Feb. 17, 1948. H. CAPRA 2,436,288

ELECTRICALLY HEATED CONVECTION RADIATOR

Filed April 27, 1946

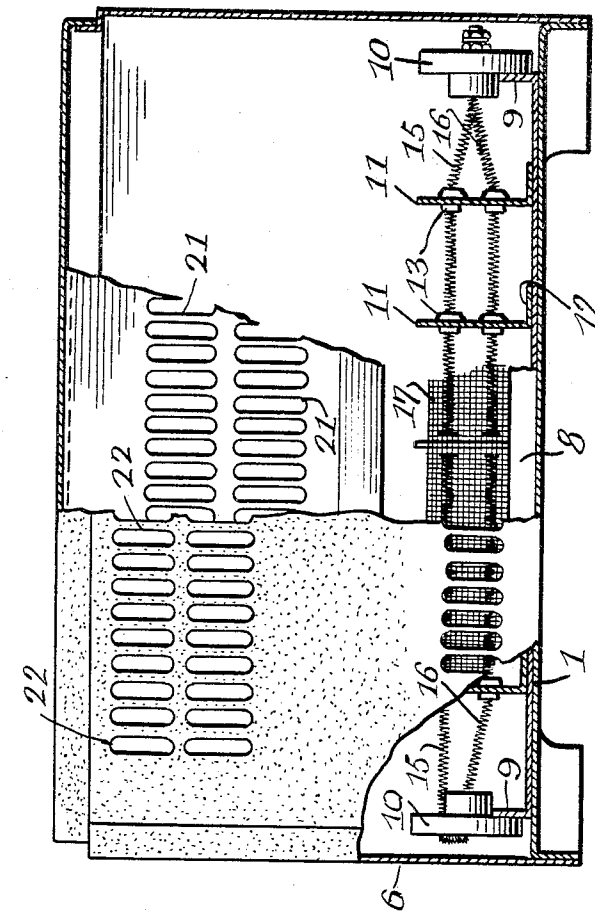


Fig. 2

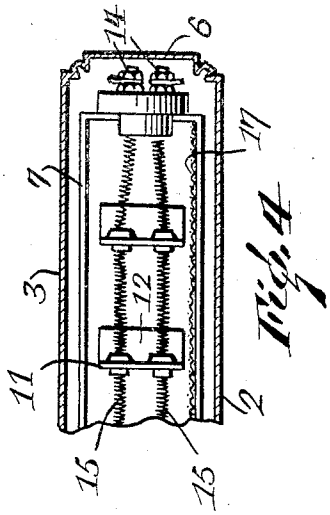


Fig. 4

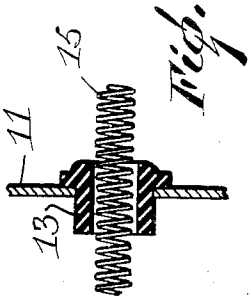


Fig. 3

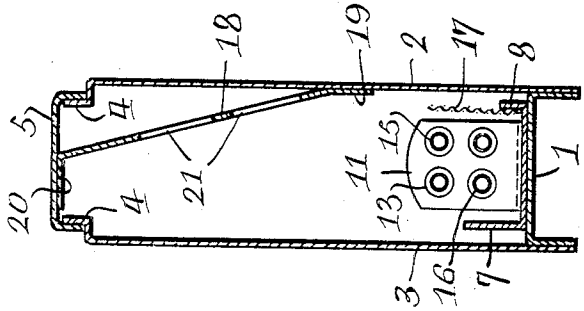


Fig. 1

Inventor:
Horace Capra
By Albert Jacobs
Attorney

Patented Feb. 17, 1948

2,436,288

UNITED STATES PATENT OFFICE

2,436,288

ELECTRICALLY HEATED CONVECTION RADIATOR

Horace Capra, Montreal, Quebec, Canada

Application April 27, 1946, Serial No. 665,427
In Canada November 29, 1945

4 Claims. (Cl. 219—38)

1

The present invention pertains to a novel electric radiator designed particularly for local and supplemental heating, although the entire heating system of a building may consist of a number of such radiators.

The principal object of the invention is to provide an inexpensive and efficient device of this character made of a relatively small number of simple and inexpensive parts. The device comprises a housing having a pair of spaced insulating disks between which are arranged a number of brackets carrying an appropriate number of insulating bushings. One of the disks carries a pair of binding posts. Two resistance elements extend from one of the posts through some of the bushings and the opposite disk and back through other bushings to the remaining binding post. A screen is mounted in front of the resistance elements to absorb and radiate the heat.

Another feature of the invention consists in the provision of an apertured baffle adjacent to the forward wall of the housing for retarding the flow of the heated air. The forward wall is also apertured opposite the baffle to permit escape of the heated air into the room. The baffle is so positioned with respect to the apertures in the forward wall as to retard the heated air and maintain it for a longer period of time at the lower levels where it is more useful.

The invention is fully disclosed by way of example in the following description and in the accompanying drawings in which:

Figure 1 is a transverse vertical section of the device;

Figure 2 is a front elevation of the device, broken away in parts to show several vertical planes;

Figure 3 is a detail vertical section; and

Figure 4 is a detail plan section of the invention.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

In Figures 1 and 2 is shown an inverted U-shaped base 1 having vertical front and rear walls 2 and 3 respectively. The upper edges of the walls are flanged inward at 4 and have a top plate or cover 5 fitted thereon. End walls 6 join the walls 2 and 3 and are fastened thereto in any suitable manner. It will be understood, however, that the housing as described is completed only after the internal parts have been assembled, as will now be set forth.

Upon the base 1 is mounted a longitudinally extending U-shaped member 7 having one of its

2

sides 8 shorter than the other, for a purpose that will presently be described. The ends 9 of this member are also turned up, as shown in Figure 1, and support insulating disks 10. Between the disks a series of vertical brackets 11 is suitably fastened to the bottom of the member 7. These brackets may, for example, have horizontal bases 12 welded or otherwise secured to the member 7. Each bracket mounts four insulating bushings 13 aligned horizontally and vertically, as shown in Figure 2, for a purpose that will presently appear.

One of the disks 10 carries a pair of binding posts 14 as shown in Figures 1 and 4. A pair of resistance wires 15 and 16 have one end connected to one of the posts, are threaded through some of the bushings 13 and the opposite disk 10, are returned through other bushings 13 and finally have their remaining ends connected to the remaining post 14. Each wire consists of two horizontal strands disposed in a given horizontal plane as shown in Figure 4. Thus, the upper wire 15 passes through the upper bushing 13, and the remaining wire 16 passes through the lower bushings 13. The left-hand disk 10 in Figure 1 also has four apertures to permit threading both wires back and forth therethrough. The wires may consist of any suitable resistant metal and are preferably turned in a fine coil as shown.

To the shorter leg 8 of the member 7 is fastened a vertical screen 17 extending upwardly somewhat beyond the upper wire 15, as shown in Figure 1. The screen absorbs heat from the wires and radiates it more uniformly. An inclined baffle 18 has its lower end welded at 19 to the forward wall 2 and its upper end flanged horizontally at 20 along the cover 5, although it need not be directly attached thereto. The baffle 18 has two horizontal series of apertures 21 which permit the heated air to pass but at a retarded rate. The forward wall 2 also has two horizontal series of similar apertures 22 elevated somewhat from the apertures 21. The heated air, in following the irregular path thus provided, is retarded and thereby maintained at the comparatively lower levels where it is most useful.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.

What I claim as my invention is:

1. An electric radiator comprising a housing, a pair of spaced insulating members therein, brack-

ets mounted between said members, insulating bushings mounted in said brackets, binding posts on one of said members, resistance elements fastened to one of said posts, threaded through said bushings and the other disk and finally attached to the remaining post, and an angular baffle extending from the forward wall to the top of said housing, said baffle and forward wall being apertured.

2. An electric radiator comprising a housing, a pair of spaced insulating members therein, brackets mounted between said members insulating bushings mounted in said brackets, binding posts on one of said members, resistance elements fastened to one of said posts, threaded through said bushing and the other disk and finally attached to the remaining post, and an angular baffle extending from the forward wall to the top of said housing, said baffle and forward wall being apertured, the apertures in said baffle and wall being at different levels.

3. An electric radiator comprising a housing, a pair of spaced insulating members therein, brackets mounted between said members, insulating bushings mounted in said brackets binding posts on one of said members, resistance elements fastened to one of said posts, threaded through said bushing and the other disk and finally attached to the remaining post, and an angular baffle extending from the forward wall to the top of said housing, said baffle and forward wall being apertured, the apertures in said baffle being at a lower level than those in said wall.

4. An electric radiator comprising a housing, a pair of spaced insulating members therein, brackets mounted between said members, insulating bushings mounted in said brackets binding posts on one of said members, resistance elements fastened to one of said posts, threaded through said bushing and the other disk and finally attached to the remaining post, and an angular baffle extending from the forward wall to the top of said housing, said baffle and forward wall being apertured, the apertures in said baffle and wall being at different levels, and a screen in said housing forward of said elements.

HORACE CAPRA.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,679,841	Shaw	Aug. 7, 1928
1,730,203	Guest	Oct. 1, 1929
2,064,389	Smith	Dec. 15, 1936