Jan. 3, 1933. J. E. GANNON ET AL 1,892,882

ELECTRIC RADIATOR

Filed Aug. 26, 1929

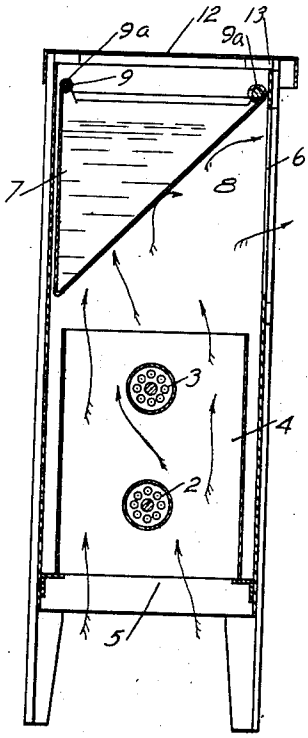


FIG. 1.

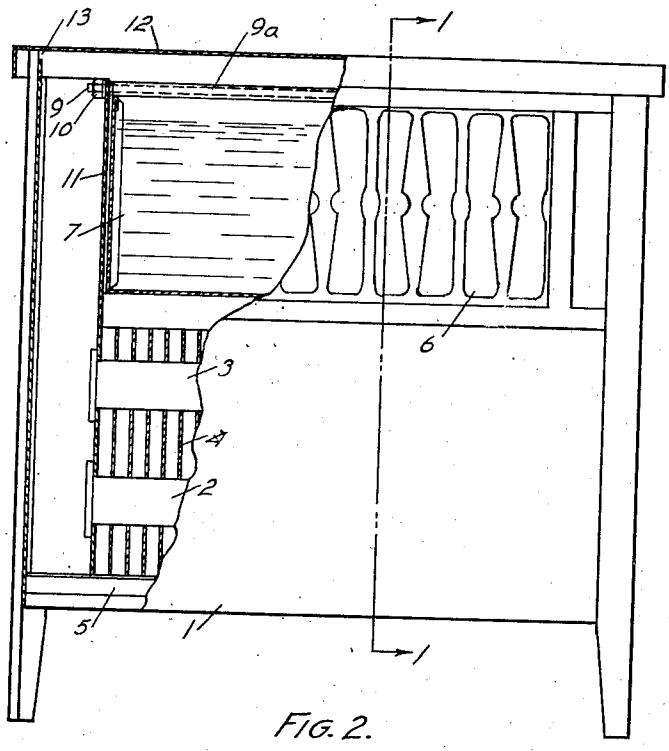


FIG. 2.

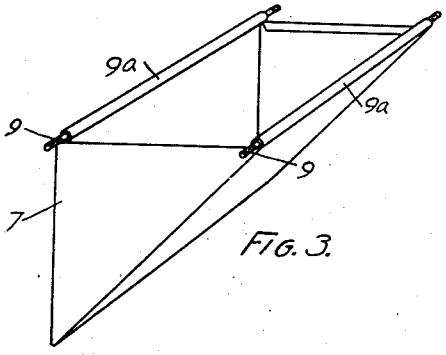


FIG. 3.

James E. Gannon
Joseph M. Hunter
INVENTORS

BY

ATTORNEYS.

Patented Jan. 3, 1933

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UNITED STATES PATENT OFFICE

JAMES E. GANNON AND JOSEPH M. WINTER, OF ERIE, PENNSYLVANIA, ASSIGNORS TO AMERICAN ELECTRIC HEATING COMPANY, OF ERIE, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

ELECTRIC RADIATOR

Application filed August 26, 1929. Serial No. 388,400.

Electric radiators are preferably arranged to provide a comparatively rapid circulation through the heat transferring surfaces. These surfaces are ordinarily of much less area than the ordinary steam radiator but at a considerably higher temperature. It is desirable in radiators to provide a humidifier in order to provide moisture with the heat and in the present invention this is made somewhat more efficient by using the bottom of the humidifier, or liquid receptacle, as a deflector for the circulating air as it becomes highly heated from the electrically heated surfaces. This assures an efficient temperature for the humidifier and diffuses some of the heat from the air. Features and details of the invention will appear from the specification and claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing as follows:—

Fig. 1 shows a section on the line 1—1 in Fig. 2.

Fig. 2 a front elevation, partly broken away to indicate the construction.

Fig. 3 a perspective view of the liquid receptacle.

1 marks the case. This is ordinarily formed of sheet metal enclosing the heating element and the humidifier. 2 and 3 are electrically actuated heating elements. The heat from these elements is taken up by plates 4. These plates are spaced apart at intervals forming passages for the ready flow of air coming in through an opening 5 at the bottom of the radiator and delivered to the room through discharge openings 6 in the upper front face of the radiator case.

A liquid receptacle 7 has an inclined lower wall 8 against which the air impinges and from which it is deflected through the openings 6. The air at this comparatively high temperature gives to the liquid in the receptacle an efficient temperature to provide the desired vapor from the room and at the same time assists in the diffusion of the heat taken up by the air.

The liquid receptacle is secured by rods 9 which extend through rolled edges 9a and plates 11 of the frame carrying the heating element and the humidifier. Nuts 10 are arranged on the ends of the rods to secure them in place. This frame is preferably removable from the case as a unit to facilitate servicing the radiator.

A cover 12 has an opening 13 between the cover and the upper edge of the case through which vapor from the liquid may be discharged to the room. The cover is removable for refilling the receptacle.

What we claim as new is:—

1. In an electric radiator, the combination of a case having air circulated from its heating surfaces discharging from the upper side face of the case; an electric heating element in the case; a liquid receptacle arranged in the top of the case having an inclined lower wall in the path of the air, said wall deflecting the air coming from the heating element to the discharge opening; rods extending through the upper edges of the liquid receptacle; and a removable frame carrying the receptacle and element having side walls receiving the rods.

2. In an electric radiator, the combination of a case having air circulated from its heating surfaces discharging from the upper side of the case; an electric heating element in the case; a liquid receptacle arranged in the top of the case, said receptacle having a deflector directing the air rising from the element through the upper side face of the case; and a removable frame in the case in which is mounted the receptacle and the electric heating element, said frame with the receptacle and heating element being removable as a unit from the case.

In testimony whereof we have hereunto set our hands.

JAMES E. GANNON.
JOSEPH M. WINTER.