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(54) **Integrated inward turning inlets and nozzles for hypersonic air vehicles**

(57) A hypersonic waverider aircraft is disclosed that includes a first engine (106) and an inlet including a throat (108). The inlet is configured to generate three-dimensional flow compression during hypersonic flight with a weak shock wave that begins at the leading edge surfaces of the inlet and coalesces ahead of the throat, and a weak shock wave that begins at the point of coalescence of the weak shock wave and extends to the throat. The inlet includes a v-shaped lip open to freestream airflow in one side of the inlet.

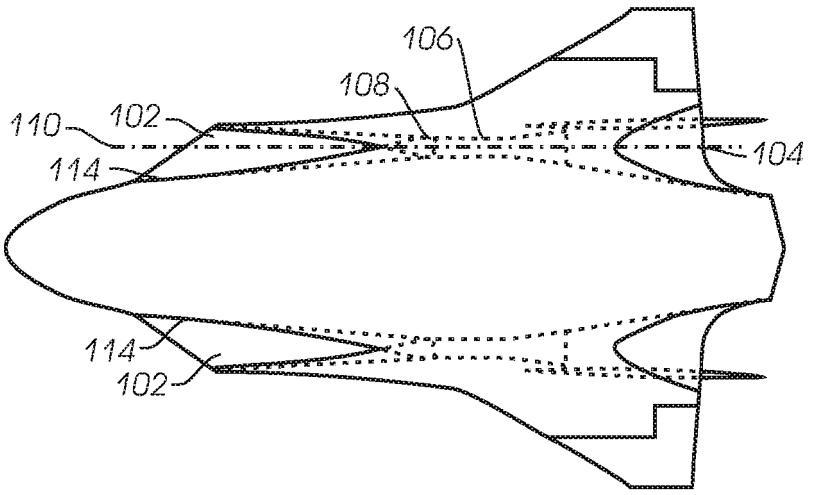

FIG. 1D

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EUROPEAN SEARCH REPORT

Application Number
EP 07 10 2293

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WIE VAN D M ET AL: "APPLICATIONS OF BUSEMANN INLET DESIGNS FOR FLIGHT AT HYPERSONIC SPEEDS" AIAA/AHS/ASEE AEROSPACE DESIGN CONFERENCE, XX, XX, 1 February 1992 (1992-02-01), pages 1-12, XP008032502 * the whole document *	1-13	INV. B64C30/00 B64D27/20 B64D33/02
X	BILLIG F S ET AL: "Design and Analysis of Streamline Traced Hypersonic Inlets" INTERNATIONAL SPACE PLANES AND HYPERSONIC SYSTEMS ANDTECHNOLOGIES CONFERENCE AND WEAKLY IONIZED GASES WORKSHOP, AIAA, NORFOLK, VA, US, 1 November 1999 (1999-11-01), pages 1-12, XP009072415 * the whole document *	1-7	
X	BILLIG F S ET AL: "STREAMLINE TRACING: TECHNIQUE FOR DESIGNING HYPERSONIC VEHICLES" 1 May 2000 (2000-05-01), JOURNAL OF PROPULSION AND POWER, AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS. NEW YORK, US, PAGE(S) 465 - 471 , XP000935377 ISSN: 0748-4658 * the whole document *	1-7	TECHNICAL FIELDS SEARCHED (IPC) B64C B64D

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	4 November 2009	Wojski, Guadalupe

CATEGORY OF CITED DOCUMENTS

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