

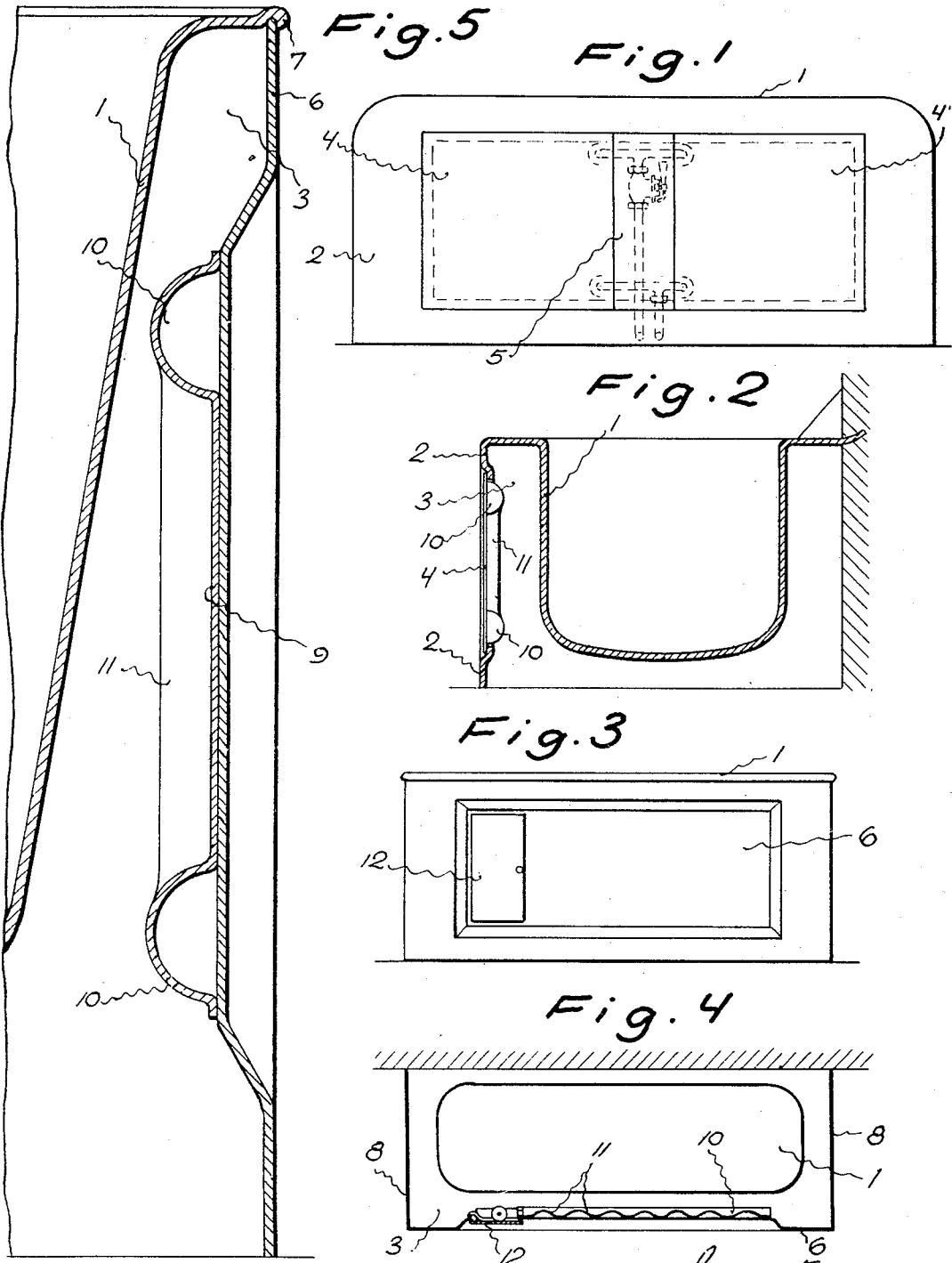
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RADIATOR ATTACHMENT FOR BATHTUBS

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RADIATOR ATTACHMENT FOR BATHTUBS

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3 Claims. (Cl. 4—1)

The present invention relates to radiator attachments for bath tubs. It is already known to provide a bath tub of the apron wall type with a radiator attachment for heating the bath room, which comprises a heat radiator inserted between a grate like portion of the apron wall and the inner wall of the tub, in order to utilize the space between the said walls for receiving the radiator, whereby the space otherwise necessary for mounting the radiator on a wall of the bathroom is saved and a person standing in front of the bath tub will directly feel the heat radiating from the radiator. Whilst, however, in the known radiator attachment a heat insulating shield is interposed between the radiator and the inner wall of the bath tub and by far the greater part of the heat emitted by the radiator is absorbed directly by the air of the bathroom, according to the present invention the air in the relatively narrow, closed space between the apron wall and the inner wall of the bath tub and, consequently, the bath tub itself is heated to a relatively higher temperature than the air in the bathroom as a result of a special construction and arrangement of the radiator. The object of this construction and arrangement of the radiator is to eliminate the discomfort of the walls of the bath tub feeling cold. The bath tub is practically never completely filled with water, and it is a well-known fact that usually the walls of the bath tub, especially the portions thereof located above the water level, far from reaching the same temperature as the hot water poured into the bath tub reach a materially lower temperature only and, consequently, feel cold and uncomfortable to the bather. In order to make it possible to utilize one and the same heat radiator for heating the bathroom and also for heating the bath tub itself to its full extent sufficiently for eliminating the said discomfort the heat radiator, according to the present invention, comprises a platelike body forming a portion of the closed apron wall of the bath tub and being provided with internal channels to allow for circulation of a heating fluid therethrough, whereby the relatively narrow space between the closed apron wall and the inner wall of the bath tub and, consequently, the entire bath tub itself will be heated to a relatively high temperature through the rear side of the said plate like heating body, whilst the air of the bathroom is heated through the front side of the said body. It has been found that the heat radiator, when constructed and arranged in this manner and given an adequate size for heating the air in the bath-

room to an appropriate temperature, is capable of simultaneously heating the bath tub itself sufficiently for eliminating the discomfort referred to above.

A further advantage of the construction and arrangement of the radiator according to the present invention is to be seen in the prevention of the heated water poured into the bath tub from cooling too rapidly.

Preferably the radiator is constructed in the form of an apron wall portion having a smooth front side and a corrugated rear side formed by corrugated sheet metal welded to the rear side of a smooth metal sheeting forming the apron wall of the bath tub.

The invention is illustrated in the accompanying drawing where:

Fig. 1 is a front elevation of a bath tub provided with a heat radiator attachment according to one embodiment of the invention.

Fig. 2 is a cross sectional view of Fig. 1.

Fig. 3 is a front elevation of a bath tub provided with a heat radiator attachment according to another embodiment of the invention.

Fig. 4 is a horizontal section of Fig. 3.

Fig. 5 is a vertical cross section on an enlarged scale of the bath tub illustrated in Figs. 3 and 4.

Referring to Figs. 1 and 2 the bath tub 1 may be cast of metal or any other suitable material. The bath tub is provided with an apron wall 2 which may be cast integral with the bath tub proper. Between this apron wall 2 and the inner wall of the bath tub 1 there is formed a closed space 3 encircling the entire bath tub. The front apron wall 2 is provided with an opening, and a radiator attachment comprising a plate like structure is fitted into this opening so as to form a portion of the front apron wall of the bath tub. The radiator proper may be divided into two interconnected parts 4 and 4' separated by an intermediate hinged door 5 which, when closed, has its front side flush with the smooth front side of the adjacent radiator parts 4, 4'. The radiator valve for controlling the supply of the heating fluid to the interconnected radiator parts 4, 4' is located behind the door 5 so as to be readily accessible when opening the said door.

Each of the radiator parts 4, 4' consists of a smooth outer or front plate and a corrugated inner or rear plate welded to the inner or rear side of the front plate so that by means of the corrugations internal channels for the circulation of the heating fluid are formed in the plate like radiator structure. This construction of the radiator will

be fully understood from the following description with reference to Fig. 5 of the drawing.

The relatively narrow space 3 encircling the entire bath tub proper is closed or substantially closed so that the air therein may be heated through the corrugated rear side of the radiator structure to a temperature relatively higher than the temperature to which the air in the bathroom is heated directly through the front side of the radiator structure. It is to be noted that the rear side of the radiator structure is directly exposed to the air in the closed space 3 so that practically all the heat emitted from the rear side of the radiator structure will serve to raise or maintain the temperature of the air in the said space and the bath tub walls confining it.

In the embodiment of the invention illustrated in Figs. 3-5 the bath tub 1 is provided with a front apron wall 6 the upper edge of which is inserted into a groove in the underside of the projecting upper edge portion 7 of the inner front wall of the bath tub, and end apron walls 8 arranged in a similar manner. A corrugated metal sheet 9 welded to the inner side of the metal sheeting forming the apron wall 6 forms together with the latter a plate like radiator structure, as is most clearly illustrated in Fig. 5. The metal sheet 9 is provided with horizontal corrugations 10 adjacent its upper and lower edges and with vertical corrugations 11 interconnecting the horizontal corrugations 10, whereby channels allowing for the circulation of the heating fluid through the radiator structure are formed in a manner known per se. The inlet and outlet pipes for the heating fluid are connected to the channels formed by the horizontal corrugations 10. The apron wall 6 may be provided with a hinged door 12 for making the radiator valve readily accessible.

While it is to be understood that the radiator proper in the embodiment according to Figs. 1 and 2 of the drawing may be constructed in the same

manner as described with reference to Fig. 5, it is also to be understood that the construction of the radiator may be varied within the scope of the appendant claims without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent is:—

1. A radiator attachment for bath tubs of the apron wall type, comprising a plate like radiator structure associated with the apron wall and forming an imperforate portion thereof for radiating heat by its front side into the bath room and by its rear side into a substantially closed air space confined between the apron wall and the inner wall of the bath tub.

2. A radiator attachment for bath tubs according to claim 1, wherein the apron wall consists of a metal sheeting and the radiator structure is formed of a portion of said metal sheeting and a corrugated metal sheet welded to the inner side of said metal sheeting, the corrugations forming interconnected channels to allow for circulation of a heating fluid through the radiator.

3. A radiator attachment for bath tubs of the apron wall type in which the apron wall confines a relatively narrow, substantially closed space encircling the entire bath tub proper, a portion of said apron wall being constructed in the form of a plate like radiator structure having its inner surface directly exposed to the air within the said space and being provided with internal channels to allow for circulation of a heating fluid there-through, whereby the relatively narrow space between the apron wall and the inner wall of the bath tub and, consequently, the entire bath tub itself can be heated to a relatively high temperature through the rear side of the radiator structure, whilst the air of the bathroom is heated through the front side of the radiator structure.

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