

Jan. 5, 1932.

H. S. MELDAHL

1,839,986

WALL RADIATOR

Filed May 31, 1930

Fig. 1.

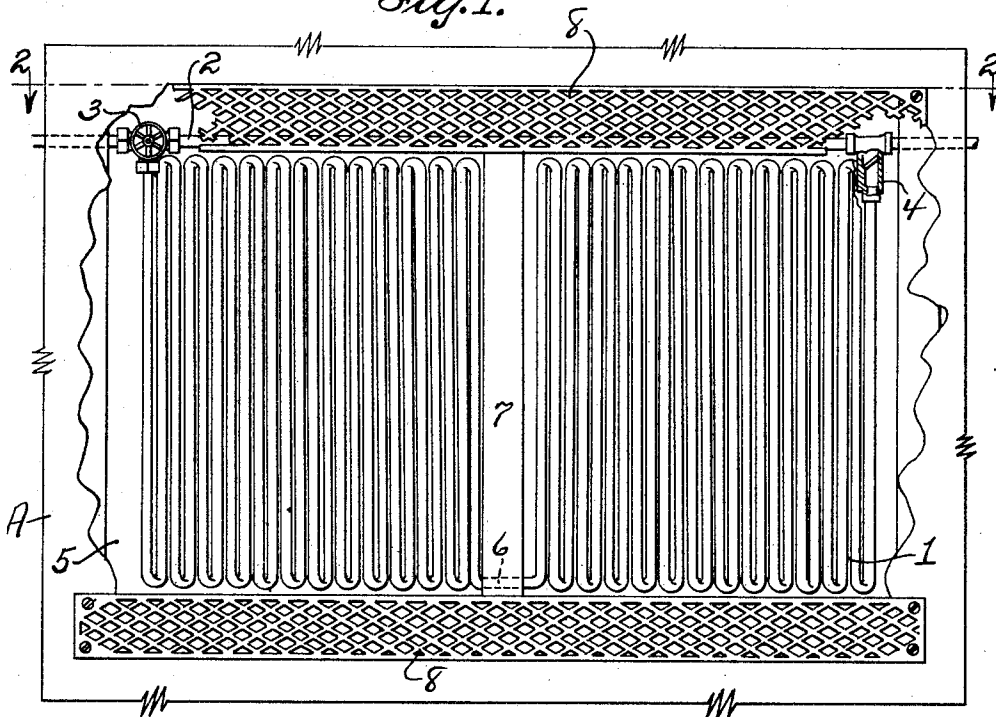


Fig. 2.

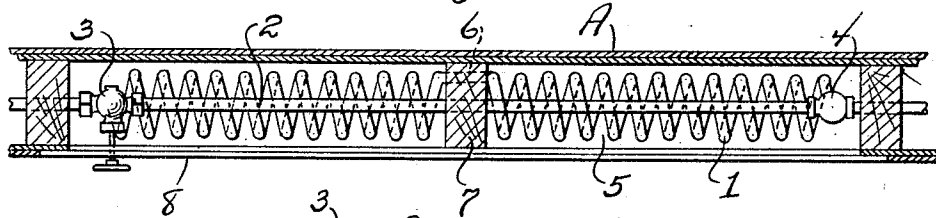
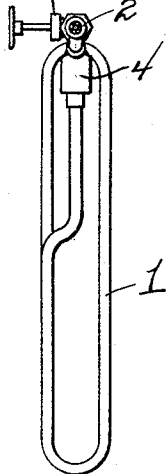


Fig. 3.



Horace S. Meldahl

INVENTOR

BY *Victor J. Evans*

ATTORNEY

UNITED STATES PATENT OFFICE

HORACE S. MELDAHL, OF NEW YORK, N. Y.

WALL RADIATOR

Application filed May 31, 1930. Serial No. 458,122.

This invention relates to a radiator for walls and other places, the general object of the invention being to form the coils of the radiator of oblong shape, with the side portions straight and staggered and their ends curved so that the device can be manufactured to sell at low cost and will occupy the minimum amount of space, with a by-pass having a valve therein for controlling the flow of the heating or cooling medium, whereby such medium can be passed through the radiator or through the by-pass when it is desired to cut off the radiator, or through both when it is desired to portion the temperature.

A further object of the invention is to so form the parts that the device can be placed in an opening in a wall or against a wall and the parts covered, with means for permitting air to enter the opening and pass therefrom whereby the air will be heated or cooled and thus heat the room or other place in which the device is used, and may be temperatured as desired.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a front view showing the device placed in an opening in a wall, with the covering means removed and showing the check valve in section.

Figure 2 is a section on line 2—2 of Figure 1.

Figure 3 is an end view of the device.

As shown in these views, the radiator consists of tubing 1 wound to produce an oblong coil, of various shapes and sizes the side portions of which may be straight and the end portions may be curved, with the side portions at one side staggered in relation to the side portions at the opposite side, so as to be of narrow width as clearly shown in Figure 2.

The side portions are also diagonally arranged, as shown in Figure 1.

A by-pass pipe 2 is connected with the ends of the coil and extends straight across the radiator, with a valve 3 arranged at the junction of the by-pass with the front end of the coil and a valve or check valve 4 is arranged at the point of connection of the rear end of the coil with the by-pass. This check valve or second valve acts to prevent water passing through the by-pass from flowing back into the coil and the valve 3 is so constructed and arranged that in one position, it will permit the heating or cooling medium to pass through the coil without passing through the by-pass. In another position, it will cause all the fluid to pass through the by-pass without entering the coil and in intermediate position, some of the heating medium will pass through the by-pass and some through the coil, in varied proportions according to the position of the valve. Thus this valve will control the flow of heating medium through the coil so that the temperature of the room or other place in which the device is located can be regulated.

Figures 1 and 2 show the device arranged in an opening 5 arranged in the wall A, with a part 6 of the coil passing through a hole cut in a studding 7. When the device is thus placed, a suitable covering can be placed over the device, with grills 8 at the top and bottom of the opening for permitting a circulation of air through the openings so that said air will be heated or cooled by the device and thus heat or cool the room. A small fan or ordinary construction can be placed in or behind the lower grill for increasing air circulation.

Thus it will be seen that I have produced a radiator which can be manufactured to sell at low cost and one which will occupy but little space, while producing the maximum amount of heat or cold.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the com-

bination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

- 5 A radiator of the class described comprising a coil, a by-pass connected with the ends of the coil, a valve at the junction of the by-pass with the front end of the coil for permitting the fluid to pass through either
10 the radiator or the by-pass or both and a check valve at the point of connection of the rear end of the coil with the by-pass, said valve first named being operable by dividing flow, for varying relative pressures through
15 the by-pass and coil respectively, on opposite sides of the second named valve.

In testimony whereof I affix my signature
HORACE S. MELDAHL.

20

25

30

35

40

45

50

55

60

65