

(19)



(11)

EP 4 477 798 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
26.02.2025 Bulletin 2025/09

(51) International Patent Classification (IPC):
E01C 5/20 (2006.01) E01C 9/00 (2006.01)

(43) Date of publication A2:
18.12.2024 Bulletin 2024/51

(52) Cooperative Patent Classification (CPC):
E01C 9/004; E01C 5/20

(21) Application number: **24181581.0**

(22) Date of filing: **12.06.2024**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL
NO PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA
Designated Validation States:
GE KH MA MD TN

(71) Applicant: **Ecco bv**
9820 Merelbeke (BE)

(72) Inventor: **Slabbinck, Chris**
9820 Merelbeke (BE)

(74) Representative: **Brantsandpatents bv**
Pauline Van Pottelsberghelaan 24
9051 Ghent (BE)

(30) Priority: **12.06.2023 BE 202305480**

(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.

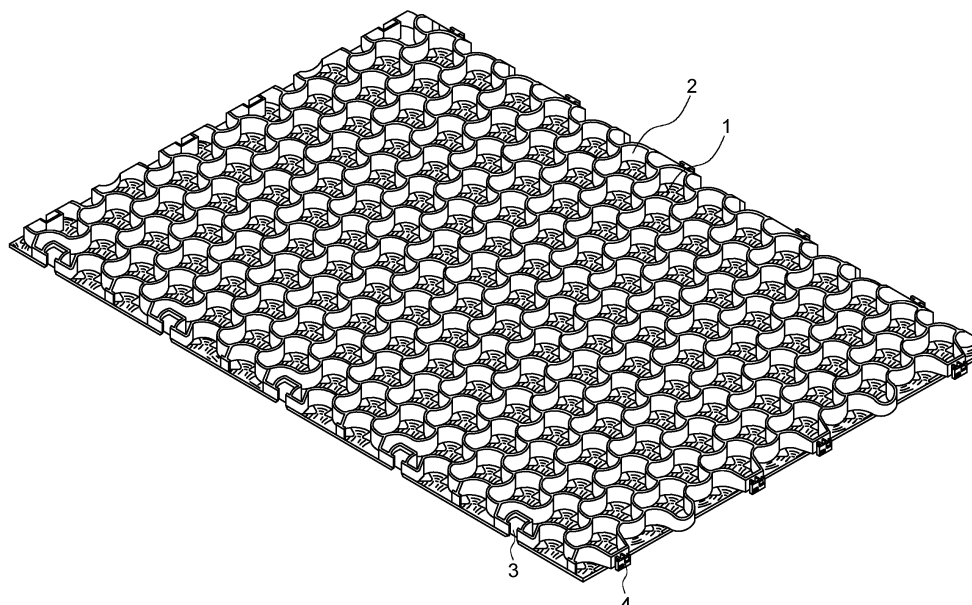


FIG. 1

EP 4 477 798 A3



EUROPEAN SEARCH REPORT

Application Number

EP 24 18 1581

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			



Application Number

EP 24 18 1581

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

EP 24 18 1581

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.

EP 24 18 1581

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.

07-10-2024

10

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	30-05-2016
		EP 2298994 A1	23-03-2011
		PL 2298994 T3	31-08-2016

DE 202009007713 U1	27-08-2009	NONE	

DE 4415595 A1	02-11-1995	NONE	

15

20

25

30

35

40

45

50

55

EPO FORM P0459

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