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(54) GROUND GRID WITH IMPROVED COUPLING SYSTEM

(57) The present invention relates to a ground grid for supporting and retaining ground coverings, comprising a base plate and an open-cell structure, wherein the sides of the cell structure comprise a coupling system to connect adjacent ground grids to each other, wherein the coupling system comprises a male coupling element and a female coupling element, wherein each side comprises one or more male coupling elements and/or one or more female coupling elements, wherein the male coupling

element of the ground grid can be connected to the female coupling element of an adjacent ground grid, and wherein the female coupling element of the ground grid can be connected to the male coupling element of an adjacent ground grid, wherein the female coupling element is formed by a T-shaped recess in the side of the cell structure, which recess extends through the base plate and the cell structure. The invention also relates to a method for connecting two or more ground grids.

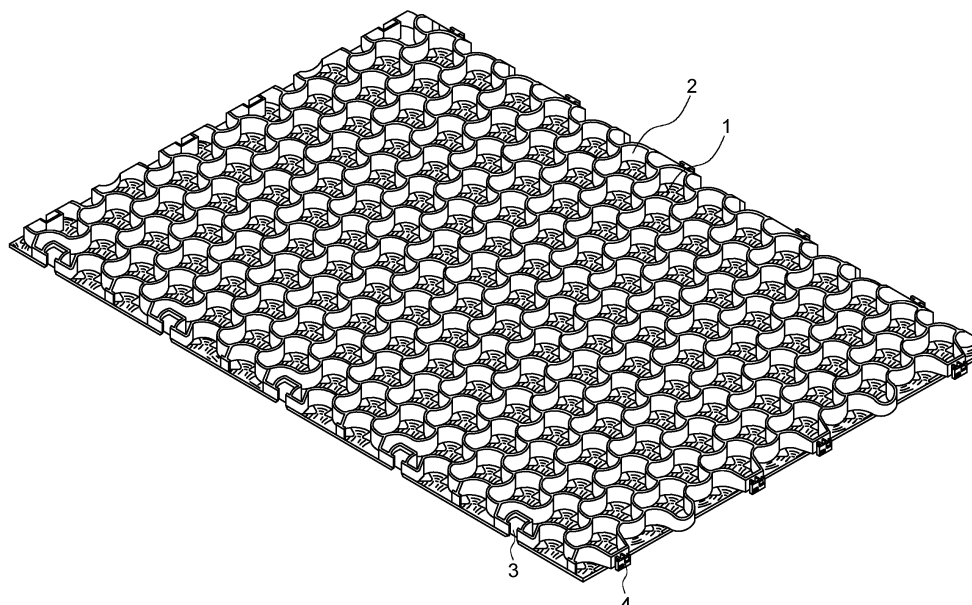


FIG. 1

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EUROPEAN SEARCH REPORT

Application Number

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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)
X	DE 196 16 233 A1 (HENNINGS MARTIN [DE]; CHALOUN DIETER [DE]) 16 October 1997 (1997-10-16)	1	INV. E01C5/20 E01C9/00
A	* the whole document *	2-15	
A	EP 2 298 994 A1 (RITTER GMBH [DE]) 23 March 2011 (2011-03-23) * abstract; figures 1-9C *	1-15	
A	DE 20 2009 007713 U1 (THERMOPLASTIK S R O [SK]) 27 August 2009 (2009-08-27) * abstract; figures 1-7B *	1-15	
A	DE 44 15 595 A1 (CHALOUN DIETER [DE]; GAMALCZYK RYSZARD [PL]) 2 November 1995 (1995-11-02) * abstract; figure 1 *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			E01C
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		7 October 2024	Flores Hokkanen, P
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			



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CLAIMS INCURRING FEES

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

☐ 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):

☐ 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.

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:

1-14 (completely); 15 (partially)

☐ 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:

1. claims: 1-14 (completely); 15 (partially)

ground grid with open-cell structure with a coupling system
for adjacent ground grids including a female coupling
element formed by a T-shaped recess

2. claim: 15 (partially)

method of connecting two ground grids by positioning them at
an angle of at least 25° and sliding their male into their
female coupling elements

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

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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
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 19616233 A1	16-10-1997	NONE	
EP 2298994 A1	23-03-2011	DK 2298994 T3 EP 2298994 A1 PL 2298994 T3	30-05-2016 23-03-2011 31-08-2016
DE 202009007713 U1	27-08-2009	NONE	
DE 4415595 A1	02-11-1995	NONE	

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82