

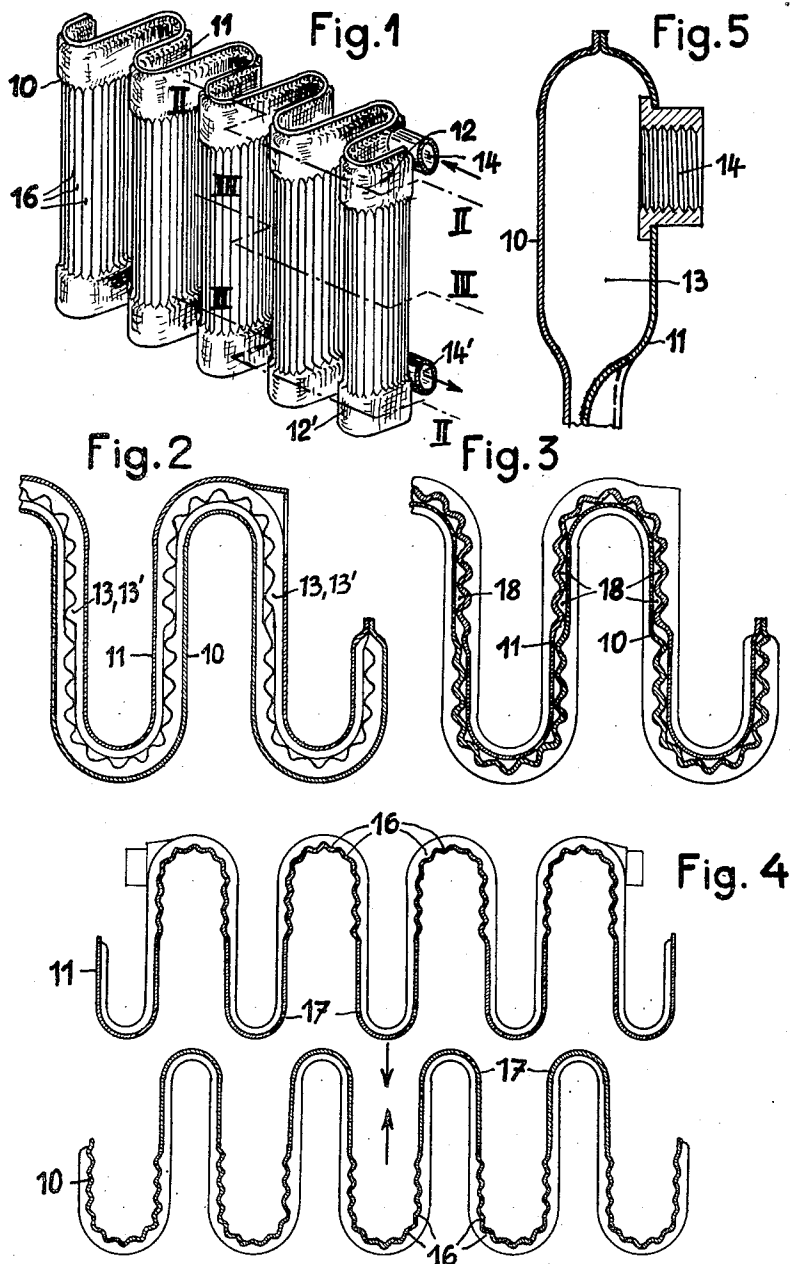
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RADIATOR IN CENTRAL HEATING INSTALLATIONS

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RADIATOR IN CENTRAL HEATING
INSTALLATIONS

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1 Claim. (Cl. 257—139)

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The object of the invention is a radiator for central heating installations, and the like, made from sheets, and in particular from steel sheets.

The invention aims at creating a radiator, the manufacturing costs of which as to materials required and wages paid is cheaper than the radiators known, owing to its reduced weight, its simplicity, and the small amount of materials required.

Besides, the radiator according to the invention presents the advantage that the ratio between its surface and its filling volume is a very favourable one, and that the heat available in the heating medium is more easily transmitted to the surrounding air, i. e. that its coefficient of efficiency is higher so that smaller dimensions are sufficient for attaining the same heating effect.

Moreover, the radiator according to the invention is distinguished by its pleasant exterior, and by the simplicity of its shape facilitating the removal of dust.

Further advantages of the invention will become apparent from the radiator described hereinafter and shown in the drawing which is to be considered as exemplifying an embodiment of the invention.

Fig. 1 is a perspective illustration of a radiator.

Figs. 2 and 3 show a part each of a horizontal section through the radiator at the level of the lines II—II and III—III of Fig. 1, respectively.

Fig. 4 is a plan of the two sheets which constitute the radiator, before their being united, and Fig. 5 shows a detail.

The radiator shown in the drawing consists of two rectangular steel sheets of plates 10 and 11 of equal size, bent according to serpentine lines, and tightly connected with each other e. g. by welding along their four edges. At the upper and the lower edge 12, 12' the sheets are smooth and even up to about one sixth of their width, and are spaced at a slight distance from each other so as to constitute in between a feed channel 13 continuous from one end to the other, and a discharge channel 13' of similar character. To the wall of the channel 13 the influx or supply branch 14 for the heating medium is fitted, whereas the discharge or outlet branch 14' is fixed to the wall of the channel 13'.

Of the sheets forming the intermediate area between the smooth-walled marginal sections the one is always smooth while the other is corrugated so as to constitute transversely located grooves. As is clearly apparent from Fig. 4, showing the two sheets before their conjunction, those areas 16 of each sheet are corrugated which form the outer parts of the arc, whereas the areas 17, located inside, are smooth. When inserted within each other, as shown in Fig. 3, the sheets will contact or lie closely to each other in such a

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manner that, as a result of the corrugation of the one part, transversal tubular channels 18 are formed, designed to connect the channels 13 and 13' with each other.

Out of the inlet branch 14 the heating medium flows into the channel 13, yields its heat to the surrounding metal when passing through the small channels 18 and flows out through the channel 13' and the discharge branch 14'.

The cross-sectional profile of the corrugation may, of course, be designed as desired. It may, for instance, be rectangular, trapezoidal, or the like.

The radiator according to the invention is—in proportion to its weight—possessed of a far greater surface of heat transmission than the majority of the cast iron radiators.

It is easy and simple to clean the outer i. e. the heat emitting faces of the radiator as these are exclusively cylindrical and easily accessible.

The ratio of the filling volume to the surface can be modified by altering the corrugations.

The radiator according to the invention may also be used in other cases where great surfaces for heat emission are required, e. g. as cooling coil or condensor in refrigerating plants and the like.

What I claim is:

Radiator for central heating installations, consisting of two sheets fixedly connected at their edges and in their longitudinal direction bent so as to form a serpentine line, said sheets being spaced at their upper and lower edges so as to form one inlet and one outlet channel, while in the intermediate area the sheet located at the outside of the arc of the serpentine line is corrugated, the inside of the arc of said sheet being smooth, both sheets being adjacent each other, and forming a great number of small channels, designed to transversely connect the inlet channel and the outlet channel.

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