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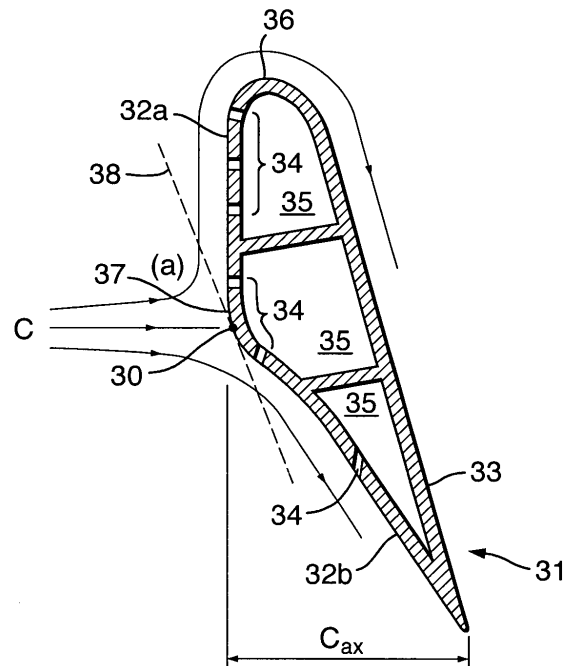
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(54) **Guide vanes for turbine**

(57) In turbine blades used as nozzle guide vanes 2, 12, 22, 31 for turbine stages of an engine there is a problem with respect to high lift vanes in that there may be significant stagnation point migration about the pressure surface 13, 21, 32 of that vane. In such circumstances, appropriate positioning of coolant flow apertures 11, 24, 34 for coolant film cooling of the vane is difficult. The present invention provides on the leading edge a bulge ridge 37 which limits the range of potential movement for the stagnation point 30 whilst retaining improved lift for higher engine performance. The present invention has particular applicability with flows directed to the turbine NGV which have a significantly variable swirl angle and therefore presentation to the vane 31.

**Fig.2.**



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EUROPEAN SEARCH REPORT

Application Number  
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 19 June 2012	Examiner de la Loma, Andrés
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