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(54) **Cover or Tarpauline**

(57) A cover or tarpauline 1 is built up from a combination of a mat 2 made by weaving or plaiting relatively narrow strips of stretched synthetic plastics film or sheeting and a covering of synthetic plastics film adhered to at least one side of the mat 2. A strip 4 of a material at least equally strong as the combination, approximately 4—8 cm wide, is adhered to it on the border of at least one edge. A flexible cord 7 of high

tensile strength is embedded between the strip 4 and the combination, approximately in the longitudinal centre of the strip 4. A series of spaced holes 8 is provided, which inwardly adjoin the cord 7, each hole 8 being formed by a line cutting through the combination including the strip 4 adhered thereto. The line is preferably interrupted over at least some distance measured along the cord 7 to form a flap 9 which remains integrally connected to the combination-with-strip 4.

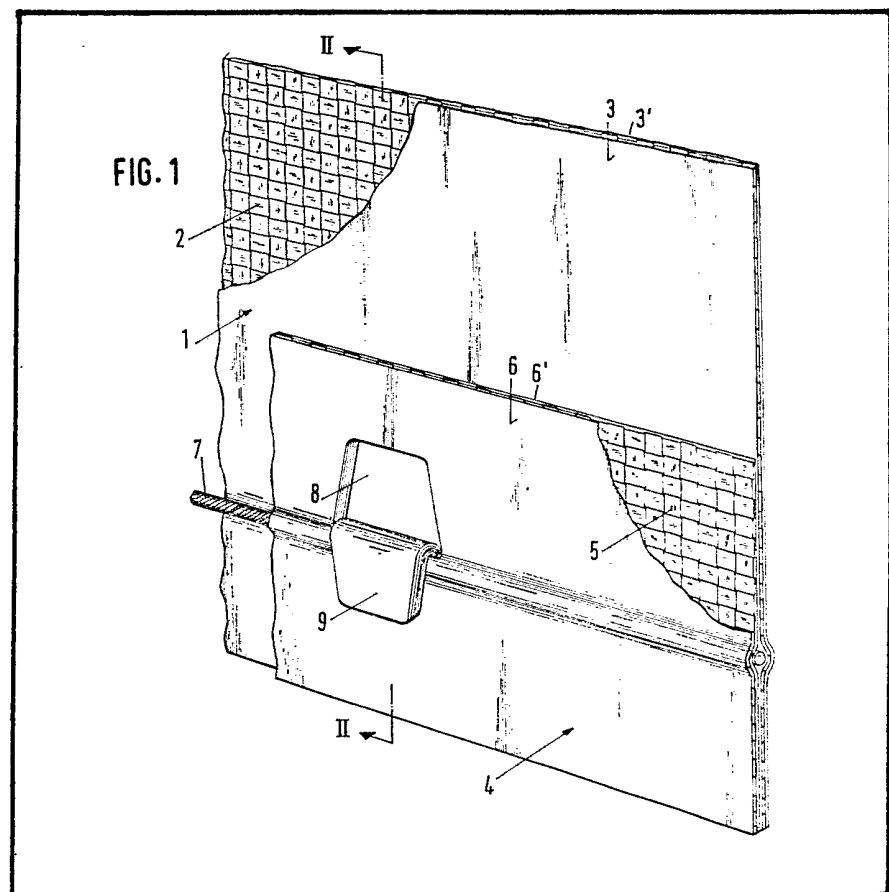


FIG. 1

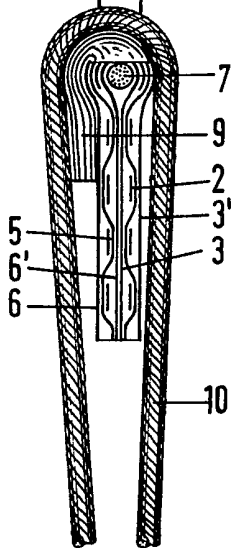
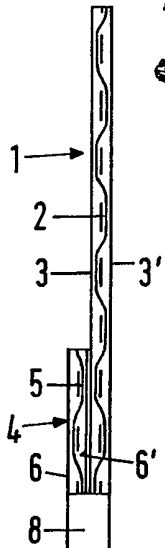
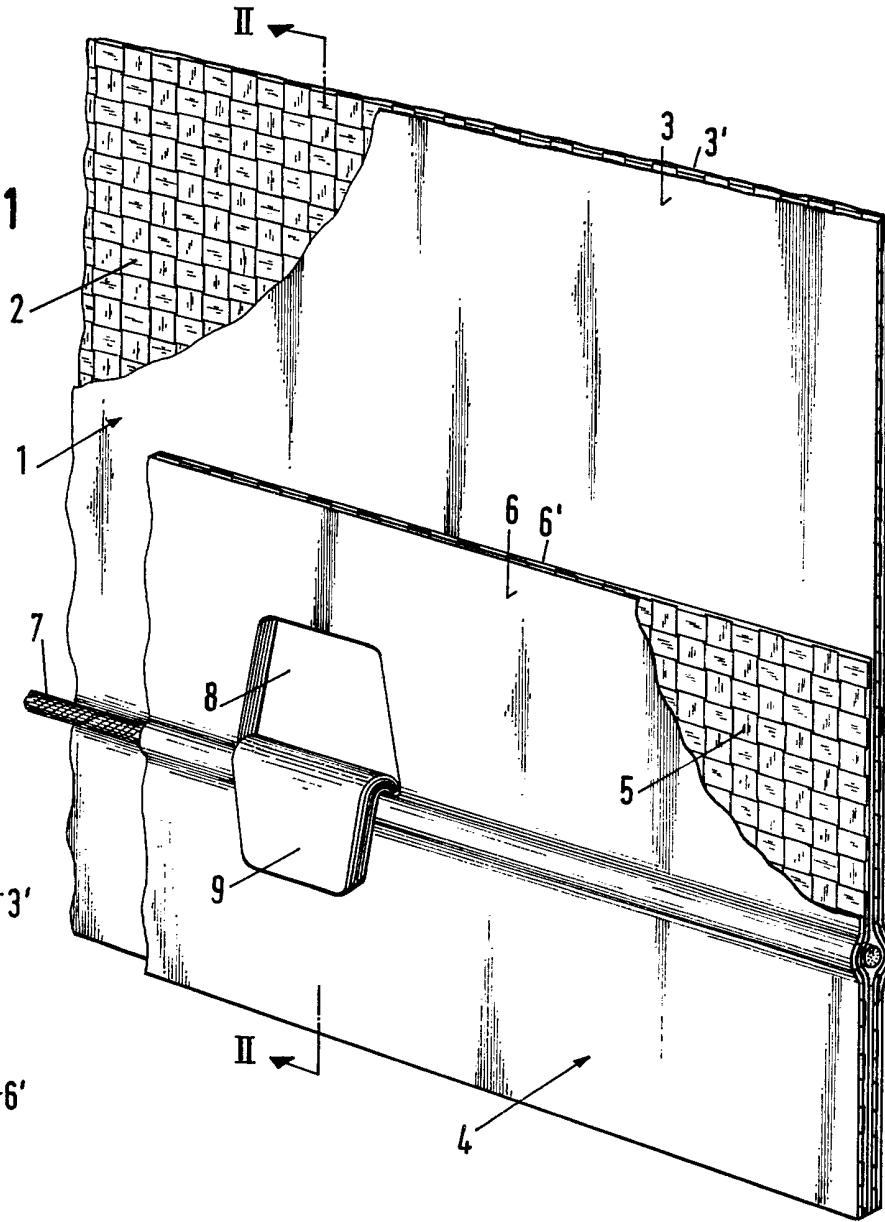


FIG. 2

SPECIFICATION

Cover, Tarpaulin, or the Like

This invention relates to a cover, tarpaulin or the like. The invention relates in particular to such a cover, tarpaulin or the like built up from a combination of a mat made by plaiting or weaving strips of stretched synthetic plastics foil or sheet material, said strips being approximately 3—7 mm wide and having a high tensile strength, and a covering of synthetic plastics foil adhered to at least one flat side of said mat, a series of spaced holes being provided along at least one edge of the combination for inserting a rope or the like therethrough for fastening the cover.

In the past, covers, tarpaulins and the like have often been made from textile fabric with an impregnation to make it water-tight. These covers were mostly fastened with the aid of holes, formed along the edges and reinforced with eyelets. If a good quality is needed, covers or tarpaulins of this kind are relatively expensive, and a weak point has always been the metal rings for forming the holes, in that these may become detached and lead to damage to the textile material.

With a view to the high cost, a recent development has been the use of synthetic plastics sheeting. Webs of such material have the disadvantage that when they are sufficiently flexible, they are apt to become torn when locally damaged. Moreover, in most cases the tensile strength of not too expensive synthetic plastics sheeting for this purpose is insufficient with moderate thicknesses.

In order that it may yet be possible to use relatively thin synthetic plastics sheeting, there has been a change-over to the use of plaited mats of narrow strips of a few millimeters, with which the risk of tears upon damage is much smaller, and a relatively high tensile strength is obtained when stretched synthetic resin sheeting is used for such strips. As the mat of plaited strips is of course not watertight, a covering of synthetic plastics foil or sheeting is adhered to at least one flat side thereof. One problem in this connection, however, is constituted by the holes for the insertion of the cord or the like with which the cover or tarpaulin can be fastened. Metal rings for such holes have been found to be unsatisfactory, and various other attempts at satisfactorily solving this problem have hitherto been unsuccessful.

It is an object of the present invention to provide a solution for this problem.

For this purpose, according to the invention, a strip of a material at least equally strong as the combination, and having a width in the order of 4—8 cm is adhered to the combination so as to border said edge, with a flexible cord of high tensile strength being embedded in between the combination and the strip approximately in the longitudinal centre thereof, each of said holes being formed inwardly of said cords by a line cutting through the combination including the

strip adhered thereto, said line substantially determining the circumference of the hole and having at least two points immediately adjoining the cord.

It has been found that by virtue of this manner of forming the holes covers, tarpaulins or the like thus made can be fastened in an extremely advantageous, rational manner without the risk of tearing.

In a preferred embodiment of the invention, the line cutting through the combination is interrupted over some length measured between the said points along the cord to form a flap which remains integrally connected to the material of the combination-and-strip throughout said length.

It has been found especially with regard to this preferred embodiment of the invention that the flaps formed in forming the holes have a protective effect along the edge along which they remain integrally connected to the material of the combination-and-strip, in the immediate vicinity of the embedded reinforcing cord, owing to which it has also been found that pulling a cord or the like through the holes does not lead to the hole being torn. For that matter, the flap is crumpled somewhat at the edge along which it is connected to the remainder of the cover or tarpaulin, so that there is some accumulation at this point of the material of which the flaps are made of, that is to say, the mat-cum-cover and the reinforcing strip, which is effective as a protective intermediate layer.

In a preferred embodiment of the invention, the marginal strip is built up similarly to the combination, that is to say, it also consists of a plaited mat of the kind referred to with a cover adhered thereto.

If desired, the marginal strip may be a folded hem of the combination, that is to say that the thickened edge is formed similarly to a doubled-back hem, with the difference, however, that the hem is not produced by sewing, but by adhering the hem strip to the mat.

The adhering, referred to hereinbefore, is effected, for example, with suitable heat-sealing apparatus.

The holes may have any given form, provided only care is taken that a portion of the hole edge extends in the immediate vicinity along the embedded cord. Round, angular and also semi-circular holes of otherwise random shape are suitable.

The invention will now be described in more detail with reference to the accompanying diagrammatic drawings, which illustrate, merely by way of example, a preferred embodiment according to the present invention. In said drawings:—

Fig. 1 is a perspective elevational view of a right-hand bottom corner portion of a cover according to the invention with some parts being broken away;

Fig. 2 is a part-sectional view, taken in the direction of the arrow on the line II—II of Fig. 1.

Referring to the drawing, there is shown a

cover, generally indicated at 1, consisting of a mat 2 of woven narrow strips of stretched synthetic resin foil or sheeting. The width of these stretched strips is in the order of 3—7 mm and, owing to
 5 being stretched, the material has a high tensile strength in the longitudinal direction of the strips. Adhered to mat 2 by means of heat-sealing, to both the front and back in Figure 1, are synthetic plastics foil coverings 3 and 3'. Covering 3 is
 10 partially broken away in the left-hand top corner of Figure 1 to show the subjacent mat 2.

Extending along the lower edge, as viewed in Figure 1, is a marginal strip 4 which in the present case is made of the same material as the portion
 15 of the cover hitherto described, namely, a mat 5 of the same composition as the mat 2 described above and coverings 6 and 6' adhered thereto. Covering 6 is partially broken away in the right-hand top corner at the front end of marginal strip
 20 4 to show the subjacent mat 5.

Marginal strip 4 has been heat-sealed to the combination of mat 2 with coverings 3 and 3' along the lower edge, as viewed in Figure 1, at the front of said combination. During the heat-
 25 sealing operation, a reinforcing cord 7 has been embedded between, on the one hand, the front of covering 3 and the back of covering 6', as viewed in Figure 1. In the present case cord 7 is a plaited cord of plastics material, which has a high tensile
 30 strength. Adjoining this cord at the top, as viewed in Figure 1, is a hole 8 of substantially trapezoidal configuration.

This hole has been formed by a cutting line through the combination of layers adhered
 35 together — in Figure 1 from the front backwards — in succession covering 6, mat 5, covering 6', covering 3, mat 2 and covering 3', the cutting line being interrupted through the portion of the circumference of hole 8 which borders cord 7,
 40 that is to say, at that point a flap 9 is formed, which accordingly also consists of the six layers 6, 5, 6', 3, 2 and 3', heat-sealed together.

The flap is also shown in cross-sectional view in Figure 2, which Figure further shows a rope 10
 45 inserted through hole 8 for lashing cover 1. Figure 2 shows how the flap forms a kind of padding along its connecting edge with the remainder of the cover between rope 10 and the upper confines of cord 7, as shown in Figures 1 and 2,
 50 owing to which the abrasive effect of rope 10 is absorbed to such an extent as to avoid the risk of tearing, while also, owing to the cushion effect of the connecting edge of the flap the tensile force

exerted by rope 10 is, to a certain extent,
 55 uniformly transmitted to the cord over a broadened zone of compressive action by rope 10. Owing to cord 7 being fixedly embedded, the force exerted by rope 10 is ultimately passed to the edge of the cover reinforced by means of the
 60 reinforcing strip 4.

It will be clear that various modifications and variants are possible without departing from the scope of the invention as described hereinbefore with reference to the example illustrated in the
 65 accompanying drawings.

Claims

1. A cover, tarpaulin or the like built up from a combination of a mat made by plaiting or weaving strips of stretched synthetic plastics foil or sheet
 70 material, said strips being approximately 3—7 mm wide and having a high tensile strength, and a covering of synthetic plastics foil adhered to at least one flat side of said mat, a series of spaced holes being provided along at least one edge of
 75 the combination for inserting a rope or the like therethrough for fastening the cover, characterized in that a strip of a material at least equally strong as the combination, and having a width in the order of 4—8 cm is adhered to the
 80 combination so as to border said edge, with a flexible cord of high tensile strength being embedded in between the combination and the strip approximately in the longitudinal centre thereof, each of said holes being formed inwardly
 85 of said cord by a line cutting through the combination including the strip adhered thereto, said line substantially determining the circumference of the hole and having at least two points immediately adjoining the cord.

2. A cover, tarpaulin or the like according to claim 1, wherein the line cutting through the combination is interrupted over at least some length measured between the said points along the cord to form a flap which remains integrally
 90 connected to the material of the combination-and-strip throughout said length.

3. A cover, tarpaulin or the like according to claim 1 or 2, wherein the marginal strip is built up similarly to the combination.

4. A cover, tarpaulin or the like according to claim 1, 2 or 3, wherein the marginal strip is a folded hem of the combination.

5. A cover, tarpaulin or the like substantially as described herein and with reference to and as
 105 illustrated in the accompanying drawings.