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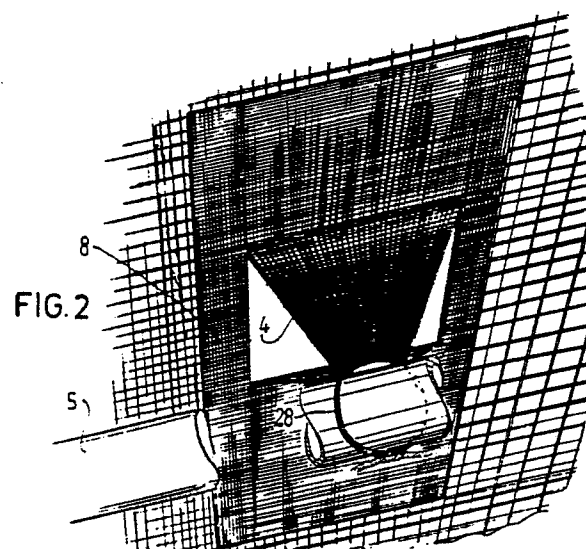
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54 **Method for manufacturing a fabric or membrane provided with at least one loop as well as a fabric or membrane obtained with that method.**

57 The invention relates to a method for manufacturing a fabric or membrane provided with at least one loop, for example a textile woven material provided with a coating layer on at least one side.

The invention has for its object to carry out a method such that it is applicable for a fabric or membrane of practically any type, including a water-proof type, that it offers the possibility of a cheap fabric or membrane and that it ensures strong loops.

With a view to this, the invention provides a method of the type mentioned in the preamble, which has the characteristic that a fabric or membrane is provided after which locally a reinforcing film is attached with at least a significant part of its surface to the fabric or membrane, for example by welding, glueing, a simultaneous coating operation or laminating, after which the thus formed reinforced part is provided with two incisions which together bound a loop.



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Method for manufacturing a fabric or membrane provided with at least one loop as well as a fabric or membrane obtained with that method

The invention relates to a method for manufacturing a fabric or membrane provided with at least one loop, for example a textile woven material provided with a coating layer on at least one side.

Such a method is known in various embodiments. Use is often made of interwoven threads, for example, which protrude locally out of the woven material bundle-wise, in this way forming loops.

The invention has for its object to provide a method such that it is applicable for a fabric or membrane of practically any type, including a waterproof type, that it offers the possibility of a cheap fabric or membrane and that it ensures strong loops.

With a view to this, the invention provides a method of the type mentioned in the preamble, which has the characteristic that a fabric or membrane is provided after which locally a reinforcing film is attached with at least a significant part of its surface to the fabric or membrane, for example by welding, glueing, a simultaneous coating operation or laminating, after which the thus formed reinforced part is provided with two incisions which together bound a loop.

In a simple embodiment the incisions are arranged parallel to each other.

In an embodiment which displays the advantage that the loop can more easily be gripped with the fingers, the method can be performed such that the incisions are formed such that they are mirror symmetrical relative to each other and have at their ends a different distance from each other than in the centre.

To the same end the incisions can also be arranged such that they each display two straight parts forming an angle to each other. The angle may be inwardly or outwardly directed relative to the loop.

The invention also relates to a method of the type mentioned in the preamble, which displays the feature that a fabric or membrane is supplied, together with at least one smaller reinforcing film provided with at least one loop, and that subsequently the or each film is attached with at least a significant part of its surface at a pre-selected position to the fabric or membrane, for example by welding or glueing.

The invention extends further to a fabric or membrane obtained with the methods described.

In order to ensure a great strength of the reinforcing film, this may consist of plastic reinforced with fibres.

The invention will now be elucidated with reference to the drawing of several embodiments. In the

drawing:

Fig. 1 shows a scaffold with a fabric according to the invention used as a scaffold covering;

Fig. 2 shows a first embodiment of a fabric according to the invention;

Fig. 3 shows the cross section III-III according to fig. 2 at a stage of the manufacture in which the incision is made by means of a punch;

Fig. 4 shows a piece of reinforcing film with a loop arranged thereon;

Fig. 5 shows an embodiment with a number of strip-like reinforcing films; and

the figures 6, 7, 8 and 9 show in schematic form details showing various forms of the two incisions which together bound a loop.

Fig. 1 shows a scaffold 1, covered with a woven material 2 provided with loops according to the invention. Scaffold 1 comprises horizontal tubes 14 which serve as fastening elements for the woven material 2 provided with loops which function as scaffold covering.

Fig. 2 shows the manner in which fastening loops 4 of the woven material 2 are attached to the horizontal tubes 5. The loops 4 which will be described hereinafter, are removed manually by a personnel member from the principal plane of the woven material 2, after which a fastening rope 28 is inserted through each loop 4 and fastened to the relevant tube 5.

Fig. 3 shows a first embodiment. In this embodiment a fabric 7 takes a coarse-mesh form and is provided on both sides with a waterproof plastic coating layer.

Reinforcing films 8 are arranged locally. These reinforcing films 8 are adhered over significant parts of their surface to the fabric 7 by welding or glueing. Arranged through each reinforcing film 8 and the corresponding portion of the fabric 7 are incisions 10 which together bound loops 11.

Fig. 4 shows a reinforcing film 16, which consists of plastic reinforced with fibres. The fibres are interwoven and present locally is a band 17 which is more densely woven in one direction, and the fibres of which run in the form of a loop over a determined length outside and over the reinforcing film. This reinforcing film 16 with a loop 18 can be attached, for example by welding or glueing, to a fabric or membrane to be provided with a loop, without an after-treatment for the arrangement of incisions being necessary for this purpose.

Fig. 5 shows a fabric 19 with reinforcing strips 20 which, analogous to the embodiment according to fig. 2, are provided at regular intervals with incisions 22 bounding loops 21. Fig. 5 shows these

incisions only schematically. The figures which will be discussed briefly hereafter give the form of the incisions in somewhat more detail.

Fig. 6 shows an embodiment in which incisions 23 are parallel to each other.

Fig. 7 shows an embodiment in which incisions 24 are arranged such that they each display two straight portions forming an angle to each other. In this case the "point" is directed outward. If required this point can also point inward. In both cases it is easier for the user to be able to grip the loop formed by incisions 24 with his fingers than in the embodiment according to fig. 6.

Fig. 8 shows an embodiment having this same advantage as in fig. 7. Here the incisions 25 are formed such that they are in curved form and directed towards each other in the centre.

Finally, fig. 9 shows an embodiment in which two incisions 26 are present as well as extra incisions 27 extending outward halfway from the loop bounded by the incisions 26. It is self-evident that in this case a user can easily grip a loop bounded by the incisions 26 with his fingers.

Attention is drawn to the fact that the arrangement of the incisions can also be realized by localized heating (sealing) or by cutting.

least one smaller reinforcing film provided with at least one loop,

and that subsequently the or each film is adhered with at least a significant part of its surface at a preselected position to said fabric or membrane, for example by welding, glueing, a simultaneous coating operation or laminating.

6. Fabric or membrane with at least one loop, obtained by application of the method as claimed in any of the previous claims.

7. Fabric or membrane as claimed in claim 6, characterized in that the reinforcing film consists of plastic reinforced with fibres.

Claims

1. Method for manufacturing a fabric or membrane provided with at least one loop, for example a textile woven material provided with a coating layer on at least one side, characterized in that a fabric or membrane is supplied, after which a reinforcing film is attached locally with at least a significant part of its surface to said fabric or membrane, for example by welding, glueing, a simultaneous coating operation or laminating, and that the thus formed reinforced part is subsequently provided with two incisions together bounding a loop.

2. Method as claimed in claim 1, characterized in that the incisions are arranged parallel to each other.

3. Method as claimed in claim 1, characterized in that extra incisions are arranged approximately halfway on each of the incisions and extending outward from the loop.

4. Method as claimed in claim 1, characterized in that the incisions are formed such that they are mirror symmetrical relative to each other and have at their ends a different distance from each other than in the centre.

5. Method for manufacturing a fabric or membrane provided with at least one loop, for example a textile woven material provided with a coating layer on at least one side, characterized in that a fabric or membrane is supplied in addition to at

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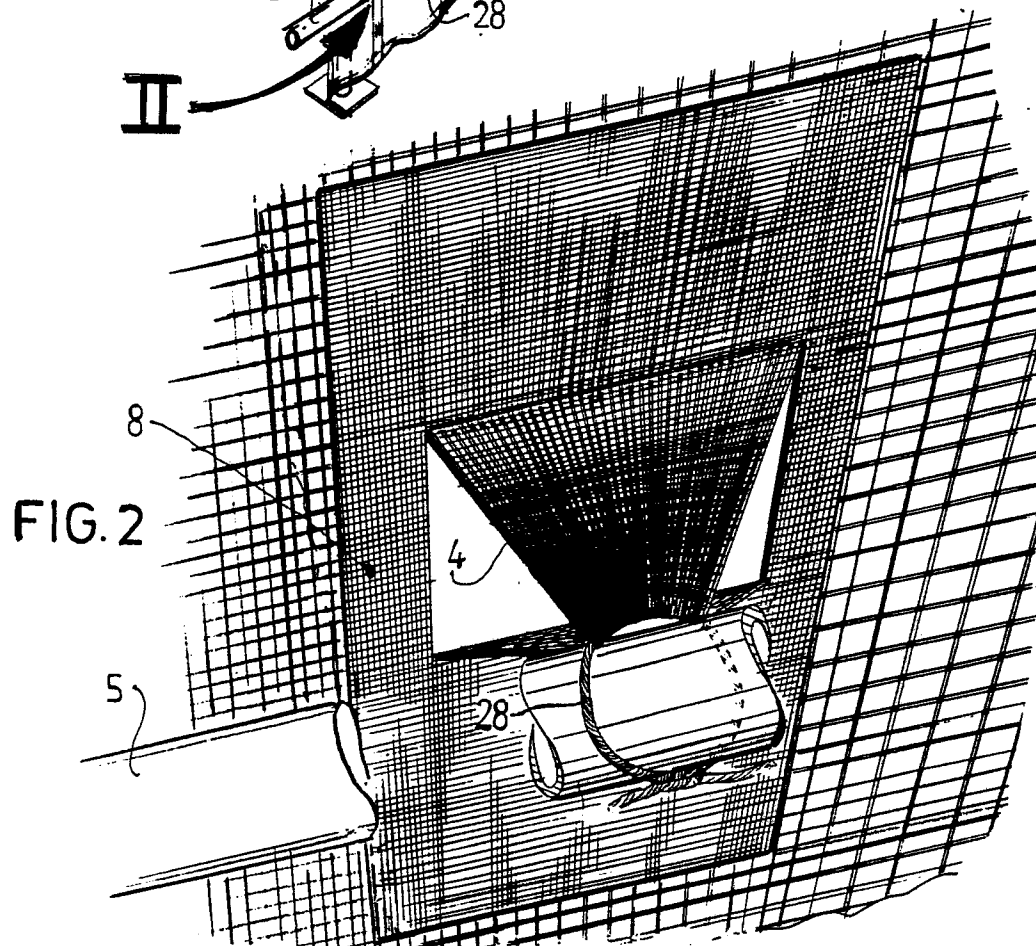
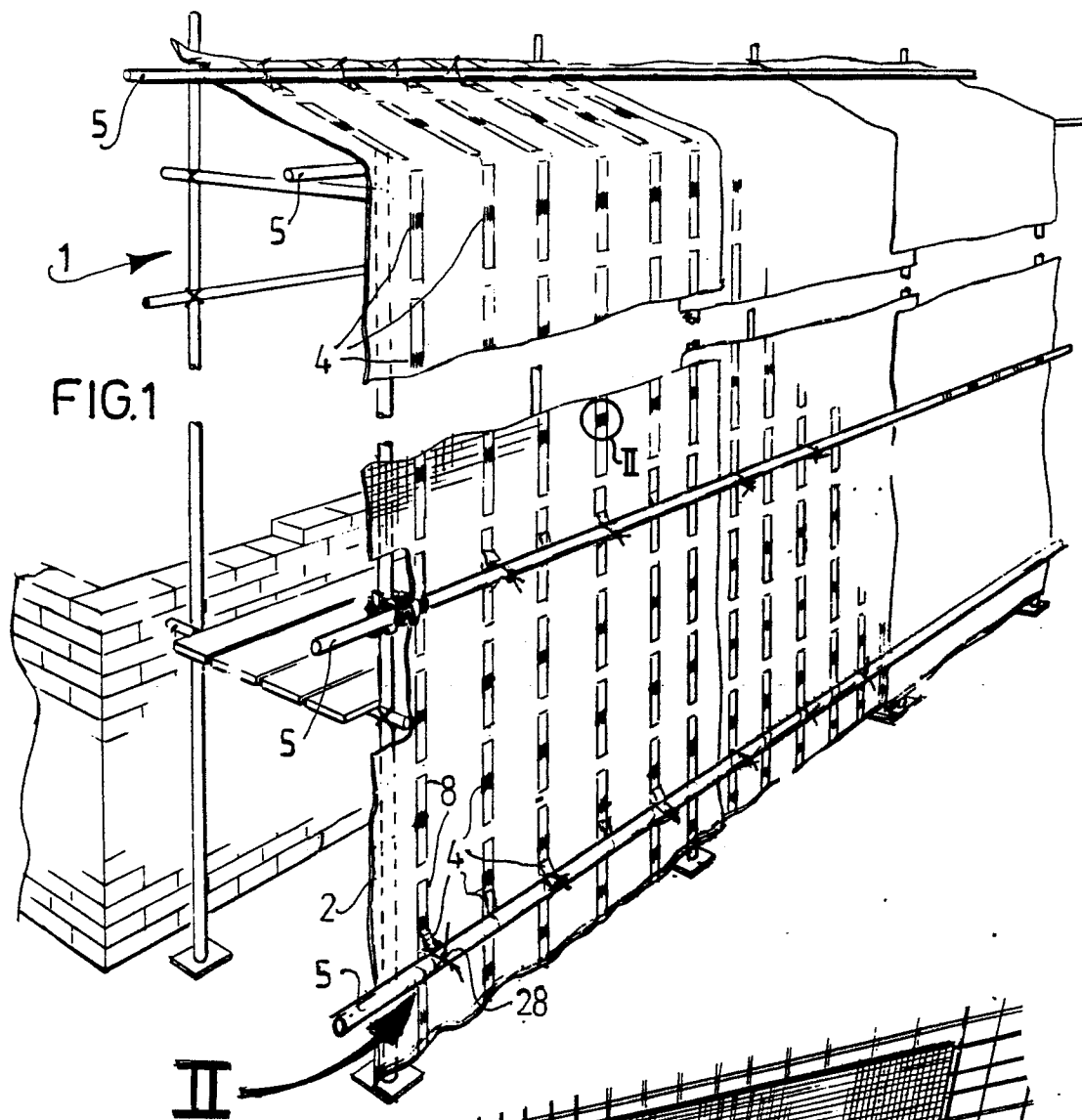


FIG.4

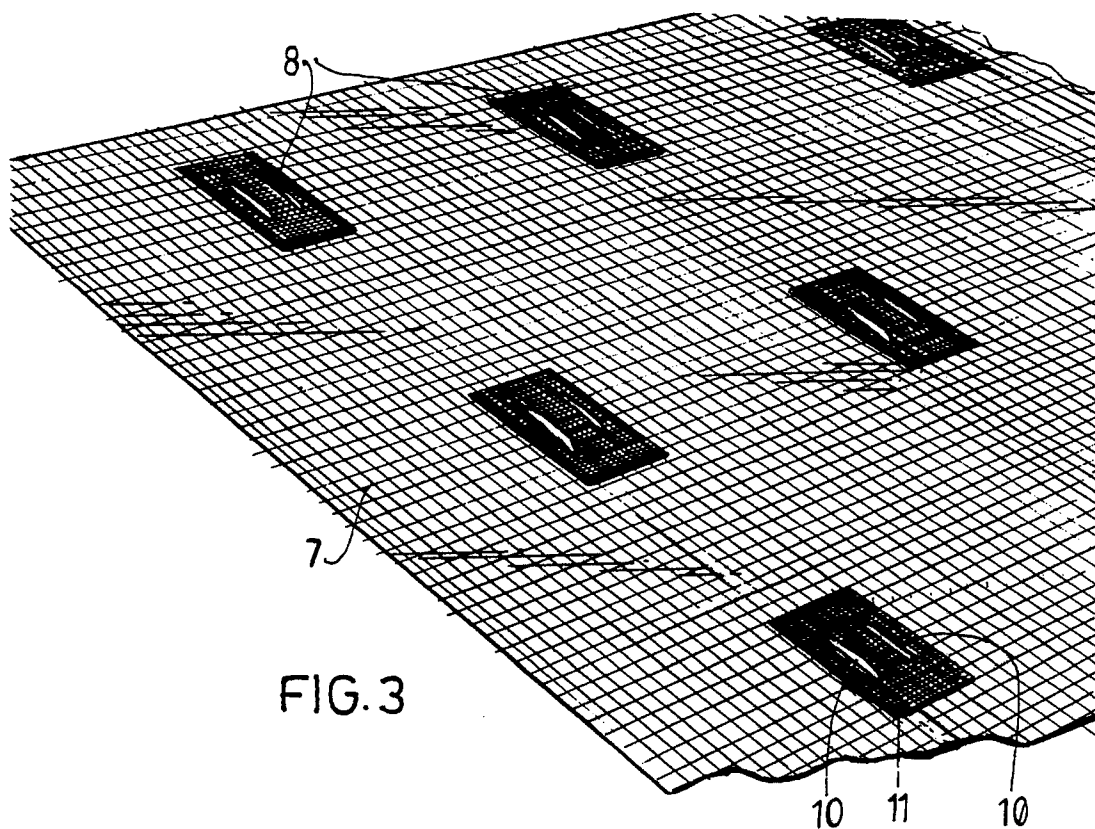
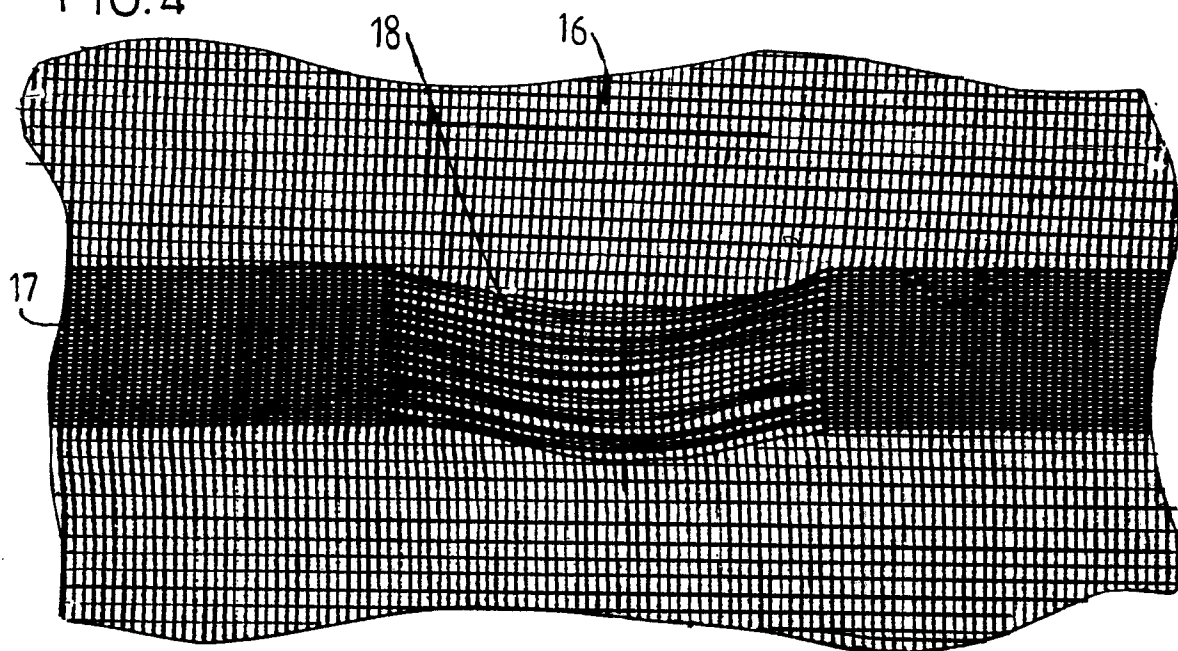
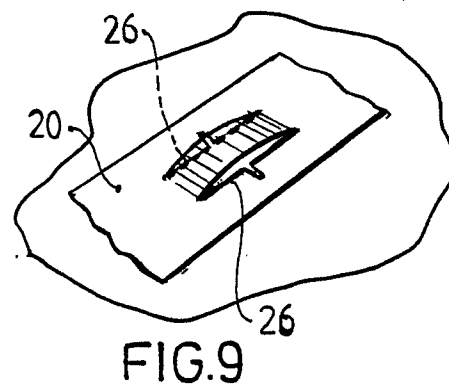
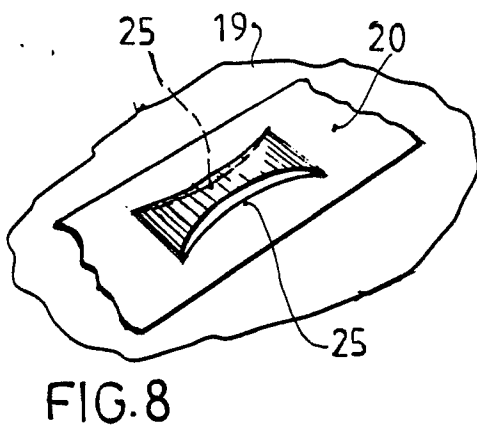
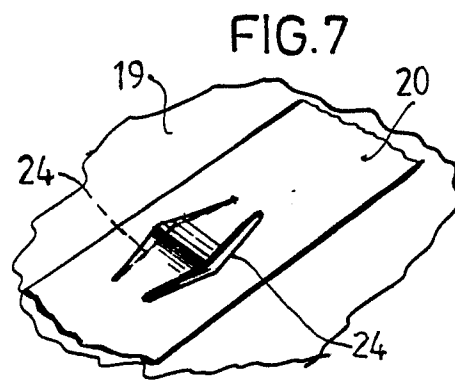
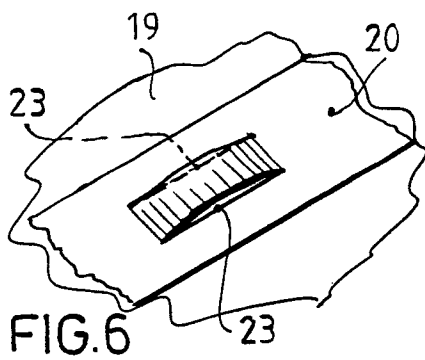
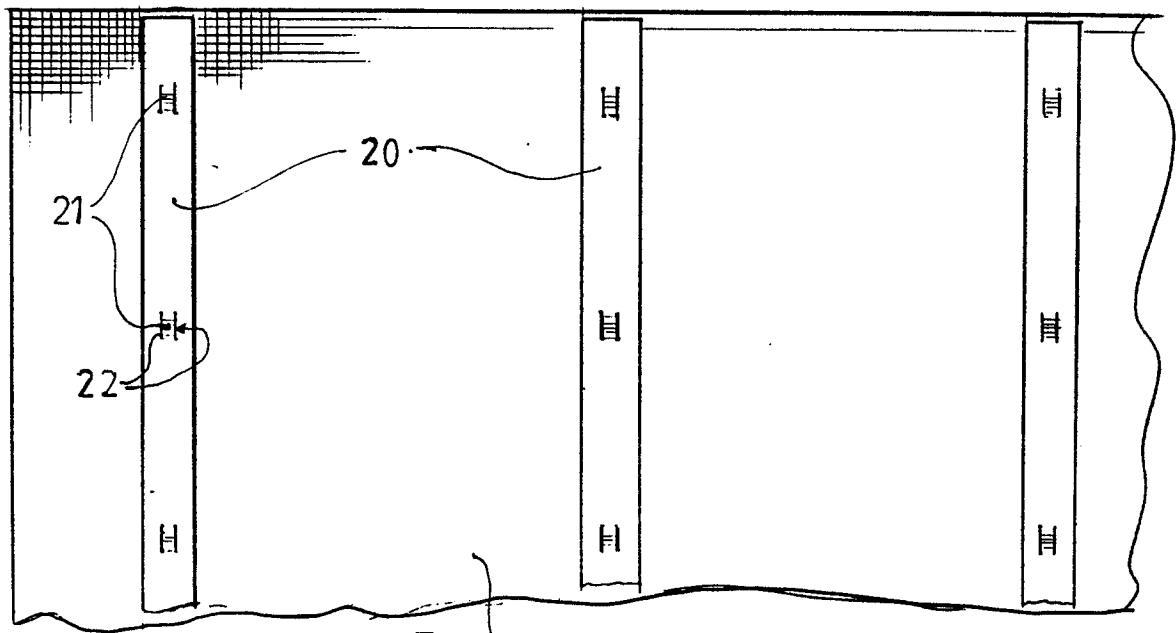


FIG.3





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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 (Int. Cl.4)
A	FR-A-2 121 955 (DAGUES-BIE) * Claims; figures *	1,5,6	E 04 G 21/28
A	DE-A-2 930 528 (NICOLON)		
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			E 04 G E 04 H A 01 G A 47 H D 03 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 04-03-1988	Examiner BOULEGIER C.H.H.
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	