

12 **EUROPEAN PATENT APPLICATION**

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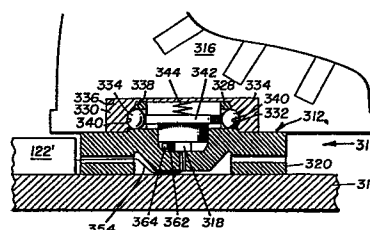
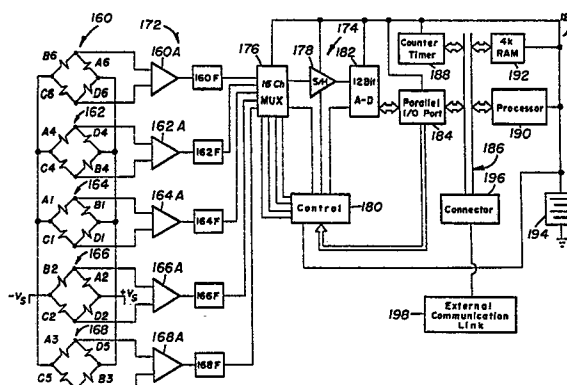
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54 **Method and apparatus for programmed release in ski bindings.**

57 A method and apparatus for achieving programmed release ski bindings is described including formulation of biomechanical models and associated equations for determining release criteria in order to minimize selected types of lower extremity ski injuries. Analog and digital (122') control circuits are also disclosed for computing the release variables from the biomechanical model equations and comparing the variable values to the release criteria in order to precisely generate a release initiating signal. Loads measured in the ski binding drive the biomechanical model equations. Three embodiments of ski binding assemblies are also disclosed including releasable binding means (310) for rigidly securing the ski boot (316) to the ski (314) with a release actuating element (318, 342, 334) for releasing the ski from the binding upon occurrence of a release condition as determined by the associated control circuit (122').





European Patent
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EUROPEAN SEARCH REPORT

0042762
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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. 3)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	DE - A1 - 2 704 583 (KIRSCH) * claims 1 to 12 *	1-7,33	A 63 C 9/08
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A	FR - A1 - 2 269 981 (D'ANTONIO et al.) * fig. 14 to 18 *	1-8, 10,12, 17,33, 34	
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A	FR - A1 - 2 354 787 (S.A. DES ETABLISSEMENTS FRANÇOIS SALOMON & FILS) * fig. 3 *	1-8,10, 12,17	TECHNICAL FIELDS SEARCHED (Int.Cl. 3)
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A	US - A - 3 907 316 (MARKER et al.) * fig. 6 *	1-8,10	A 63 C 9/08 G 01 L 5/00 G 06 G 7/60
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A	US - A - 3 919 563 (LAUTIER et al.) * fig. 1 *	1-8,10	
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A	US - A - 3 988 931 (PERRYMAN) * abstract *	1-8,10	
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A	DE - A - 1 703 787 (BRUNNER) * claim 1 *	1-4,20, 27-29, 31	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
A	DE - A - 1 915 899 (WAGNER) * fig. 1 *	26,44	
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X	The present search report has been drawn up for all claims		&: member of the same patent family, corresponding document
Place of search Berlin		Date of completion of the search 05-04-1982	Examiner ZAPP



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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	<u>DE - A1 - 2 707 149</u> (MEYER) * fig. 1 * ---	41-43	TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
A	<u>DE - A1 - 2 739 207</u> (ETABLISSEMENTS FRANCOIS SALOMON et FILS) * fig. 1 to 5 * ---	44,45	
A	<u>AT - B - 320 493</u> (WIENER METALLWAREN- FABRIK SMOLKA & CO.) * fig. 1 * ---	44,45	
A	<u>WO - A1 - 79/00311</u> (SPADEMAN) * fig. 1A * -----	44,45	