

[54] **DEVICE FOR PROTECTING COVERINGS OF INFLATABLE TENNIS HALLS**

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[58] Field of Search..... 272/3; 273/29 R, 95 H, 273/29 B, 29 BA, 29 BB, 29 BC, 29 BD, 29 BE, 29 BF, 29 BG; 256/12.5, 19, 24; 52/2

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ABSTRACT

[57] This invention describes a device for protecting coverings of inflatable halls, particularly inflatable tennis halls (covered tennis courts) from mechanical damages, which coverings are provided on the inner hall side in the range in which hit tennis balls might possibly strike on the covering wall. The protective device is a resilient skirt mounted on stands, which extends at a spacing parallel to the inner hall wall and is of a height up to which tennis balls can be expected to impact in play an unprotected covering.

8 Claims, 2 Drawing Figures

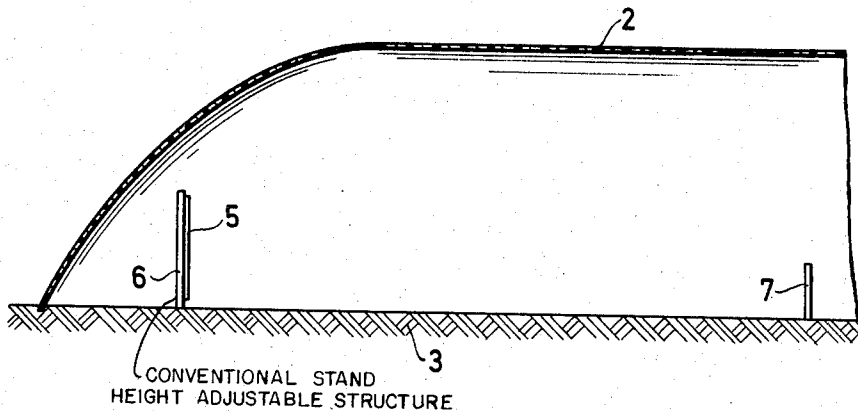


Fig. 1

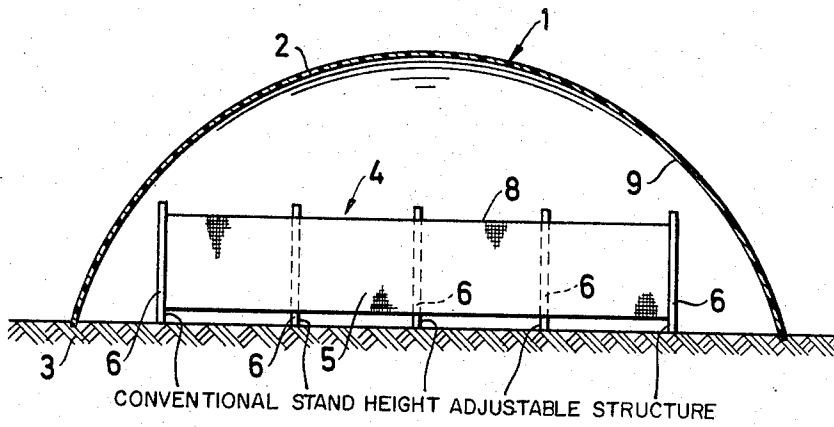
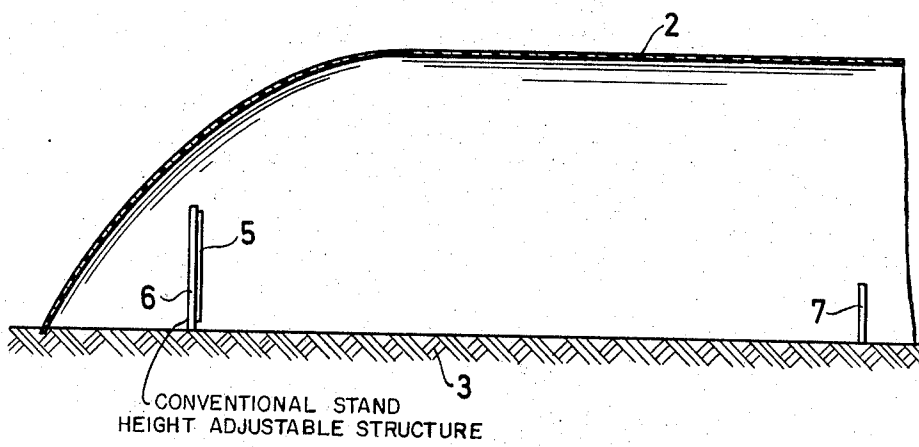


Fig. 2



DEVICE FOR PROTECTING COVERINGS OF INFLATABLE TENNIS HALLS

BACKGROUND OF THE INVENTION

It is known in connection with inflatable halls used as covered tennis courts to design the covering that envelops the inside of the hall in such a manner that a meshed foil is welded to the covering foil in the wall region extending upwardly from the hall base and against which tennis balls might possibly strike, in order to reinforce the covering material in this region and to prevent piercing of the covering. However, it is not only expensive to weld-on such a meshed foil, but it is always necessary to repeat it when the covering foil is worn and must be replaced by a new one. Moreover, it has turned out that when tennis balls strike the meshed foil with great impetus, the covering material is exposed to comparatively high shock loads in spite of a protection by the meshed foil, which can lead to damages on the covering material.

SUMMARY OF THE INVENTION

These difficulties in the prior art devices are overcome in this invention by providing a protective device which is a resilient skirt mounted on stands and extended at a spacing parallel to the inner hall wall and up to a height to which tennis balls can be expected to impact in play an unprotected covering.

The attachment of the impact skirt which may also be a net which, according to one embodiment of the invention, consists of meshed wire, on individual stands provides the advantage that the protective device can be mounted at a desired location on the hall base independently of the construction of the hall. Instead of meshed wire however, a continuous material web is also suited, such as a cloth.

The impact skirt prevents the hit tennis balls which usually have relatively high kinethic energy from contacting the relatively sensitive covering foil, and it simultaneously prevents tennis balls contacting it from rebounding into the court. The protective device can be arranged in front of each of the hall walls, but the two court end walls are the most important ones. Furthermore, the stands on which the skirt is mounted for instance by means of suspension can also be anchored in the hall base if this is necessary.

The object of this invention is therefore to provide a protective device against mechanical damage of the covering foil by tennis balls, by which not only the production of the inflatable hall is considerably simplified compared to the use of meshed foils and by which a better protection from damages by hit tennis balls can be attained than is possible with the aid of welded-on meshed foil, but which can be mounted also independently of the covering wall.

A further object is to provide a protective device the height of which can be adjustable, in order to thus provide a possibility to arrange the skirt at various levels as required. An additional object is to provide the stands on which the skirt is mounted with means to mutually support the stands so that they are also supported against the hall base by lateral or rear supports which prevent them from tipping over.

These and other objects will be apparent from the following description taken in conjunction with the attached drawings, in which shows:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 a cross-sectional view of an inflatable hall with a protective device according to the invention arranged at the front face, and

FIG. 2 a partial longitudinal section of the hall as shown in FIG. 1, from which the arrangement of the protective device at the hall end can be seen.

DETAILED DESCRIPTION OF THE DRAWINGS

As shown by the FIGS. 1 and 2 the inflatable hall 1 that is under inside positive pressure comprises covering 2, which is anchored in per se known manner laterally in the base 3.

A blower which is not shown maintains the positive hall pressure.

A protective device 4 is installed transversely to the longitudinal hall direction behind each court end, said device consisting of stands 6 arranged at a spacing adjacent one another and of a skirt-like material web 5 secured to the stands, the other rim of which extends approximately to the height, which it is expected that tennis balls hit beyond the court end will reach. The stands 6 are mounted on the hall base 3 and can be anchored in the base by suitable means or can be supported against the hall base with the aid of supports mounted laterally and at the rear, so that they will not tip over when balls strike the skirt 5. The skirt 5 can be mounted on the stands in such a manner that it depends down to the hall base 3, so that balls rolling beyond the court edge cannot roll behind the skirts.

The balls striking the skirt pass their energy of motion entirely onto the skirt without any forces whatever being transmitted in that regard to the covering 2 of the hall, because neither the stands nor the skirt are in communication with the covering. After striking the skirt, the balls drop down on the skirt without rebounding into the court, because the limp skirt is not capable of transmitting impact forces to the balls striking it.

The spacing of the stands 6 from the net 7 is selected such that a distance in accordance with regulations is maintained between the stands and the inner side of the covering. The height of the stands can be adjustable by conventional adjustable means in order to thereby be able to adapt the skirt height to the maximum height at which balls are expected to strike. The skirt itself can either be a continuous material web, i.e., a cloth-reinforced foil, or it can also be a net consisting e.g., of meshed wire.

A protection device of this kind cannot only be arranged at the front ends of the court, but also longitudinally of the court edges, so that then the hall covering surrounding the court is entirely covered by protection devices of this type.

This application is intended to cover variations, uses or adaptations of the invention following, in general, the principles of the invention and including such departures from the present disclosure as come within known or customary practice in the art to which the invention pertains, and as fall within the scope of the invention or the limits of the appended claims.

What is claimed is:

1. In combination with an inflatable structure to be used to cover a tennis court, said structure having substantially vertical side walls and a base; said base including said tennis court positioned thereon, said court being provided with end boundaries and side bound-

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aries, said court being further provided with a net structure positioned across the center thereof; in addition to said net structure, a plurality of protection devices which are positioned around at least some of the boundaries of said tennis court each of said protection devices comprising a plurality of stands mounted to said base at a distance spaced inwardly from said side walls toward said court and a resilient skirt mounted on said stands disconnected from and spaced from said side walls and substantially parallel thereto, said skirt having a height sufficient to ordinarily protect said side walls from tennis balls being hit thereagainst.

2. The combination as claimed by claim 1, in which said skirt mounted on said stands is arranged in front of each of said side walls.

3. The combination as claimed by claim 1, in which said skirt is suspended on the stands.

4. The combination as claimed by claim 1, in which the skirt is disposed behind the ends only of said tennis

court.

5. The combination as claimed by claim 1, in which the skirt contacts said base.

6. The combination as claimed by claim 1, in which the height of the skirt is adjustable by adjusting the stands.

7. In combination with an inflatable structure to be used to cover a tennis court, said structure having substantially vertical side walls and a base; stands mounted to said base at a distance spaced inwardly from said side walls toward said court and a resilient skirt mounted on said stands disconnected from and spaced from said side walls and substantially parallel thereto, said skirt having a height sufficient to ordinarily protect said side walls from tennis balls being hit thereagainst, said skirt being a continuous material web.

8. The combination as claimed by 7, in which the material web is a foil.

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