One object of the invention of the apparatus includes a frame, which includes at one end, on both the sides vertical beams. The vertical beams can have multiple horizontal beams that have attached to them multiple supporting posts that allow for the automobile part to be securely held in place and supported. The arrangement of the multiple supporting posts can vary in order to be able to support different automobile parts. The apparatus can include additional support portions to provide additional support for automobile parts. Additionally, vertical extensions can be used to provide for support of additional automobile parts.
APPARATUS FOR SUPPORTING AUTOMOBILE PARTS

BACKGROUND

[0001] This invention relates generally to an apparatus for supporting at least one or more automobile parts at a time, such as, hardtop roof, paneling, hood, bumper or door utilizing an arrangement of supporting posts for use in holding certain types of automobile parts based on the automobile part’s design to utilize the supporting posts.

SUMMARY

[0002] It is an object of the invention to provide a novel apparatus for providing support and storage for automobile parts. The support and storage is accomplished by providing a particular arrangement of supporting posts so that the automobile parts can be supported and thus stored when not in use. In particular, certain types of automobiles allow the user to remove certain parts, such as, roof panels or doors, even when the automobile is in use. The apparatus disclosed in this patent application allows the user to support and store the automobile parts in such a way to reduce stress on the automobile parts and protect the automobile parts from damage while at the same time limiting the storage space of the automobile parts.

[0003] It is a further object of the invention that the frame can be constructed in various schemes in order to support different sizes and types of automobile parts.

[0004] It is a further object of the invention that the frame can be constructed from a singular piece of framing material that is shaped accordingly to accomplish the design.

[0005] It is a further object of the invention that the apparatus includes a frame, which includes at one end, on both the sides vertical beams. The vertical beams can have multiple horizontal beams that are attached to them multiple supporting posts that allow for the automobile part to be securely held in place and supported. The arrangement of the multiple supporting posts can vary in order to be able to support different automobile parts.

[0006] It is a further object of the invention that the frame can include at both ends, a pair of vertical beams. The vertical beams can be connected with multiple horizontal beams.

[0007] The horizontal beams can have an arrangement of multiple supporting posts that allow the automobile part to be securely held in place and supported. The arrangement of the supporting posts can be varied in arrangement in order to be able to support different automobile part designs.

[0008] It is a further object of the invention to provide an apparatus that is collapsible when not in use in order to reduce the apparatus’ storage space.

[0009] It is further object of the invention to provide an apparatus that is portable and can be used by a single operator to support and store automobile parts.

[0010] It is a further object of the invention that the frame and the vertical beams can be connected with hinges so that the vertical beams can be collapsed when not in use, allowing for easier storage.

[0011] It is a further object of the invention that the frame and the vertical beams can be additionally supported with an angular portion of frame material.

[0012] It is a further object of the invention that the angular portion of the frame material can be constructed of two pieces of framing material connected by a hinge.

[0013] It is a further object of the invention that a pair of vertical beams and a horizontal beam can be constructed from a singular piece of framing material that is shaped accordingly to accomplish the design.

[0014] It is a further object of the invention that the vertical beams, horizontal beams and frame can be constructed from a singular piece of framing material that is shaped accordingly to accomplish the design.

[0015] It is a further object of the invention that a support piece be included on the frame to allow support for different sized automobile parts.

[0016] It is a further object of the invention that the vertical beams can have attached to them vertical extenders that can include multiple designs so that the apparatus can support additional automobile parts.

[0017] It is a further object of the invention that the apparatus can have rollers connected to each corner of the bottom of the frame so that the operator can move the apparatus more easily.

[0018] It is a further object of the invention that the supporting posts can have a layer of protective material, such as, but not limited to foam, in order to protect the automobile part. Additionally, certain portions or lengths of the apparatus can have a layer of the same or different protective material.

BRIEF DESCRIPTION OF THE DRAWINGS/FIGURES

[0019] FIG. 1 is a top perspective view of the automobile holder’s frame, a pair of vertical beams with a horizontal beam constructed from a singular piece of framing material, and a horizontal beam.

[0020] FIG. 2 is a top perspective view of the automobile holder’s frame constructed from a singular piece of framing material, a pair of vertical beams and multiple horizontal beams.

[0021] FIG. 3 is a top perspective view of the automobile holder’s frame, a pair of vertical beams and multiple horizontal beams.

[0022] FIG. 4 is a top perspective view of the automobile holder’s frame, vertical beams and a horizontal beam constructed from a singular piece of framing material and a horizontal beam.

[0023] FIG. 5 is a top perspective view of the automobile holder’s frame, vertical beams and a horizontal beam constructed from a singular piece of framing material and a horizontal beam.

[0024] FIG. 6 is a top perspective view of the automobile holder with a support beam showing an automobile door by ghost lines.

[0025] FIG. 7 is a top perspective view of the automobile holder with a support beam, which are both collapsible, in its erected position.

[0026] FIG. 8 is a top perspective view of the automobile holder with a pair of support beams showing an automobile door by ghost lines.

[0027] FIG. 9 is a top perspective view of the automobile holder with a pair of support beams, which are all collapsible, in its erected position.

[0028] FIG. 10 is a top perspective view of the automobile holder with a pair of support beams, in the collapsed position.

[0029] FIG. 11 is a top perspective view of the automobile holder with a pair of support beams, which are all collapsible, showing multiple automobile doors by ghost lines.
FIG. 12 is a top perspective view of the automobile holder with a plurality of support beams, which are all collapsible.

FIG. 13 is a top perspective view of the automobile holder with a plurality of support beams, in the collapsed position.

FIG. 14 is an enlarged view of the support design of the automobile part being supported by the post of the apparatus.

FIG. 15 is a top perspective of the automobile holder with the vertical beams having vertical extenders attached.

DETAILED DESCRIPTION

Referring now in particular, to FIG. 2, illustrates the apparatus (10). The apparatus (10) preferably includes a frame (12) is constructed from one piece of framing material. Attached to the frame (12) is the support portion (13) that is constructed of the vertical beams (14) and a horizontal beam (16). Attached to the vertical beams (14) of the support portion (13) is at least one lower horizontal beam (17).

Referring now in particular, to FIG. 3, illustrates the apparatus (10). The apparatus (10) preferably includes a frame (12) is constructed in a cross design. Attached to the frame (12) is the support portion (13) that is constructed of the vertical beams (14) and the horizontal beam (16). Attached to the vertical beams (14) of the support portion (13) is at least one lower horizontal beam (17).

Referring now in particular, to FIG. 4, illustrates the apparatus (10). The apparatus (10) preferably includes an open ended frame (11) and a support portion (13). The support portion (13) has a pair of vertical beams (14) attached to the open-ended frame (11), a top horizontal beam (16) and at least one lower horizontal beam (17) attached to the vertical beams (14). The vertical beams (14) and the top horizontal beam (16) of the support portion (13) and the open-ended frame (11) are constructed from one piece of framing material.

Referring now in particular, to FIG. 5, illustrates the apparatus (10). The apparatus (10) preferably includes an open ended frame (11) and a support portion (13) that is constructed from one piece of framing material. The support portion (13) consists of the vertical beams (14) and the horizontal beam (16). Attached to the support portion (13) is at least one lower horizontal beam (17).

Referring now in particular, to FIG. 6, illustrates the apparatus (10). The apparatus (10) preferably includes a frame (12), a pair of vertical beams (14) and a top horizontal beam (16), which makes up a support portion (13). The support portion (13) is attached to the frame (12). Attached to the support portion (13) is a lower horizontal beam (17). The top horizontal beam (16) and the lower horizontal beam (17) have a plurality of supporting posts (20). The shape of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part (22) to be supported. The arrangement of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part to be supported. The arrangement of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part (22) to be supported. The arrangement of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part (22) to be supported. The arrangement of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part (22) to be supported.
The arrangement of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part to be supported.

[0043] Referring now in particular, to FIG. 10, illustrates the apparatus (10) in the collapsed mode. The apparatus (10) preferably includes a frame (12) a pair of vertical beams (14) and a top horizontal beam (16), which makes up a support portion (13). The support portion (13) is attached to the frame (12) via a plurality of hinges (26). Attached to the support portion (13) is a lower horizontal beam (17). The support portion (13) is reinforced with a plurality of angular supports (18). The plurality of angular supports (18) is constructed with an upper portion (28) and a lower portion (30) that are connected by a hinge (32). The angular supports (18) are attached to the frame (12) and the support portion (13). Attached to the frame (12) by a plurality of hinges (40) is a second support portion (33). The second support portion (33) has a pair of vertical beams (34) and a horizontal beam (36). The top horizontal beam (16), the lower horizontal beam (17) and the second support portion (33) have a plurality of supporting posts (20). The shape of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part to be supported. The arrangement of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part to be supported. The arrangement of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part to be supported.

[0044] Referring now in particular, to FIG. 11, illustrates the apparatus (10). The apparatus (10) preferably includes a frame (12) a pair of vertical beams (14) and a top horizontal beam (16), which makes up a support portion (13). The support portion (13) is attached to the frame (12) via a plurality of hinges (26). Attached to the support portion (13) is a lower horizontal beam (17). The support portion (13) is reinforced with a plurality of angular supports (18). The plurality of angular supports (18) is constructed with an upper portion (28) and a lower portion (30) that are connected by a hinge (32). The angular supports (18) are attached to the frame (12) and the support portion (13). Attached to the frame (12) by a plurality of hinges (40) is a second support portion (33). The second support portion (33) has a pair of vertical beams (34) and a horizontal beam (36). The top horizontal beam (16), the lower horizontal beam (17) and the second support portion (33) have a plurality of supporting posts (20). The shape of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part to be supported. The arrangement of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part to be supported. The arrangement of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part to be supported.

[0047] Referring now in particular, to FIG. 14, illustrates an enlarged view of a portion of the apparatus (10). The support post (20) connected to the horizontal beam (16). The automobile part (22) includes the design part (24) that interacts with the support post (20) so that the automobile part (22) is supported by the apparatus.

[0048] Referring now in particular, to FIG. 15, illustrates the apparatus (10). The apparatus (10) preferably includes a frame (12), a pair of vertical beams (14) and a top horizontal beam (16), which makes up a support portion (13). The support portion (13) is attached to the frame (12). Attached to the support portion (13) is a lower horizontal beam (17). Attached to the frame (12) is a second support portion (33). The second support portion (33) has a pair of vertical beams (34) and a horizontal beam (36). Attached to the frame (12) is a third support portion (49). The third support portion (49) has a pair of horizontal beams (46), a pair of vertical beams (48) and a horizontal beam (50). The top horizontal beam (16), the lower horizontal beam (17), the second support portion (33) and the third support portion (49) have a plurality of supporting posts (20). The shape of the plurality of supporting posts (20) can be varied and is determined by the design of an automobile part to be supported.
CONCLUSION

References in the specification to “one embodiment,” “an embodiment,” “an exemplary embodiment,” etc., indicate that the embodiment described may include a particular feature, structure, or characteristic, but every embodiment may not necessarily include the particular feature, structure, or characteristic. Moreover, such phrases are not necessarily referring to the same embodiment. Further, when a particular feature, structure, or characteristic is described in connection with an embodiment, it is submitted that it is within the knowledge of one skilled in the art to affect such feature, structure, or characteristic in connection with other embodiments whether or not explicitly described.

The exemplary embodiments described herein are provided for illustrative purposes, and are not limiting. Other exemplary embodiments are possible, and modifications may be made to the exemplary embodiments within the spirit and scope of the disclosure. Therefore, the specification is not meant to limit the invention. Rather, the scope of the invention is defined only in accordance with the following claims and their equivalents.

The Detailed Description of the exemplary embodiments has revealed the general nature of the present disclosure that others can, by applying knowledge of those skilled in relevant art(s), readily modify and/or adapt for various applications such exemplary embodiments, without undue experimentation, without departing from the spirit and scope of the disclosure. Therefore, such adaptations and modifications are intended to be within the meaning and plurality of equivalents of the exemplary embodiments based upon the teaching and guidance presented herein. It is to be understood that the phraseology or terminology herein is for the purpose of description and not of limitation, such that the terminology or phraseology of the present specification is to be interpreted by those skilled in relevant art(s) in light of the teachings herein.

It is to be appreciated that the Detailed Description section, and not the Abstract section, is intended to be used to interpret the claims. The Abstract section may set forth one or more, but not all exemplary embodiments, and thus, is not intended to limit the disclosure and the appended claims in any way.

The present invention has been described above with the aid of functional building blocks illustrating the implementation of specified functions and relationships thereof. The boundaries of these functional building blocks have been arbitrarily defined herein for the convenience of the description. Alternate boundaries can be defined so long as the specified functions and relationships thereof are appropriately performed.

The breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims and their equivalents.

What is claimed is:

1. An apparatus for supporting automobile parts comprising:
   a frame;
   a support portion attached at or near an end of the frame;
   a lower horizontal beam attached to the support portion at a point between the horizontal beam of the support portion and the horizontal portion of the frame; and
   a plurality of supporting posts that are varied in their design depending on the type and design of an automobile part to be supported and the arrangement of the plurality of supporting posts can be varied depending on the type and design of the automobile part to be supported.

2. The apparatus of claim 1 wherein the apparatus further comprises a pair of angular supports, the pair of angular supports are attached to the frame and the support portion.

3. The apparatus of claim 1 wherein the apparatus further comprises a second support portion attached at or near the opposite end of the support portion; and the second support portion having a plurality of supporting posts that are varied in their design depending on the type and design of an automobile part to be supported and the arrangement of the plurality of supporting posts can be varied depending on the type and design of the automobile part to be supported.

4. The apparatus of claim 3 wherein the apparatus further comprises a third support portion attached at or near the opposite end of the support portion; and the third support portion having a plurality of supporting posts that are varied in their design depending on the type and design of an automobile part to be supported.

5. The apparatus of claim 4 wherein the apparatus further comprises a pair of vertical beams that can be slotted into the vertical portions of the support beam, the pair of vertical beams have attached to them at a height that may be varied an L-shaped extension.

6. The apparatus of claim 5 wherein the apparatus is further comprises a plurality of rollers attached to the bottom of the frame.

7. The apparatus of claim 5 wherein the apparatus has in selective portions a protective coating or protective foam that protects the supported automobile parts.

8. An apparatus for supporting automobile parts comprising:
   a frame;
   a support portion attached at or near an end of the frame with a plurality of hinges;
   a lower horizontal beam attached to the support portion at a point between the horizontal beam of the support portion and the horizontal portion of the frame; and
   a plurality of supporting posts that are varied in their design depending on the type and design of an automobile part to be supported and the arrangement of the plurality of supporting posts can be varied depending on the type and design of the automobile part to be supported.

9. The apparatus of claim 8 wherein the apparatus further comprises a pair of angular supports, which are constructed with an upper portion and a lower portion and connected by a hinge, the pair of angular supports are attached to the frame and the support portion.

10. The apparatus of claim 8 wherein the apparatus further comprises a second support portion attached at or near the opposite end of the support portion; and the second support portion having a plurality of supporting posts that are varied in their design depending on the type and design of an automobile part to be supported and the arrangement of the plurality of supporting posts can be varied depending on the type and design of the automobile part to be supported.

11. The apparatus of claim 10 wherein the apparatus further comprises a third support portion attached at or near the opposite end of the support portion; and the third support portion having a plurality of supporting posts that are varied in their design...
depending on the type and design of an automobile part to be supported and the arrangement of the plurality of supporting posts can be varied depending on the type and design of the automobile part to be supported.

12. The apparatus of claim 9 wherein the apparatus further comprises a pair of vertical beams that can be slotted into the vertical portions of the support beam, the pair of vertical beams have attached to them at a height that may be varied an L-shaped extension.

13. The apparatus of claim 12 wherein the apparatus is further comprises a plurality of rollers attached to the bottom of the frame.

14. The apparatus of claim 12 wherein the apparatus has in selective portions a protective coating or protective foam that protects the supported automobile parts.

15. An apparatus for supporting automobile parts comprising:
   a frame;
   a support portion attached at or near an end of the frame with a plurality of hinges;
   a lower horizontal beam attached to the support portion at a point between the horizontal beam of the support portion and the horizontal portion of the frame;
   a plurality of supporting posts that are varied in their design depending on the type and design of an automobile part to be supported and the arrangement of the plurality of supporting posts can be varied depending on the type and design of the automobile part to be supported;
   a second support portion attached at or near the opposite end of the support portion;
   and the second support portion having a plurality of supporting posts that are varied in their design depending on the type and design of an automobile part to be supported and the arrangement of the plurality of supporting posts can be varied depending on the type and design of the automobile part to be supported;
   a third support portion is connected to the frame at a distance between the support portion and the second support portion, the third support portion having a plurality of supporting posts that are varied in their design depending on the type and design of an automobile part to be supported and the arrangement of the plurality of supporting posts can be varied depending on the type and design of the automobile part to be supported; and
   a pair of vertical beams that can be slotted into the vertical portions of the support beam, the pair of vertical beams have attached to them at a height that may be varied an L-shaped extension.

16. The apparatus of claim 15 wherein the apparatus is further comprises a plurality of rollers attached to the bottom of the frame.

17. The apparatus of claim 15 wherein the apparatus has in selective portions a protective coating or protective foam that protects the supported automobile parts.

18. The apparatus of claim 15 wherein the frame of the apparatus is comprised of a one piece of framing material.

20. The apparatus of claim 15 wherein the frame and the support portion of the apparatus is comprised of one piece of framing material.

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