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A6D

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(54) Improvements in or relating to weather protective covers for sports surfaces

(57) An inflatable weather protective cover for a sports surface has a sheet member and a flexible skirt member (5) secured to the periphery of the sheet member. At the junction of the skirt member and the sheet member a flap (7) is formed to which anchor straps (11,23) are secured for anchoring the sheet member to the ground. Air introduced under the cover elevates the sheet member clear of the sports surface and enables the skirt member to act as a partial seal with the sports surface so that once the sheet member is elevated only a minimal air supply is required to maintain it in the elevated condition.

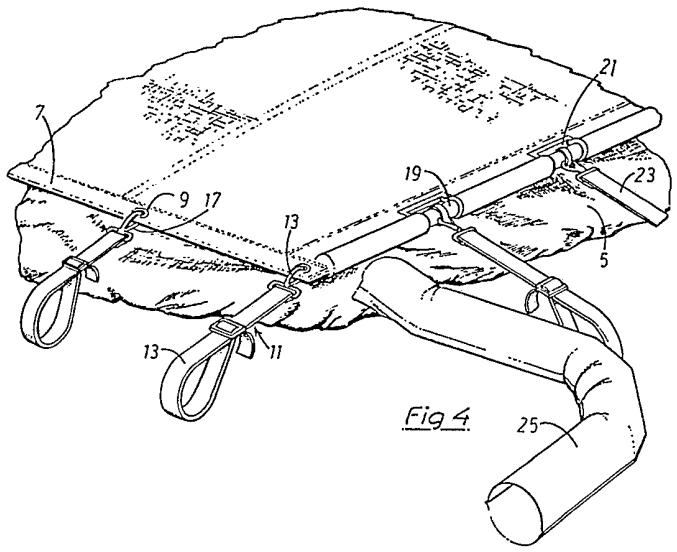


Fig 4

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The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.
The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

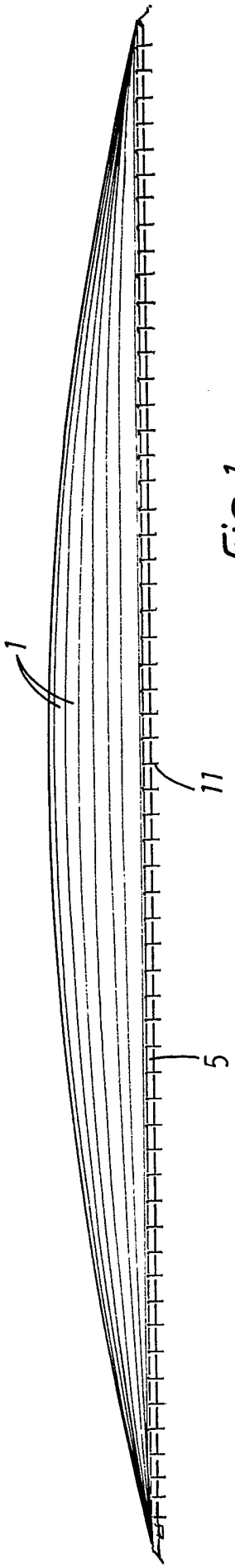


Fig 1

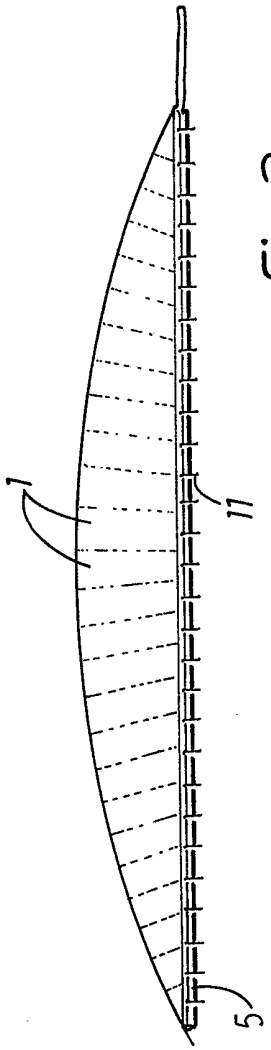


Fig 2

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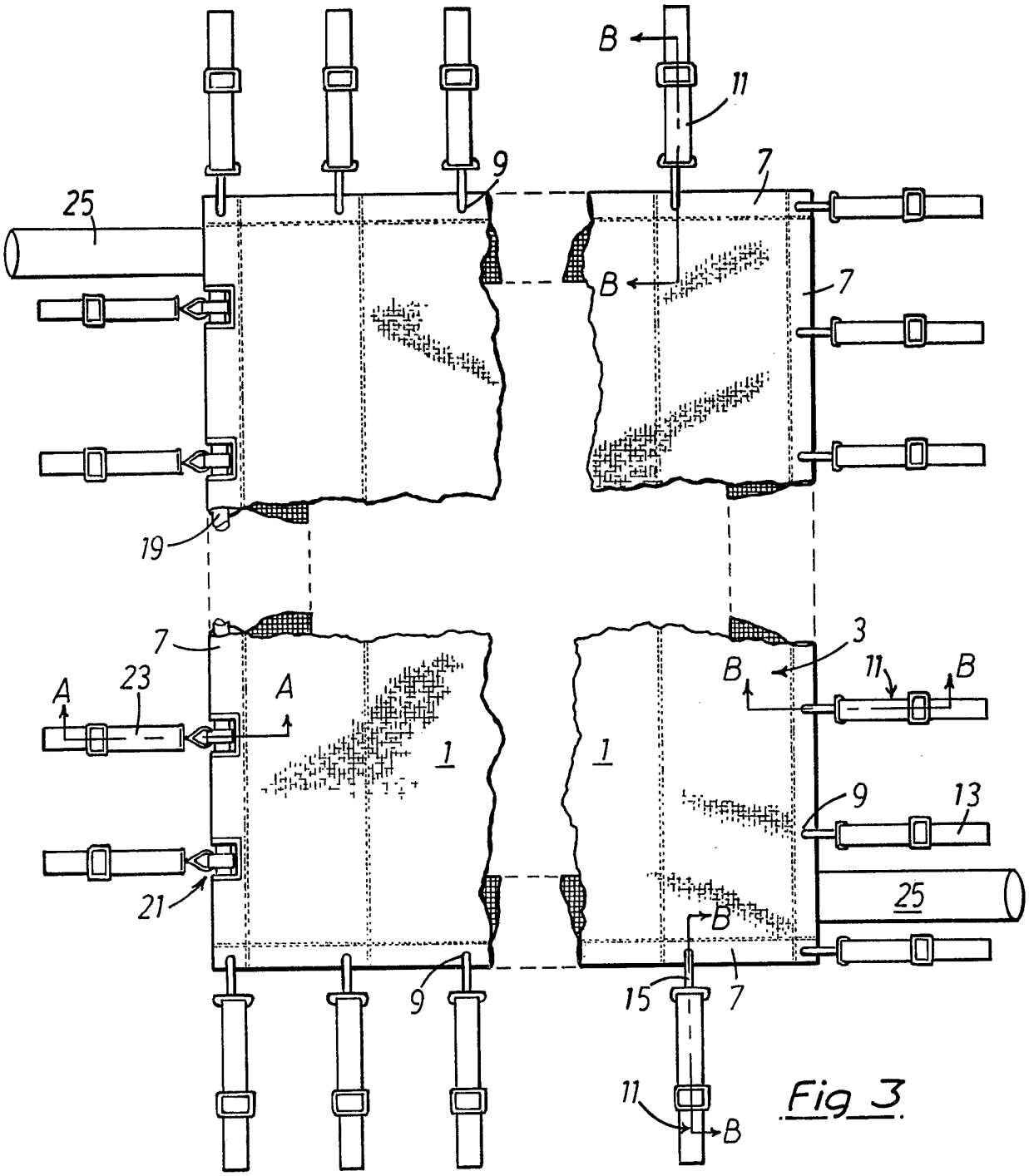


Fig 3

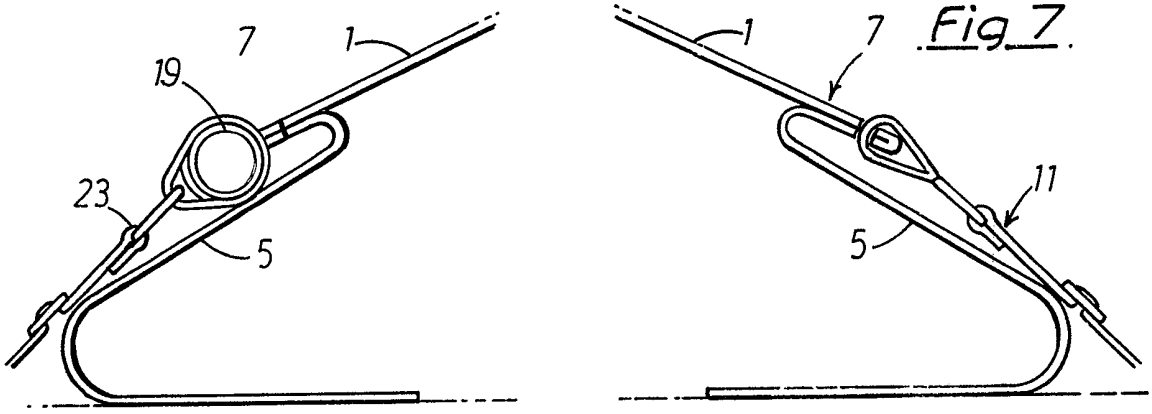


Fig 7

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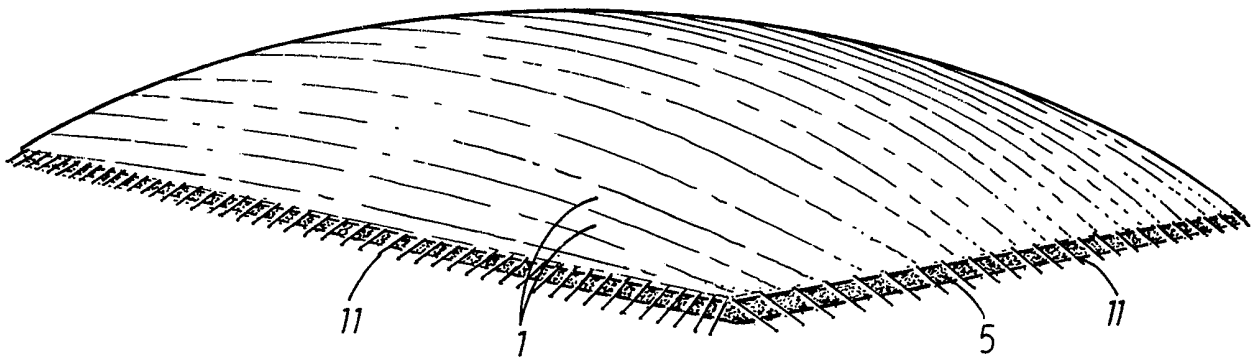


Fig 5

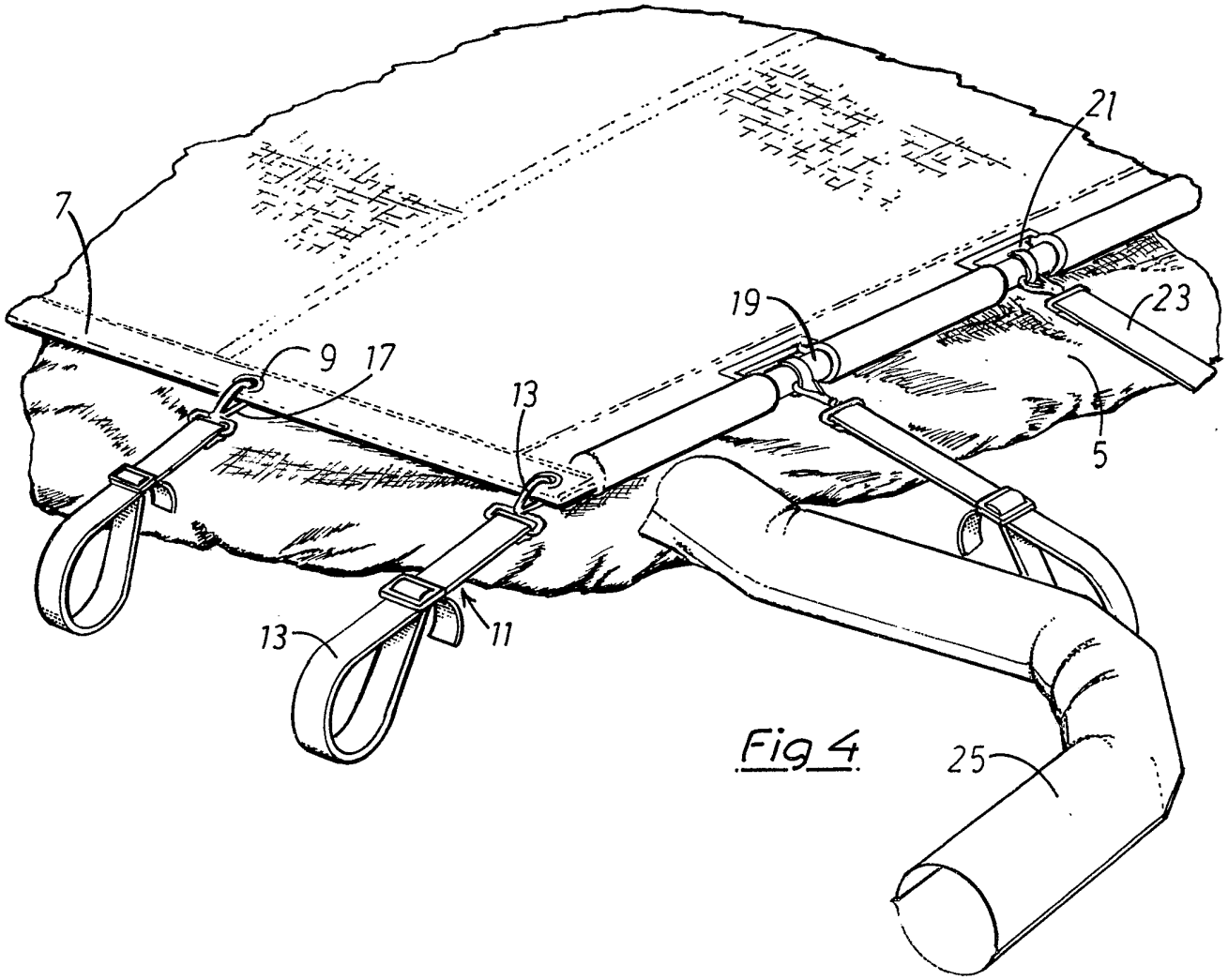


Fig 4

SPECIFICATION

Improvements in or relating to weather protective covers for sports surfaces

The present invention relates to a protective cover for a sports surface, and in particular to a cover which is inflatable. The cover has particular application for a grass tennis court but its use is not restricted to this particular application.

According to the present invention there is provided a weather protective cover for a sports surface comprising a substantially square or rectangular sheet member and a flexible skirt member secured around the periphery of the sheet member, a reinforced flap member being formed at the junction of the skirt member and the periphery of the sheet member, which flap member has location points for anchor straps which, in use, anchor the sheet member to the ground, the sheet member being of light weight material such that air introduced under the cover elevates the sheet member clear of the sports surface, and the flexible skirt member then depends thereon to form an effective partial seal with the sports surface so that, once elevated the sheet member requires reduced or minimal air supply thereunder to maintain it in the elevated condition.

Where the cover is intended to protect the playing surface of a tennis court, cricket pitch or football pitch, the sheet member is generally rectangular in shape. Conveniently, the sheet member is made up of a plurality of longitudinal sections which are secured together along adjacent edges. Where possible the seams are preferably formed by welding so as to produce a sealed seam.

The anchor straps serve to restrict the height that the periphery of the sheet member can lift from the ground when air is introduced, and thereby ensures that the skirt member can contact the ground to serve as a seal. If the pressure underneath the cover is too high, the skirt may be forced out, but this is prevented to a large extent by the anchor straps if the skirt is made sufficiently deep. A pressure of approximately .75 wg ( ) has been found sufficient to elevate the sheet member.

The sheet member is preferably made of a vinyl material.

The flap along one side of the sheet member is in the form of a loop which receives a tube upon which the cover can be rolled when not in use. Apertures are provided in the free edge of the flap and the anchor straps are arranged to pass around the tube. On the other three edges of the sheet member, the flaps are provided with eyelets, with which the anchor straps cooperate.

The perimeter of the sports playing surface which is to be protected by the cover is provided with anchor lugs disposed at spaced intervals therearound, with which the anchor straps cooperate.

Conveniently, at least one tubular extension is secured to the skirt for connecting to the output of an air pump for elevating the cover. More conveniently, two tubular extensions are provided at opposite corners of the cover.

In one embodiment a sealable door or entry flap is provided in one side of the cover to permit entry to the interior whilst elevated.

The present invention will now be described further, by way of example only with reference to the accompanying drawings, in which:-

Figure 1 is a side elevation with the protective cover elevated;

Figure 2 is an end view of the protective cover of Figure 1;

Figure 3 is a fragmentary plan view of the protective cover showing the corners;

Figure 4 is a perspective view of upper left hand corner of Figure 3;

Figure 5 is a perspective view of the elevated protective cover, and

Figures 6 and *7* are sections on lines A-A and B-B of Figure 3 respectively.

Referring now to the drawings, there is illustrated a weather protective cover suitable for protecting a tennis court. By changing the dimensions, covers suitable for protecting cricket wickets, and football pitches can be constructed. The cover comprises a plurality of longitudinal strips 1 which are secured together along adjacent edges to form a substantially rectangular sheet member, generally indicated as 3. The strips are preferably made from a vinyl material, and a specification of one suitable material is given hereinafter. The strips of the preferred material can be secured together by welding. As an alternative the strips may be stitched together. A flexible skirt 5 is fastened around the periphery of the sheet member 3 the purpose of which will be explained further hereinafter. The skirt 5 is secured to the periphery of the sheet member 3 in such a way that a flap 7 is formed at the junction. The flap is of double thickness and additional reinforcement may be provided if required. Along three sides of the sheet member eyelets 9 are disposed in the flap 7 at regularly spaced intervals. The eyelets receive anchor straps 11 which comprise a webbing strap 13 and a cleat 15 with spring closure bar 17.

Along the fourth side, the flap 7 forms a loop within which is received an elongate tube 19. The cover can be rolled up on the tube when not in use. The flap 7 has cut outs 21 disposed in the edges at intervals therealong and these permit anchor straps 23 to pass around the tube. The anchor straps 11 and 23 are, in use, attached to fixing lugs fixed to the or disposed in the ground surrounding the playing surface to be covered. The skirt 5 is made of the same material as the longitudinal strips 1.

Two tubular connectors 25 are provided at opposite corners of the cover and these branch from the skirt and are connected to a respective air pump.

In use, the cover is unrolled so as to lie over the sports playing surfaces, and each of the anchor straps 11, 23 are secured to anchor lugs. Air is then introduced under the cover from the air pumps and this causes the sheet member to lift.

The lift of the sheet member is controlled by the anchor straps 11, 23. The skirt 5 hangs down from the edge of the sheet member 3 and forms a partial seal with the ground. A pressure of 0.75 wg is sufficient to elevate the sheet member well clear of

the playing surface. By making the skirt of sufficient depth any tendency for the skirt to lift under pressure can be reduced. The skirt can be arranged to be restrained by the anchor straps 11, 23.

Because the material is of light weight it can be elevated quickly. The elevated cover serves as a weather protective cover for the sports surface. Any rain falling on the cover, which adapts a convex or part spherical shape on elevation, drains off to the sides. This has the advantage that a wet grass surface is not subject to the weight of a protective cover lying on it plus the weight of any water lying on the cover.

In one embodiment, a sealed flap or door is provided in the side of the cover to permit entry under the cover, for example to inspect the surface.

A suitable material is plastolene 827X which is a flexible vinyl sheeting reinforced internally with woven polyester fabric. The base is a polyester fabric and the coating is solid vinyl. The overal weight is 280 g.s.m.

CLAIMS

1. A weather protective cover for a sports surface comprising a substantially square or rectangular sheet member and a flexible skirt member secured around the periphery of the sheet member, a reinforced flap member being formed at the junction of the skirt member and the periphery of the sheet member, which flap member has location points for anchor straps which, in use, anchor the sheet member to the ground, the sheet member being of light weight material such that air introduced under the cover elevates the sheet member clear of the sports surface, and the flexible skirt member then depends thereon to form an effective partial seal with the sports surface so that, once elevated the sheet member requires reduced or minimal air supply thereunder to maintain it in the elevated condition.

2. A weather protective cover as claimed in claim 1 wherein the sheet member comprises a plurality of longitudinal sections which are secured together along adjacent edges.

3. A weather protective cover as claimed in claim 2 wherein the longitudinal sections are welded together.

4. A weather protective cover as claimed in Claim 2 wherein the longitudinal sections are stitched together.

5. A weather protective cover as claimed in any of claims 1 to 4 wherein the sheet member is made of a vinyl material.

6. A weather protective cover as claimed in any of claims 1 to 5 wherein the sheet member is made of plastolene 827X

7. A weather protective cover as claimed in any of claims 1 to 6 in which the flap member along one edge of the sheet member is in the form of a loop which receives a tube upon which said cover can be rolled when not in use.

8. A weather protective cover as claimed in claim 7 in which apertures are provided in the looped side of the flap member to allow anchor straps to pass around the tube.

9. A weather protective cover as claimed in any preceding claim in which at least one flap member is provided with eyelets with which the anchor straps co-operate.

10. A weather protective cover as claimed in claim 9 in which the flap members along three edges are provided with the eyelets.

11. A weather protective cover as claimed in any of claims 1 to 10 in which at least one tubular extension is secured to the skirt member for the purpose of introducing air under the cover and thereby elevating the cover.

12. A weather protective cover as claimed in any of claims 1 to 11 in which a sealable entry flap is provided in one side of said cover to permit entry to the interior whilst elevated

13. A weather protective cover constructed and arranged and adapted to operate substantially as herein described with reference to and as illustrated in the accompanying drawings.

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