out through the connecting-pipes into the service and finally into the expansion-tank connected with the house system.

The advantages of my improved radiators are that the gas-burners throw out consider-

able heat and of themselves will take the chill off a dwelling-room. The shield gets quite hot and also radiates heat, making a most excellent foot-warmer or "shin-toaster," and
5 when an expansion chamber or tank is used on the radiator the steam or vapor rising from it moistens the air—an important hygienic feature.

I do not limit myself to any specific kind or
10 style of atmospheric burner, but show an improved burner, for which I have filed an application for Letters Patent on April 21, 1902, Serial No. 103,843, this burner I find answering all purposes.

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

1. The combination with the radiator of a burner arranged beneath the same, a shield
20 formed in two sections, having their inner edges snugly receiving the burner and said

sections being curved outwardly and upwardly therefrom so as to extend on opposite sides of the radiator, apertured lugs formed integral with the inner edges of said sections, and
25 a securing means arranged in the apertures of said lugs.

2. In combination with the radiator and the legs 16 of the stands 7 and the burners 6 mounted thereon, said stands and burners raised directly beneath the said radiator and between
30 the said legs, and the shield secured to said burners and extending on opposite sides of the radiator.

In testimony whereof I have signed my name
35 to this specification, in the presence of two subscribing witnesses, this 22d day of October, 1902.

JAMES J. LAWLER.

Witnesses:

ANTHONY P. ZOESCH,
GASTON E. CORDEAUX.