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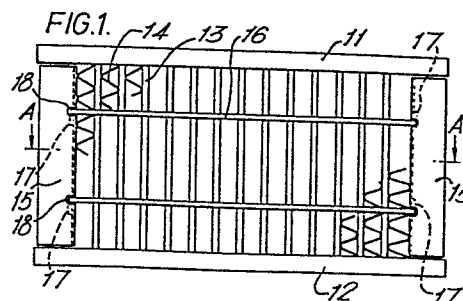
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54 Improvements relating to heat exchangers.

57 A heat exchanger such as a vehicle radiator comprises a pair of tube plates (11, 12) between which flat tubes (13) extend, interspersed with corrugated fins forming airways (14). Header tanks are formed by attaching shells (not shown) to the tube plates. In production of the radiator, the tubes and airways are assembled, between clamping channels (17), as a separate item. To hold the matrix together, ties (16) hold the clamping channels together. The ties have end portions (17) which are bent laterally with respect to the axes of the ties, and which extend in different, preferably substantially opposite directions. Thus the ties can only be removed from the apertures in the channels by twisting the ties about their axes, and thus cannot jump out as a result of vibration.





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EUROPEAN SEARCH REPORT

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Application number

EP 83 30 2977

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
A	DE-A-3 045 087 (KÜHLERFABRIK LÄNGERER & REICH) * Claim 1; figures *	1,5,7	F 28 F 9/02 F 28 D 1/02
A	DE-A-1 962 466 (FERODO)		
			TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
			F 28 F F 28 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27-02-1984	Examiner VAN GESTEL H.M.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			