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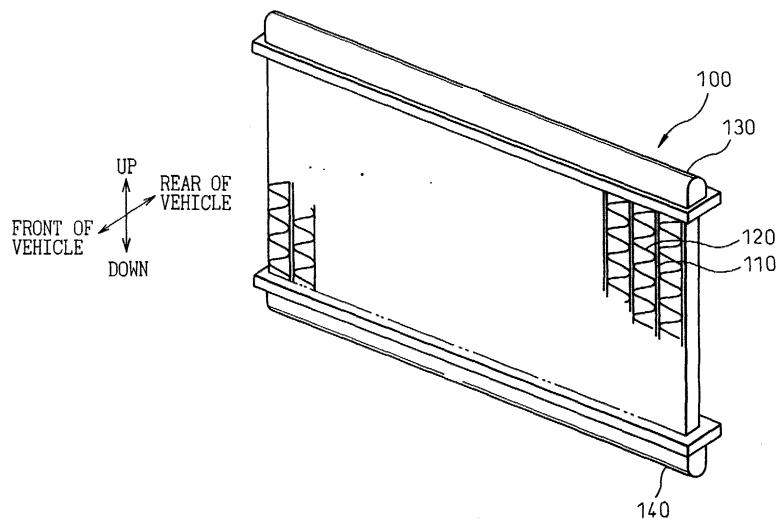
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### (54) Heat exchanger

(57) A heat exchanger, in which the space (110a) in each of a plurality of tubes (110) is segmented by a partitioning wall (111), and dimples (protrusions) (112) are formed on the inner wall of the tubes (110), is disclosed. The substantial sectional area of the flow path, which has a large effect on the flow velocity in the tubes (110), can thus be reduced without increasing the total number of the tubes (110). Even in the case where the radiation area is enlarged by increasing the long diameter of the

tube (110), therefore, a turbulent flow of the cooling water can be obtained in collaboration with the agitating action of the dimples (112). In this way, the reduction in heat transfer coefficient between the cooling water and the tubes (110) can be prevented. As a result, the radiation capacity of the radiator (100) can be improved while suppressing the increase in the number of the parts and the production cost of the radiator (100), thereby producing a radiator suitable for large automotive vehicles.

Fig. 1





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