

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 80200582.7

(22) Date of filing: 18.06.80

(51) Int. Cl.³: **E 02 B 3/12**
E 02 B 3/14, E 02 D 17/20
E 01 C 9/00, E 01 C 9/08

(30) Priority: 22.06.79 NL 7904906

(43) Date of publication of application:
07.01.81 Bulletin 81/1

(84) Designated Contracting States:
BE DE FR GB NL

(71) Applicant: Timmerman, Jan
Westerkaai 44
Genemuiden(NL)

(71) Applicant: Last, Harm
Jan van Nassastraat 9
Genemuiden(NL)

(71) Applicant: Eenkhoorn, Gerrit
Prinses Beatrixstraat 25
Genemuiden(NL)

(71) Applicant: Timmerman, Gerrit
Sasdijk 3
Genemuiden(NL)

(72) Inventor: Timmerman, Jan
Westerkaai 44
Genemuiden(NL)

(72) Inventor: Last, Harm
Jan van Nassastraat 9
Genemuiden(NL)

(72) Inventor: Eenkhoorn, Gerrit
Prinses Beatrixstraat 25
Genemuiden(NL)

(72) Inventor: Timmerman, Gerrit
Sasdijk 3
Genemuiden(NL)

(74) Representative: Hoorweg, Petrus Nicolaas et al,
OCTROOIBUREAU ARNOLD & SIEDSMA Sweelinckplein
1
NL-2517 GK The Hague(NL)

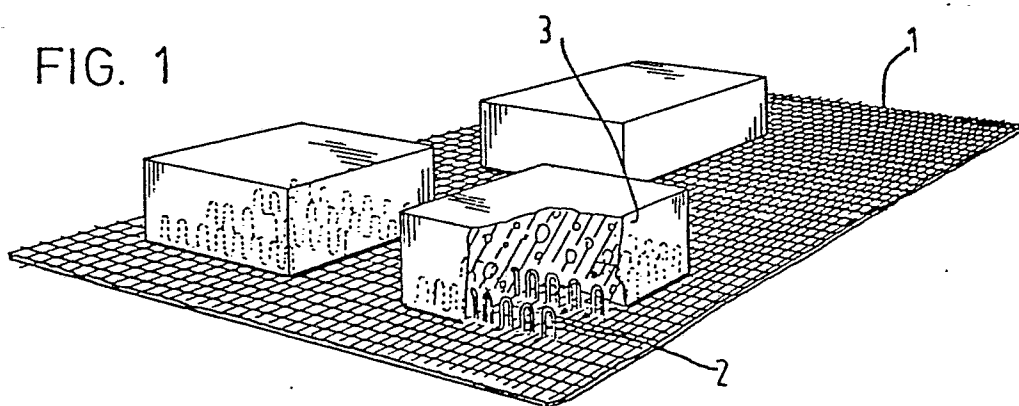
(54) Method of manufacturing a ground coating and semi-product for the same.

(57) A method of manufacturing a ground coating, for example a road or talus coating, mattresses and the like on the basis of a woven mat (1) of preferably synthetic warp and weft wires, bounding means being fastened to the mat for applying to one side of the mat casting and curable material such as bitumen or concrete (3), wherein at least one tissue-foreign wire is passed from the other side of the mat at two or more places across the tissue to form loops (2), the curable material being poured on said loops.

EP 0 021 532 A1

./...

FIG. 1



Harm Last, Gerrit Eenkhoorn, Gerrit Timmerman and
Jan Timmerman, all from Genemuiden, The Netherlands.

Method of manufacturing a ground coating and semi-product
for the same.

The invention relates to a method of manufacturing
a ground coating, for example a road or talus coating,
mattresses and the like on the basis of a woven mat of
preferably synthetic warp and weft wires, bounding means
5 being fastened to the mat for applying to one side of
the mat casting and curable material such as bitumen of
concrete.

In hydraulic engineering it is known to construct
mattresses from a tissue of the kind set forth above, across
10 which pins are passed in a manner such that on the pins
emerging from the other side of the mat concrete can be
poured to form strengthening concrete blocks.
It is also known to weave in the mat tissue elements such
as iron rods, the ends of which emerge from the mat, to which
15 ends concrete can adhere. It is finally known to apply
bonding means to one side of the mat to which a ballast
element or the like can adhere.

The invention has for its object to provide a
completely novel method in which the bonding means can be
20 simply applied by means of a machine and in which, in addi-
tion, an uninterrupted adhesion is obtained along substan-
tially the whole contact surface between the ballast means

of the coating to be applied and the mat.

The method according to the invention is distinguished in that at least one tissue-foreign wire is passed from the other side of the mat at two or more
5 places across the tissue to form loops, the curable material being poured on said loops.

The loops are preferably made in the tissue by means of a needle machine known in the textile factory. By means of such a needle machine the loops to be
10 provided can be arranged in accordance with a given programme in any desired pattern so that any desired pattern of ballast blocks can be obtained on a mat, for example, for a mattress.

The invention will be described more fully with
15 reference to a drawing:

the drawing shows in

fig.1 a perspective view of a first embodiment of a ground coating, particularly, a mattress,

fig.2 a view corresponding with that of fig.1
20 of a further embodiment of a ground coating,

fig.3 a sectional view of a detail of the tissue with loops provided therein.

Referring to the figures numeral 1 designates a tissue preferably of synthetic warp and weft yarns. This
25 tissue can be manufactured on a conventional loom and any desired weaving pattern may be used.

After the manufacture of the tissue loops of a tissue-foreign yarn are passed across the tissue, the loops being designated in the figures by numeral 2,
30 These loops are passed across the tissue only at the places where finally the curable casting material 3 has to be applied. This material is formed in fig.1 by relatively spaced concrete blocks moulded by a suitable gauge arranged on the mat 1, the gauge being removed after curing, after
35 which a rigid adhesion is obtained between the cured concrete 3 and the loops 2 and the mat 1 respectively.

Fig.2 shows a further embodiment in which loops 2 are passed across the mat 1 throughout the surface thereof, after which a layer of asphalt or bitumen is spread on the

mat 1. During the plastic phase of the asphalt 4 adhesion is established between the asphalt 4 and the loops 2 and hence adhesion with the mat 1. Such a structure may be suitable for talus protection or for bicycle paths and
5 the like.

Fig.3 shows a cross-sectional view of the tissue of the mat 1: 1' designates the weft yarns and 1" the warp yarn of the tissue. 5 Designates the tissue-foreign wire, which is passed across the tissue 1 at
10 least two places A and B so that after adhesion of the curable material a solid connection with the mat is obtained by means of the portions of the wire extending along the bottom side of this mat.

WHAT IS CLAIMED IS:

1. A method of manufacturing a ground coating, for example, a road or talus coating, mattresses and the like on the basis of a woven mat of preferably synthetic warp and weft yarns, in which bonding means are fastened to the
5 mat for applying to one side of the mat curable cast material, for example, bitumen or concrete, characterized in that at least one tissue-foreign wire is passed from the other side across the mat at two or more places in order to form loops, after which the curable material is poured into
10 the loops of the mat.
2. A method as claimed in claim 1, characterized in that the loops are arranged on the tissue by means of a needle machine.
3. A ground coating manufactured by the method
15 claimed in claim 1 and/or 2.
4. A semi-product consisting of a woven mat having at least one tissue-foreign wire passed in looplike fashion at one or more places across the tissue intended for a ground paving as claimed in claim 3.

"1/1"

FIG. 1

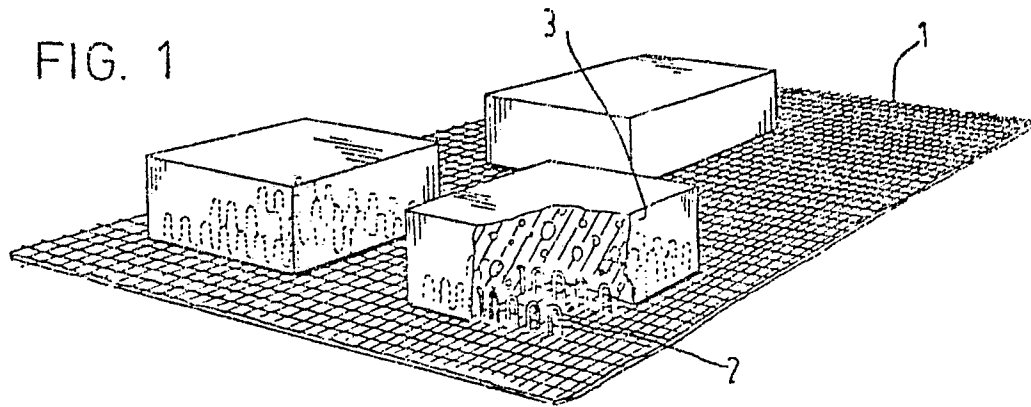


FIG. 2

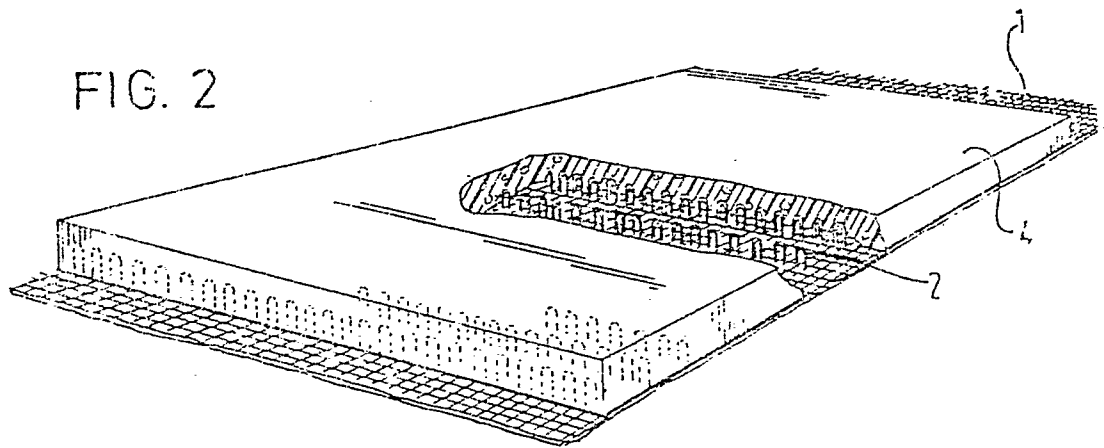
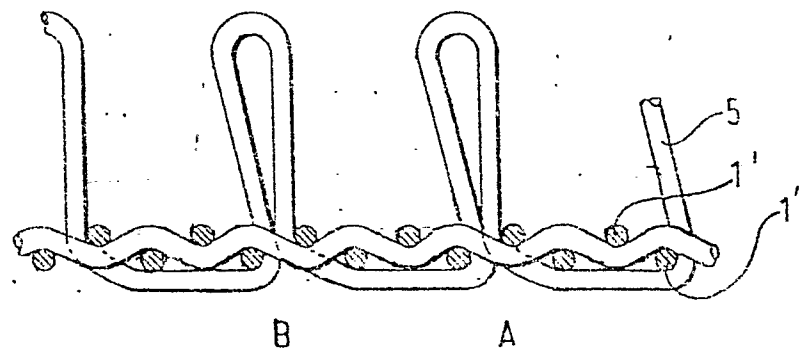


FIG. 3





European Patent
Office

EUROPEAN SEARCH REPORT

0021532

Application number

EP EP 80 20 0582.7

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		
	<u>DE - A - 2 344 178</u> (AANNEMERS COMBINA-TIE ZINKWERKEN B.V.) * page 4, last line to page 7, first line; fig. 1 to 8 * -- <u>DE - A - 2 259 055</u> (J. TIMMERMANN et al.) * whole document * -- <u>US - A - 3 597 928</u> (J.C. PILAAR) * column 5, line 38 to column 6, line 50; column 8, lines 20 to 30; fig. 1 to 5 * -- A <u>DE - U - 7 400 948</u> (M. BOCK et al.) * whole document * -- A <u>US - A - 4 154 061</u> (UMEMOTO et al.) * whole document * -- A <u>DE - A1 - 2 348 276</u> (FORSCHUNGSGRUP-PE FÜR BAUTECHNOLOGIE AG) * whole document * -- A <u>US - A - 1 549 802</u> (E.M. RABON) * fig. 1 to 6 * ----	1,3,4 1,3,4 1	E 02 B 3/12 E 02 B 3/14 E 02 D 17/20 E 01 C 9/00 E 01 C 9/08	
			TECHNICAL FIELDS SEARCHED (Int.Cl.3)	
			E 01 C 9/00 E 01 C 11/00 E 02 B 3/00 E 02 D 17/00 E 04 C 5/00 E 04 F 15/00	
			CATEGORY OF CITED DOCUMENTS	
			X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons	
			&: member of the same patent family, corresponding document	
☒ The present search report has been drawn up for all claims				
Place of search		Date of completion of the search		Examiner
Berlin		09-09-1980		PAETZEL