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(54) MULTI-COMPONENT PUTTER

(57) Embodiments of multi-component putters comprising an upper portion and a lower portion are described herein. The upper portion is formed from a first material having a first density and the lower portion is formed from a second material having a second density. The first density is less than the second density. The upper portion is

affixed to the lower portion via an adhesive or a combination of adhesives and interlocking geometry. The multi-component putter design provides increased forgiveness and moment of inertia compared to a putter formed from a single material.



EUROPEAN SEARCH REPORT

Application Number

EP 24 15 7442

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
10	X KR 101 980 597 B1 (SONG KWON SUP [KR]) 22 May 2019 (2019-05-22) * paragraph [0009] - paragraph [0010] * * paragraph [0015] * * paragraph [0021] - paragraph [0022] * * paragraph [0029] * * paragraph [0047] * -----	1,9	INV. A63B47/02 A63B60/50 A63B60/52 A63B53/04
15	X US 5 417 426 A (BAYER SYLVESTER L [US]) 23 May 1995 (1995-05-23) * the whole document *	1,2,8,9	
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The present search report has been drawn up for all claims			
1	Place of search	Date of completion of the search	Examiner
	Munich	29 April 2024	Tejada Biarge, Diego
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	
EPO FORM 1503 03/82 (P04C01)			



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

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Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

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No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

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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:

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see sheet B

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All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

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As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

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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:

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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, 2, 8, 9

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The present supplementary 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 (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION
SHEET B

Application Number
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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:

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1. claims: 1, 2, 8, 9

Ball retention portion which is defined by a semicircular slot with a width between 0.25 inch and 1 inch.

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1.1. claim: 8

Ball retrieval feature which is defined by a pear shape.

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2. claim: 3

Ball retrieval which is defined by a recess in the upper portion and an aperture in the lower portion.

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3. claims: 4-7

A ball retention portion which comprises a plurality of prongs.

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4. claim: 10

An upper portion of a golf club head which comprises alignment features extending the entire length of the crown.

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5. claim: 11

A putter golf club head which comprises a moment of inertia about the CG y-axis greater than 4000 g-cm².

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Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

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

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5 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.

29 - 04 - 2024

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
	KR 101980597 B1	22 - 05 - 2019	NONE	
15	US 5417426 A	23 - 05 - 1995	NONE	
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82