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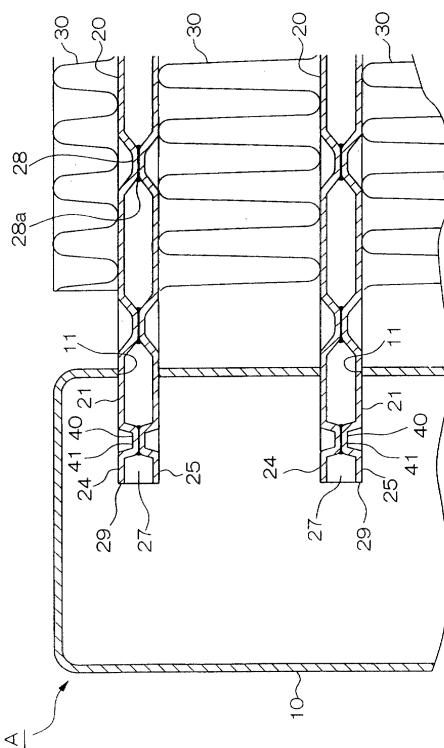
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### (54) Heat exchanger

(57) A heat exchanger comprises: a pair of headers (10, 10) which are provided in parallel facing each other through a predetermined distance and a pathway of the fluid is respectively provided therein; and a plurality of flat heat-exchange tubes (20, 20...) which are provided between the headers in parallel, both ends thereof are fastened to the headers, and a pathway of the refrigerant for connecting the pathways of both headers is respectively provided therein. In this heat exchanger, the heat-exchange tubes and the headers are air-tightly and liquid-tightly fastened by inserting end portions (21, 21...) of the heat-exchange tubes into insertion holes (11, 11...) which are bored on the headers. Furthermore, in the vicinity of opening ends (29) of both end portions of the flat heat-exchange tubes, shape-holding portions (41) for preventing deformation of the opening ends are provided.

FIG. 1





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THE HAGUE	28 January 2003	Beltzung, F	
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