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(54) **SYSTEM FOR FORMING A PROTECTIVE STRUCTURE**

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(57) **ABSTRACT**

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A system for forming at least one pre-selected protective structure includes a predetermined number of elongated generally U-shaped channel members having a first predetermined length and formed from a first pre-selected material. A predetermined number of corner members having a predetermined shape and formed from a second pre-selected material are provided for connecting adjacent ends of a pair of such predetermined number of elongated generally U-shaped channel members together thereby forming at least a portion of a framework for the pre-selected protective structure. There is a predetermined covering member provided having each of a second predetermined length and a predetermined width and formed from a third pre-selected material and a plurality of resilient members having a third predetermined length engageable within such predetermined number of elongated U-shaped channel members for securing the covering member thereto and thereby forming the at least one pre-selected protective structure.

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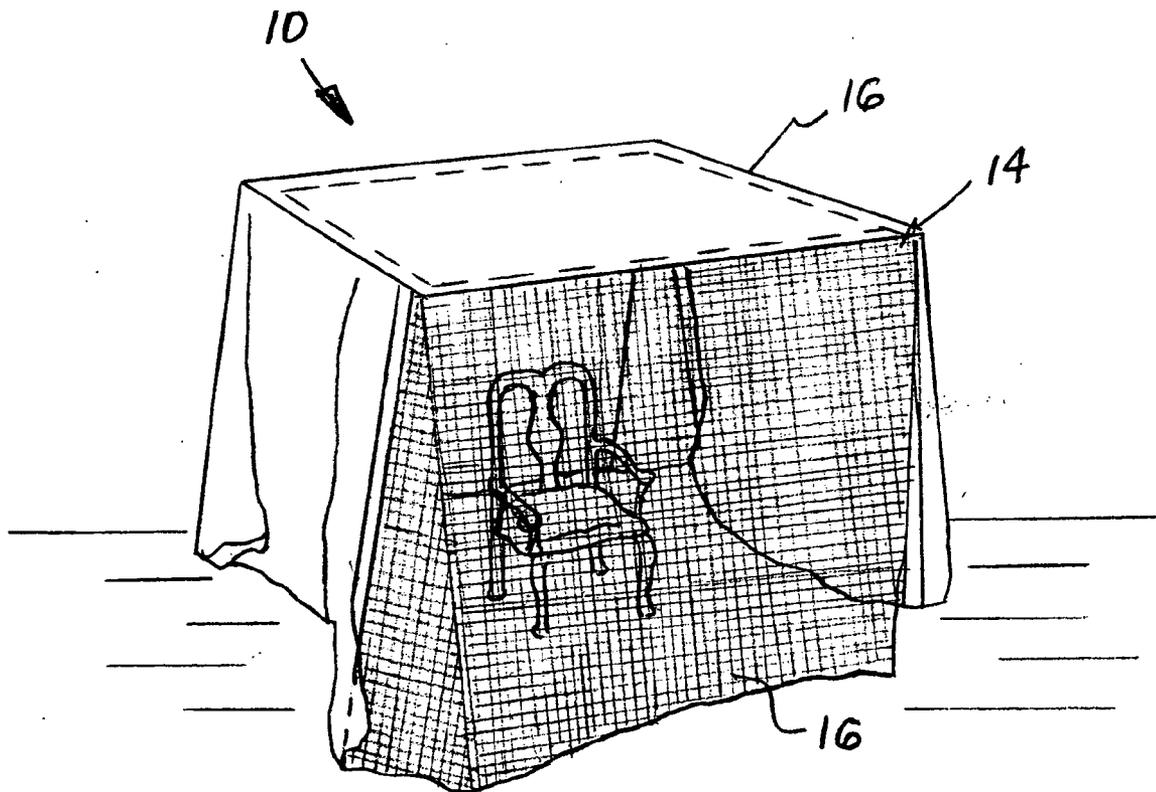
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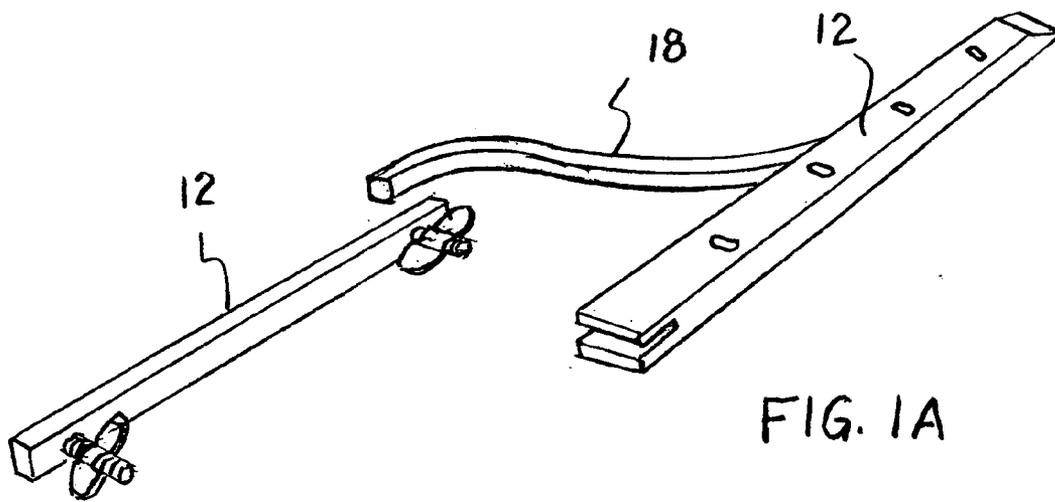
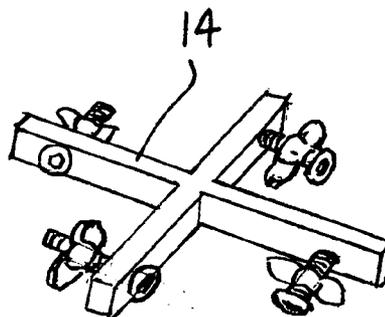
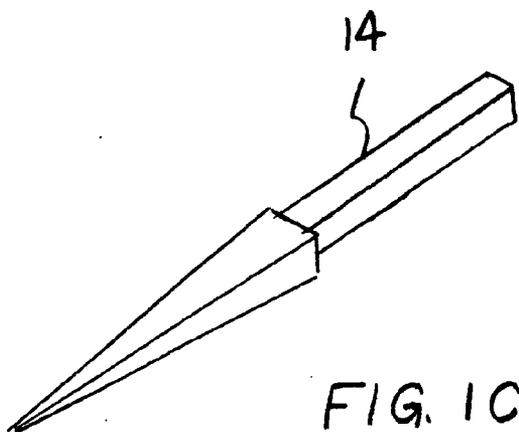


FIG. 1B



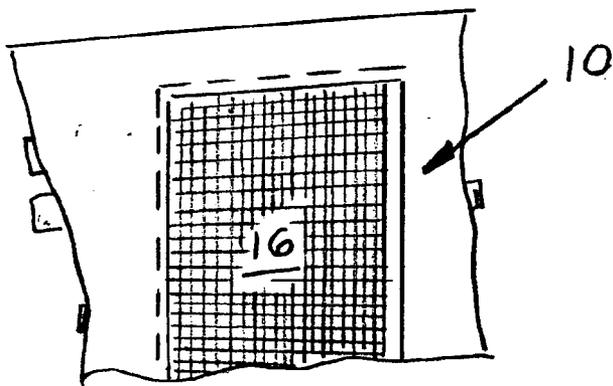


FIG 2

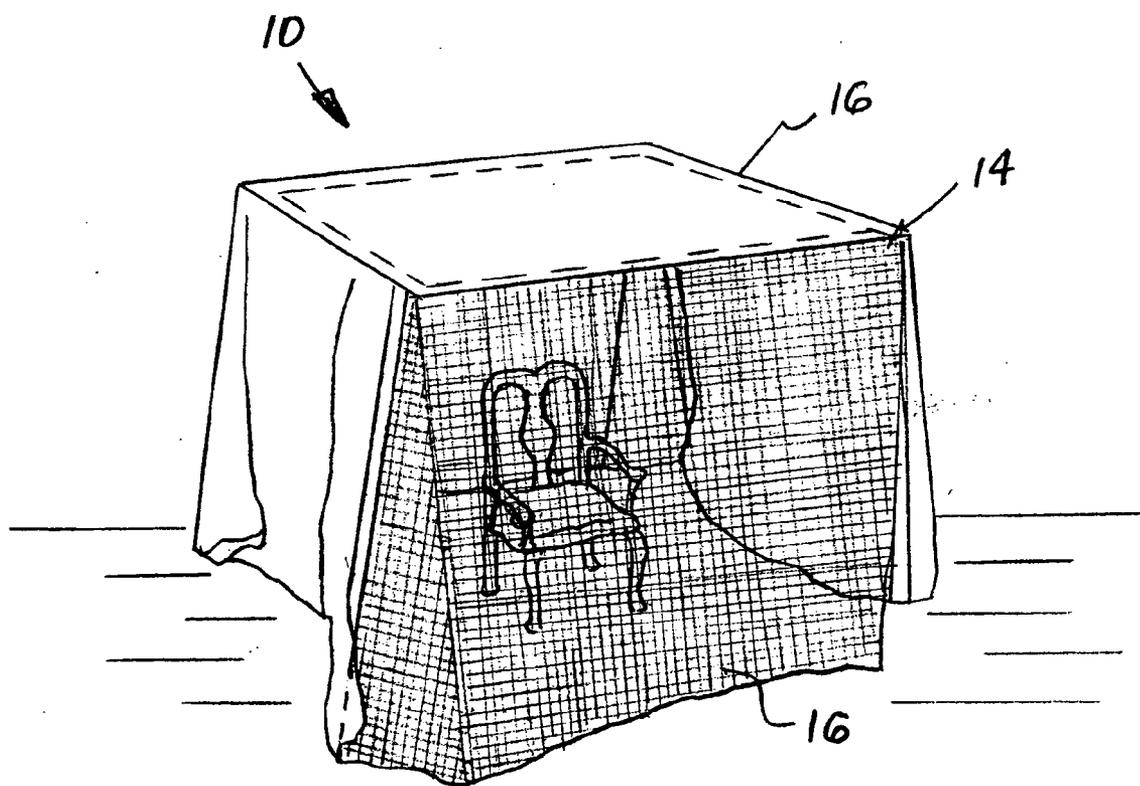


FIG. 3

SYSTEM FOR FORMING A PROTECTIVE STRUCTURE

CROSS REFERENCE TO RELATED APPLICATION

[0001] This patent application is related to and claims priority from U.S. Provisional Patent Application Ser. No. 60/953,827 filed Aug. 3, 2007.

FIELD OF THE INVENTION

[0002] The present invention relates, in general, to protective structures and, more particularly, this invention relates to a system for forming such a protective structure.

BACKGROUND OF THE INVENTION

[0003] Prior to the conception and development of the present invention, as is generally well known in the prior art, homeowners frequently decorate their outdoor areas with plants during as many months as possible. Accordingly, when an unexpected early frost is forecast the homeowner must move the plants indoors or cover them in some fashion to protect them from the being killed by the frost.

[0004] Additionally, it is well known that during cleaning, refurbishing and remodeling that many areas of the home are subject to dust and dirt.

[0005] The prior art that applicant is aware of is generally taught in U.S. Pat. Nos. 5,181,354; 4,411,300 and 4,380,140.

SUMMARY OF THE INVENTION

[0006] The present invention, according to a first aspect, provides a system for forming at least one pre-selected protective structure. This system includes a predetermined number of elongated generally U-shaped channel members having a first predetermined length and formed from a first pre-selected material. A predetermined number of corner members are required for connecting adjacent ends of a pair of such predetermined number of elongated generally U-shaped channel members together thereby forming at least a portion of a framework for the pre-selected protective structure. Such predetermined number of corner members, having a predetermined shape and are formed from a second pre-selected material. Additionally, there is a predetermined covering member having each of a second predetermined length and a predetermined width and formed from a third pre-selected material provided. Finally, there is a plurality of resilient members having a third predetermined length engageable within such predetermined number of elongated generally U-shaped channel members for securing the covering member thereto and thereby forming the at least one pre-selected protective structure.

[0007] In a second aspect, the present invention teaches a method of forming at least one pre-selected protective structure. The method includes the steps of selecting a protective structure to be formed. Thereafter, determining a number of elongated generally U-shaped channel members required to make such structure. Each one of the number of elongated generally U-shaped channel members having a respective first predetermined length and formed from a first pre-selected material. Further, determining a number of corner members required for connecting adjacent ends of a pair of the number of elongated generally U-shaped channel members together. Forming a framework for the pre-selected protective structure. Thereafter, placing a predetermined cover-

ing member over said framework and securing the covering member to the framework by engaging a number of resilient members within the elongated generally U-shaped channel members and thereby forming such at least one pre-selected protective structure.

OBJECTS OF THE INVENTION

[0008] It is, therefore, one of the primary objects of the present invention to provide a system and method for forming a protective structure which is relatively easy to erect.

[0009] Another object of the present invention is to provide a system for forming a protective structure which is relatively light weight.

[0010] Still another object of the present invention is to provide a system for forming a protective structure which can take the form of a single wall or one of a two sided, three sided or four or more sided rooms.

[0011] Yet another object of the present invention is to provide a system for forming a protective structure which can be manufactured from a variety of materials depending on the end use of the structure.

[0012] An additional object of the present invention is to provide a system for forming a protective structure which can have certain elements semi-permanently installed and other elements removably installed.

[0013] In addition to the various objects and advantages of the present invention described with some degree of specificity above it should be obvious that additional objects and advantages of the present invention will become more readily apparent to those persons who are skilled in the relevant art from the following more detailed description of the invention, particularly, when such description is taken in conjunction with the attached drawing figures and with the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. 1A is a perspective view of one the elements used in the framework constituting a portion of the system for forming a protective structure;

[0015] FIG. 1B is a perspective view of another one the elements used in the framework constituting a portion of the system for forming a protective structure;

[0016] FIG. 1C is a perspective view of still another one of the elements used in the framework constituting a portion of the system for forming a protective structure;

[0017] FIG. 1D is a perspective view of yet another one the elements used in the framework constituting a portion of the system for forming a protective structure;

[0018] FIG. 2 is a view illustrating the system for forming a single wall; and

[0019] FIG. 3 is a perspective view showing the system being used to form a four sided structure to be used as a tent.

BRIEF DESCRIPTION OF A PRESENTLY PREFERRED AND VARIOUS ALTERNATIVE EMBODIMENTS OF THE INVENTION

[0020] Prior to proceeding to the more detailed description of the present invention it should be noted that, for the sake of clarity and understanding, identical components which have identical functions have been identified with identical reference numerals throughout the several views illustrated in the drawing figures.

[0021] Reference is now made, more particularly, to FIGS. 1A-D and 2-3. Illustrated therein is a presently preferred embodiment of a system, generally designated 10, for forming at least one pre-selected protective structure. The system includes a predetermined number of elongated generally U-shaped channel members 12. Each one of the predetermined number of elongated generally U-shaped channel members 12 have a respective first predetermined length and are formed from a first pre-selected material.

[0022] There are a predetermined number of corner members 14 for connecting adjacent ends of a pair of such predetermined number of elongated generally U-shaped channel members 12 together thereby forming at least a portion of a framework for the pre-selected protective structure. Each of the corner members 14 have a predetermined shape and are formed from a second pre-selected material.

[0023] A predetermined covering member 16 having each of a second predetermined length and a predetermined width and formed from a third pre-selected material is provided.

[0024] Finally there is a plurality of resilient members 18 formed from a fourth pre-selected material and having a third predetermined length engageable within the predetermined number of elongated generally U-shaped channel members 12 for securing the covering member 16 thereto and thereby forming the at least one pre-selected protective structure. Such pre-selected protective structure is selected from the group consisting of a doorway, a window and at least one of a single wall, a double sided wall, a three sided wall and a wall having greater than three sides.

[0025] In the presently preferred embodiment of the invention the second predetermined length of the covering member 16 is greater than the first predetermined length of a respective one of such elongated generally U-shaped channel members 12. Additionally, the third predetermined length of the plurality of resilient members 18 is substantially equal to the first predetermined length a respective one of the elongated generally U-shaped channel members 12.

[0026] The first pre-selected material and the second pre-selected material are selected from the group consisting of plastic and metal. Preferably, such first pre-selected material and the second pre-selected material are aluminum. According to the most presently preferred embodiment of the invention each of the first pre-selected material and the second pre-selected material are substantially identical.

[0027] The third pre-selected material of the covering member is selected from the group consisting of cloth, nylon mesh, screen wire, canvas and various combinations thereof. Preferably, the third pre-selected material is canvas. Further, the fourth pre-selected material of the plurality of resilient members is selected from the group consisting of natural rubber, synthetic rubber, rope and various combinations thereof. Preferably, such fourth pre-selected material is synthetic rubber.

[0028] The present invention further provides a method of forming at least one pre-selected protective structure. The method includes the steps of first selecting a protective structure to be formed. Thereafter, determining a number of elongated generally U-shaped channel members required, each one of the number of elongated generally U-shaped channel members have a respective first predetermined length and are formed from a first pre-selected material. Additionally, the method includes determining a number of corner members required for connecting adjacent ends of a pair of such number of elongated generally U-shaped channel members

together. Then, forming a framework for the pre-selected protective structure. Then, placing a predetermined covering member over the framework and securing such covering member to the framework by engaging a number of resilient members within the elongated generally U-shaped channel members and thereby forming the at least one pre-selected protective structure.

[0029] While a presently preferred and various alternative embodiments of the present invention have been described in sufficient detail above to enable a person skilled in the relevant art to make and use the same it should be obvious that various other adaptations and modifications can be envisioned by those persons skilled in such art without departing from either the spirit of the invention and/or the scope of the appended claims.

I claim:

1. A system for forming at least one pre-selected protective structure, said system comprising:

- (a) a predetermined number of elongated generally U-shaped channel members, each one of said predetermined number of elongated generally U-shaped channel members having a respective first predetermined length and formed from a first pre-selected material;
- (b) a predetermined number of corner members, having a predetermined shape and formed from a second pre-selected material, for connecting adjacent ends of a pair of said predetermined number of elongated generally U-shaped channel members together thereby forming at least a portion of a framework for said pre-selected protective structure;
- (c) a predetermined covering member having each of a second predetermined length and a predetermined width and formed from a third pre-selected material; and
- (d) a plurality of resilient members formed from a fourth pre-selected material and having a third predetermined length engageable within said predetermined number of elongated generally U-shaped channel members for securing said covering member thereto and thereby forming said at least one pre-selected protective structure.

2. A system for forming at least one pre-selected protective structure, according to claim 1, wherein said pre-selected structure is selected from the group consisting of a doorway, a window and at least one of a single wall, a double sided wall, a three sided wall and a wall having greater than three sides.

3. A system for forming at least one pre-selected protective structure, according to claim 1, wherein said second predetermined length of said covering member is greater than said first predetermined length of a respective one of said elongated generally U-shaped channel members.

4. A system for forming at least one pre-selected protective structure, according to claim 1, wherein said third predetermined length of said plurality of resilient members is substantially equal to said first predetermined length a respective one of said elongated generally U-shaped channel members.

5. A system for forming at least one pre-selected protective structure, according to claim 1, wherein said first pre-selected material is selected from the group consisting of plastic and metal.

6. A system for forming at least one pre-selected protective structure, according to claim 5, wherein said first pre-selected material is metal.

7. A system for forming at least one pre-selected protective structure, according to claim 6, wherein said metal is aluminum.

8. A system for forming at least one pre-selected protective structure, according to claim 1, wherein said second pre-selected material is selected from the group consisting of plastic and metal.

9. A system for forming at least one pre-selected protective structure, according to claim 8, wherein said second pre-selected material is metal.

10. A system for forming at least one pre-selected protective structure, according to claim 9, wherein said metal is aluminum.

11. A system for forming at least one pre-selected protective structure, according to claim 1, wherein said first pre-selected material and said second pre-selected material are substantially identical.

12. A system for forming at least one pre-selected protective structure, according to claim 1, wherein said third pre-selected material of said covering member is selected from the group consisting of plastic, cloth, nylon mesh, screen wire, canvas and various combinations thereof.

13. A system for forming at least one pre-selected protective structure, according to claim 12, wherein said third pre-selected material is canvas.

14. A system for forming at least one pre-selected protective structure, according to claim 1, wherein said fourth pre-selected material of said plurality of resilient members is selected from the group consisting of natural rubber, synthetic rubber, rope and various combinations thereof.

15. A system for forming at least one pre-selected protective structure, according to claim 14, wherein said fourth pre-selected material is synthetic rubber.

16. A system for forming at least one pre-selected protective structure, according to claim 2, wherein said at least one pre-selected structure is a single sided wall.

17. A system for forming at least one pre-selected protective structure, according to claim 2, wherein said at least one pre-selected structure is a four sided structure.

18. A system for forming at least one pre-selected protective structure, according to claim 17, wherein said four sided structure is a tent.

19. A method of forming at least one pre-selected protective structure, said method comprising the steps of:

- (a) selecting a protective structure to be formed;
- (b) determining a number of elongated generally U-shaped channel members required, each one of said number of elongated generally U-shaped channel members having a respective first predetermined length and formed from a first pre-selected material;
- (c) determining a number of corner members required for connecting adjacent ends of a pair of said number of elongated generally U-shaped channel members together;
- (d) forming a framework for said pre-selected protective structure;
- (e) placing a predetermined covering member over said framework; and
- (e) securing said covering member to said framework by engaging a number of resilient members within said elongated generally U-shaped channel members and thereby forming said at least one pre-selected protective structure.

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