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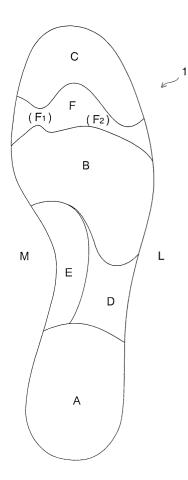
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(54) Outsole structure of football shoe

(57)An outsole (1) of a soccer spike shoe is formed of six portions, i.e. a heel portion (A), a tread portion (B), a toe portion (C), a midfoot portion (D), an arch portion (E) and a toe root portion (F). The heel portion (A), tread portion (B), toe portion (C) and midfoot portion (D) are made more rigid, and the arch portion (E) and the toe root portion (F) are made less rigid. First to fifth studs (31-35) are provided on a sole surface of the outsole (1). The first stud (31) is disposed at a central portion of a distal phalanx (DP₁) of a first or great toe of a shoe wearer's foot. The second stud (32) is positioned at a metatarsophalangeal joint (MJ₁) of the first toe. The third stud (33) is placed at a head portion of a metatarsus (MB₄) of a fourth toe. The fourth stud (34) is located at a distal phalanx (DP₃) of a third toe. The fifth stud (35) is deployed at each head portion of metatarsi (MB2, MB3) of a second and third toe. Thereby, rigidity and strength as well as bendability of the outsole can be achieved. Also, slippage on the contact surfaces can be prevented from occurring during playing soccer.

FIG. 3



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EUROPEAN SEARCH REPORT

Application Number EP 02 25 0233

	DOCUMENTS CONSID	ERED TO BE RELEVANT				
Category	Citation of document with of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)		
Ρ,Χ	EP 1 092 358 A (LO 18 April 2001 (200	TTO SPORT ITALIA S P A 1-04-18)	37	A43B5/02 A43B13/14		
P,A	* the whole docume		1-4	A43B13/16 A43C15/16		
A	WO 00 30483 A (TURI WILLIAM (GB)) 2 Jun * the whole document	NER AMANDA ;COLLINS ne 2000 (2000-06-02) nt *	1-4,37	 		
A	DE 19 73 891 U (ADO * the whole documer		1-4,37			
х	WO 00 57740 A (GROS 5 October 2000 (200		37			
A	* the whole documer	nt *	1-4			
A	EP 0 123 550 A (NIH 31 October 1984 (19 * the whole documer	(E INTERNATIONAL LTD) 084-10-31) nt *	1-4,37			
				TECHNICAL FIELDS SEARCHED (Int.Cl.7)		
				A43B A43C		
	The present search report has t	ocen drawn up for all claims				
	Place of search	Date of completion of the search		Examiner		
,	THE HAGUE	28 May 2002	Cla	udel, B		
X : partic Y : partic docun A : techn O : non-v	TEGORY OF CITED DOCUMENTS ularly relevant if taken alone ularly relevant if combined with anothent of the same category ological background vitten disclosure nediate document	E : earlier patent after the filing out of the filing of the comment cite. E : document cite	: theory or principle underlying the invention : earlier patent document, but published on, or after the filing date : document cited in the application : document cited for other reasons : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)



Application Number

EP 02 25 0233

CLAIMS INCURRING FEES							
The present European patent application comprised at the time of filing more than ten claims.							
Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):							
No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.							
LACK OF UNITY OF INVENTION							
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:							
see sheet B							
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.							
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.							
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:							
None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims: 1-21, 37							



LACK OF UNITY OF INVENTION SHEET B

Application Number EP 02 25 0233

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-21,37

footwear providing both rigidity and bendability of the $\operatorname{outsole}$

2. Claims: 22-36,38,39

football footwear preventing slippage on some contact surfaces $% \left(1\right) =\left(1\right) \left(1$

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 02 25 0233

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-05-2002

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 1092358	A	18-04-2001	IT EP US	PD990223 A 1092358 A 6421933 B	\1	12-04-2001 18-04-2001 23-07-2002
WO 0030483	Α	02-06-2000	AU WO	1282100 A 0030483 A	-	13-06-2000 02-06-2000
DE 1973891	U	na gara 1907 nono dina unen denne ente pida unen inono vidor mano insti d	NONE	gair lage dags dags lags and lade eth dat field was		
WO 0057740	A	05-10-2000	US AU WO	6412196 B 4016600 A 0057740 A	1	02-07-2002 16-10-2000 05-10-2000
EP 0123550	Α	31-10-1984	EP JP	0123550 A 60034401 A		31-10-1984 22-02-1985
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