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Link to Claims Section

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Protection Structure

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ENGLISH-ABST:

A support structure that is fixed preferably to the ground and that extends above a parking space for a vehicle, boat, airplane or other vehicle. A support region is provided near the front corner of the present invention that serves to support a structure above a parking space, and then canvas, or another conventional material, is attached to prevent water and other elements from falling upon the parking space.

NO-OF-CLAIMS: 17

NO-DRWNG-PP: 3

SUMMARY:

FIELD OF THE INVENTION

[0001] The present invention has to do with structures that are erected for protection of automobiles, airplanes and the like. More specifically, the present invention is a protection structure that provides a minimal footprint and minimal interference with activities, while at the same time, offering proper protection.

BACKGROUND OF THE INVENTION

[0002] Although garages are more and more common in today's society, the need arises for parking structures that do not have the characteristics of a garage. In the past, carports and other structures have been erected to protect automobiles, airplanes, boats, et cetera, from being directly rained on and/or snowed on. However, carports still make a big footprint on a piece of property. For example, a carport that is erected to provide one parking space for an automobile typically has support posts that are positioned at its corners and along its sides. While the carport offers an open-air feeling compared to a garage, the support posts that are at the carport's corners and along its sides still interfere with getting in and out of an automobile that is parked underneath a carport.

[0003] Thus, there is a problem that exists with garages, as well as carports, when one parks a vehicle underneath. The problem essentially is that the support structure for the garage or carport often times interferes with access to the vehicle. Doors, for example, will hit the side of the garage, or open doors will hit support posts for the carport. This is obviously undesirable, not only because the carport or garage can be damaged, but also because the vehicle parked underneath the carport or garage can be damaged.

[0004] There is a need for a structure that can protect an automobile, or other vehicle, while allowing for easy movement in and outside of the vehicle, unobstructed access to the vehicle, while at the same time, having a minimal imprint in terms of physical space on the ground. Furthermore, while garages, carports and other similar devices certainly function well in terms of protecting vehicles from the environment, they are not terribly flexible because of the structural supports that are necessary to maintain them above the vehicles. For example, even a two, three or four-car garage can only receive vehicles parked in one pattern; meaning that each of the vehicles would need to take a customary parking space in the large garage. The walls of the garage become boundaries that are impenetrable, and thus, there are very definite entrances and exits to the garage.

[0005] Similarly, with a carport, although a carport usually does not have many walls, but merely support posts, the support posts and the danger of a vehicle hitting them when moving in and out of the carport, forces parking under a carport to be very regular in a predetermined spot. Even with a large carport that can handle two or three or four vehicles, each of the vehicles must park in their designated space, or if not, there is danger that they might collide with the support structures of the carport.

[0006] There is a need for a device that can serve as protected parking or storage for multiple vehicles, just as would a four or five or six-car garage, or just as would a four or five or six-car carport, but that has greater flexibility than a conventional garage or a conventional carport. Restated, there is a need for a device that provides protected parking while allowing for variable parking arrangements there under.

SUMMARY OF THE INVENTION

[0007] The present invention is a support structure that is fixed preferably to the ground and that extends above a parking space for a vehicle, boat, airplane or other vehicle. A support region is provided near the front corner of the present invention that serves to support a structure above a parking space, and then canvas, or another conventional material, is attached to prevent water and other elements from falling upon the parking space. Most notable in the present invention is that there are not a series of posts around the parking space, but merely a small area is provided for

footprinting the ground. Thus, various parking arrangements and free access to any vehicles parked under the present invention is simple. The present invention can be attached in a series, so that more than one parking space can be provided. When attached in a series, the present invention preferably has a modified support structure, but also has a small footprint on the ground.

DRWDESC:

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a side view of one embodiment of the present invention.

[0009] FIG. 2 is a side view of a second embodiment of the present invention.

[0010] FIG. 3 is an environmental view of multiples of the present invention attached in a series to one another.

DETDESC:

DETAILED DESCRIPTION OF THE PRESENT EMBODIMENT

[0011] With reference to FIG. 1, the present invention has vertical support (10) that is connected to horizontal support (20). Vertical support (10) serves to define one corner of the present invention, while horizontal support (20) serves to define the roof line of the present invention. First cross-support (30) is adjacent to horizontal support (20) and then first cross-support (30) angles down from its parallel disposition with horizontal support (20) to attach to vertical support (10) at the approximate midpoint along the height of vertical support (10). First cross-support (30) serves the purpose of transferring the load of horizontal support (20), and anything placed upon horizontal support (20) to vertical support (10), so that horizontal support (20) does not break off from its connection at vertical support (10).

[0012] Second cross-support (40) is attached to first cross-support (30) and angles down to the ground to provide additional support for first cross-support (30) and additional support for horizontal support (20). Third cross-support (50) extends from the midpoint of vertical support (10) and curves down to meet the ground. One end of third cross-support (50) is attached to vertical support (10) near the point where first cross-support (30) meets vertical support (10). The other end of third cross-support (50) meets the ground near the point where second cross-support (40) meets the ground. The purpose of third cross-support (50) is to provide additional stability for vertical support (10).

[0013] First plate (60) is positioned between third cross-support (50) and second cross-support (40). Third cross-support (50) allows the weight load of the present invention to be more evenly distributed and contributes to the present invention's structural integrity. Second plate (70) is positioned between first cross-support (30) and second cross-support (40). Second plate (70) serves to further share the load of the present invention between first cross-support (30) and second cross-support (40).

[0014] As shown in FIG. 1, it should be noted that vertical support (10), horizontal support (20), first cross-support (30), second cross-support (40) and third cross-support (50) are preferably made of conventional structural pipe, and that first plate (60) and second plate (70) are conventional steel plates.

[0015] The supports of the present invention, as aforementioned, are conventionally attached to one another. A piece of canvas, or any canopy-type material, can be placed atop horizontal support (20), so that the present invention protects the space beneath horizontal support (20) from rain, snow, sleet and other debris that the user would want to prevent from touching the vehicle stored under horizontal support (20). Of note is the fact that second cross-support

(40) is able to provide structural support for first cross-support (30) and horizontal support (20), but that second cross-support (40) does not interfere with a conventional door being opened from a conventional vehicle that would be parked underneath the present invention.

[0016] Second cross-support (40), rather than being completely vertical from its attachment point to first cross-support (30), actually curves, as shown in FIG. 1. As shown in FIG. 2, an alterative embodiment of the present invention, has all of the supports shown in FIG. 1, plus an additional support, fourth cross-support (80) that connects first cross-support (30) to the joint of vertical support (10) and horizontal support (20).

[0017] As shown in FIG. 3, a third embodiment of the present invention allows multiple parking spaces to be provided. While the supports in FIG. 3 are the same as the supports aforementioned in FIG. 1, roof support (90) is shown connecting front support (100) to back support (110). Canopy (120) is also shown in dotted lines, disposed over roof support (90). It should be noted that there are multiple roof supports (90) shown in FIG. 3 to provide structural support.

[0018] It should be further noted that the present invention, as shown in FIG. 1, is reproduced three times in FIG. 3, to serve as a vertical support structure for the rest of the present invention, as shown in FIG. 3.

ENGLISH-CLAIMS:
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I claim:

1. A protection structure comprising: a top rectangular covering member; and a series of members supporting said top rectangular covering member, wherein said series of members supporting said top rectangular covering member contact the ground with a small footprint and only support two corners of said top rectangular covering member.

2. The protection structure of claim 1, wherein said series of members supporting said top rectangular covering member are mounted to the ground.

3. The protection structure of claim 1, wherein said top rectangular covering member is constructed of a canopy-type material such as canvas.

4. The protection structure of claim 1, wherein said series of supporting members is comprised of a series of horizontal and vertical supports.

5. The protection structure of claim 1, wherein said protection structure is secured to said ground with anchor bolts.

6. The protection structure of claim 1, wherein said protection structure is modular and capable of combination with other protection structures in order to form a larger structure.

7. The protection structure of claim 1, wherein said structure has said minimal footprint so as to allow entry into said structure from nearly all directions.

8. The protection structure of claim 4, wherein said horizontal and vertical supports are curved so as not to intrude upon the usable space underneath said support structure.

9. A protection structure comprising: A protective solid top member; A series of arching members supporting said protective solid top member, wherein said arching members arch underneath said protective solid top member; and A mounting system securing said series of members supporting said protective solid top member to the ground.

10. The protection structure of claim 9, wherein said protective solid top member is constructed of a canopy-type material such as canvas.

11. The protection structure of claim 9, wherein said series of arching members is comprised of a series of horizontal and vertical supports anchored to said ground and attached to said protective solid top member.

12. The protection structure of claim 9, wherein said mounting system is secured to said ground with anchor bolts.

13. The protection structure of claim 9, wherein said protection structure is modular and capable of combination with other protection structures in order to form a larger structure.

14. The protection structure of claim 9, wherein said protection structure has a minimal footprint by which it is mounted to the ground.

15. The protection structure of claim 11, wherein said horizontal and vertical supports are curved so as not to intrude upon the usable space underneath said support structure.

16. The protection structure of claim 14, wherein said protection structure has said minimal footprint so as to allow entry into said structure from nearly all directions.

17. A protection structure, comprising: A roof member; Three support sections, each of said three support sections aligned along one edge of said roof member and having two feet; and Three support arches extending underneath said roof member perpendicularly from one edge of said roof member.

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