An article supporting device for use on the top member of a seat backrest comprising a base or first frame member and an internal or second frame member either fixedly attached, hinged, or recessed to the base or first frame member. The base or first frame member can either be attached to the seat backrest top member, or recessed therein. A kit for installing the device on the top portion of an existing automobile seat backrest is further disclosed.
SEAT BACK CADDY

CROSS-REFERENCES TO RELATED APPLICATIONS

None.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

None.

REFERENCE TO A MICRO-FICHE APPENDIX

None.

TECHNICAL FIELD

The embodiments of the present invention described herein relate generally to the field of accessories for use with seats to allow hanging of articles. Such seats have various applications and may be found in various modes of transportation such as trains, planes, buses, automobiles, and elsewhere. Specifically, the invention relates to apparatus mounted on or constructed within the top portion of a seat backrest for hanging articles comprising looped attachments such as purses, backpacks, shopping bags, and the like, or items hung on conventional hangers.

BACKGROUND OF THE INVENTION


DISCLOSURE OF INVENTION

The present invention provides securing apparatus for hanging articles comprising looped attachments such as purses, backpacks, shopping bags, and the like, or items hung on conventional hangers from the top portion of a seat backrest such that the article so hung rests against the side of the seat backrest. In this manner, persons seated around the seat will not be encumbered by the presence of the article on the floor or in another seat. Similarly, persons seated next to the article so hung may readily access it for retrieving necessary items.

The present invention comprises generally a supporting base or frame member having means for attachment to the top portion of the seat backrest. Upon or within the base, is an internal or second frame member fixedly attached, hinged, or recessed to the base or first frame member. When the internal or second frame member is operationally positioned, it is sufficient to safely secure the hung article. The apparatus of the present invention is suitable for either addition to existing seat backrests or manufacture into seat backrests.

Other features, advantages, and objects of the present invention will become apparent with reference to the following detailed description and accompanying figures.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a perspective view of an embodiment of the present invention, shown installed on the top portion of the seat backrest of an automobile seat and supporting a purse therefrom.

FIG. 2 is a top view of an embodiment of the present invention comprising a base supporting member, frame and split-wing toggle bolts suitable for assembly onto the top portion of a seat backrest.

FIG. 3 is a side view of an embodiment of the present invention comprising a base supporting member, frame and split-wing toggle bolts assembled onto the top portion of a seat backrest.

FIG. 4 is a front view of FIG. 3.

FIG. 5 is a top view of an embodiment of the present invention comprising a base supporting frame and closed hinged internal member suitable for manufactured assembly onto the top portion of a seat backrest.

FIG. 6 is a detailed view of the locking and unlocking mechanism of an embodiment of the present invention comprising a base supporting frame and closed hinged internal member suitable for manufactured assembly onto the top portion of a seat backrest.

FIG. 7 is a side view of an embodiment of the present invention comprising a base supporting frame and opened hinged internal member assembly manufactured onto the top portion of a seat backrest.

FIG. 8 is a front view of FIG. 7.

FIG. 9 is a top view of an embodiment of the present invention comprising a base supporting frame and closed hinged internal member suitable for manufactured assembly onto the top portion of a seat backrest.

FIG. 10 is a side view of an embodiment of the present invention comprising a base supporting frame and opened hinged internal member assembly manufactured onto the top portion of a seat backrest.

FIG. 11 is a front view of FIG. 10.

FIG. 12 is a top view of an embodiment of the present invention comprising a base supporting frame and closed, spring activated internal member assembly having a rectangular cross-section suitable for attachment onto the top portion of a seat backrest.

FIG. 13 is a side view of an embodiment of the present invention comprising a base supporting frame and open, spring activated internal member assembly having a rectangular cross-section attached to the top portion of a seat backrest using split-wing toggle bolts.

FIG. 14 is a side view of an embodiment of the present invention comprising a base supporting frame and open, spring activated internal member assembly having a circular cross-section attached to the top portion of a seat backrest using screws.

FIG. 15 is a top view of an embodiment of the present invention comprising a base supporting frame and closed, spring activated internal member assembly having a rectangular cross-section suitable for manufacture onto the top portion of a seat backrest.
FIG. 16 is a side view of FIG. 15.

FIG. 17 is a bottom view of FIG. 16.

FIG. 18 is a top view of an embodiment of the present invention comprising a base supporting frame and closed, spring activated internal member assembly having a circular cross-section suitable for manufacture onto the top portion of a seat backrest.

FIG. 19 is a side view of FIG. 18.

FIG. 20 is a side view of a typical resilient channel spring clip for use in the embodiment depicted in FIGS. 18 and 19.

FIG. 21 is a top view of an embodiment of the present invention comprising a base supporting frame and closed, spring activated internal member assembly having a circular cross-section suitable for manufacture onto the top portion of a seat backrest.

FIG. 22 is a side view of FIG. 21.

FIG. 20 is a side view of a typical coil spring for use in the embodiment depicted in FIGS. 21 and 22.

BEST MODE FOR CARRYING OUT THE INVENTION

The present invention for a securing apparatus on the top portion of a seat backrest comprises a supporting member 10 attached to or within the top portion 150 of the seat backrest 100 as shown generally in FIG. 1.

FIGS. 2-4, comprises a base supporting member 14 having a top surface, a bottom surface, a longitudinal centerline, two long sides of predetermined length, two short sides of predetermined length, and at least two holes, 22 and 24, through the base top and bottom surfaces, each hole, 22 and 24, at an equal distance from each short side on the base longitudinal centerline. The two holes, 22 and 24, are for securing the base supporting member 14 to the backrest 100 top side 150. A frame 16 is fixedly attached to the base supporting member 14 top surface and extends upwards perpendicular to the base supporting member 14. The frame 16 width is equal in dimension to the short sides of the base supporting member 14. The frame 16 length is less than the base member 14 long sides, and the frame 16 length is centered on the base member 14 longitudinal centerline such that the holes, 22 and 24, through the base member 14 are at equal distances beyond the frame 16 length. The base supporting member 14 bottom can be adhered to the top 150 of the seat backrest 100 using plynobond or similar industrial adhesive. As shown in FIGS. 2-4, attaching means between the base supporting member 10 and the backrest 100 can comprise split-wing toggle bolts 18 and 20, or similar attaching apparatus, which are received by the frame assembly within the seat backrest 100 as secured thereto. The base supporting member 14 and frame 16 can be constructed of metal or plastic.

As depicted in FIGS. 5-8, a second preferred embodiment of the present invention suitable for manufacture into a seat backrest comprises a frame 30 of an open rectangular box of predetermined length, width, and depth, having a bottom, two long sides, two short sides, an open top, wherein the frame 30 bottom has a top side and a bottom side, and wherein the frame 30 rests within the top surface 150 of the seat backrest 100 such that the frame 30 is flush with the top surface 150.

As further illustrated in FIGS. 5-8, the frame 30 houses an internal member 32 comprising rectangular box of predetermined length, width, and depth, having a bottom, a top, two long sides, two short sides, and which is sized to fit within the frame 30 and rotate therein to a position above and perpendicular to the frame 30. When the internal member 32 is closed its top side is flush with the top surface 150 of the seat backrest 100. A pair of equally opposed, locking and unlocking assemblies 34 and 36 allow the frame internal member 32 in an unused position to be received into the frame 30 and to rest flat on the top 150 of the seat backrest 100. The frame 30 and internal member 32 are attached by a hinged means 38. The frame 30 further comprises a recess 40 for ease of operating the internal member 32 from the closed position flush with the top 150 of the seat backrest 100, FIG. 5, to a fully open position, perpendicular to the top 150 of the seat backrest 100, FIG. 8.

A preferred locking/unlocking assembly 36 is depicted in FIGS. 6 and 8. This assembly comprises a first and second curved, biased member, 34 and 36, each having uniformly flat top and bottom sides, two ends, and identically sized channels 48 having two ends conforming to the members' curves through the member sides, wherein the first and second members, 34 and 36, are identical in size and curved shaped. One end of a first member 34 is attached at a position 42 on one long side of the internal member 32 and one end of the other member 36 is attached to a position corresponding to the other long side of the internal member, and each unattached end of the curved members has a locking notch at the end of curved channel. A first and second pin of equal sizes, 44, is fixedly attached to the inside surface of each of the long sides of the frame 30 such that the pins 44 oppose each other and define a horizontal plane parallel to the top surface 150 of the seat backrest 100. Each pin 44 is sized to fit and be received within the channel 36 of each curved member, 34 and 36, and guide the curved member, 34 and 36, through its length of travel as the internal member 32 opens and closes within the frame 30, FIGS. 6 and 8.

Each assembly, 34 and 36, is biased such that when the internal member is fully opened in a position perpendicular to the top 150 of the seat backrest 100, FIG. 8, the assembly locks onto the pin 44. Each assembly, 34 and 36, is released by pressure simultaneously exerted on each respective assembly towards the side of the frame 30, and the internal member travels to a flush position the top 150 of the seat backrest 100, FIGS. 5 and 8. The frame 30, internal member 32, and assemblies 34 and 36 can be constructed of metal or plastic.

FIGS. 9-10 illustrate a third preferred embodiment of the present invention suitable for manufacture into a seat backrest comprising a frame 50, and internal member 52, and rotational hinge means whereby the internal member 52 connects to the frame 50, and can be manually pivoted from an open position perpendicular to the frame 50 and top 150 of the seat backrest 100, FIGS. 10 and 11, to a closed position flush with the top 150 of the seat backrest 100, FIGS. 9 and 11. The frame 50 is recessed into the top 150 of the seat backrest 100, FIGS. 10 and 11. The frame 50
further comprises a recess 60 for ease of operating the internal portion 52 from the closed position flush with the top 150 of the seat backrest 100, FIGS. 9 and 11, to a fully open position, perpendicular to the top 150 of the seat backrest 100, FIGS. 10 and 11. The frame 50 and internal member 52 can be constructed of metal or plastic.

[0039] As depicted in FIGS. 12-23, a fourth preferred embodiment of the present invention suitable for manufacture into, or attachment to, a seat backrest comprises a base member 70 having a top mounting surface, a center point, a housing of predetermined length, width, depth and uniform cross-sectional area connected to the mounting surface. The housing defines a longitudinal centerline which is co-existent with the mounting surface center point. Two holes are drilled through the base member mounting surface, each hole at an equal distance from the base center point.

[0040] As further illustrated in FIGS. 12-23, a spring locking and unlocking mechanism allows an internal member 72 of predetermined size and uniform cross-sectional area to be received and reside within the housing of the base member 70. The locking/unlocking mechanism allows the internal member 72 to be recessed into the seat backrest and flush to the top 150 of the backrest when the internal member 72 is not in use. The internal member 72 may have a rectangular cross-section, FIGS. 13 and 16, or a circular cross-section, FIGS. 14, 21-22. Other cross-sections, such as square [not shown], triangular, or elliptical [not shown] may be practiced within the scope of this embodiment of the present invention. The spring locking and unlocking mechanism may be a typical coil spring within the internal member 72, FIGS. 13-17, 21-23. Alternately, the spring locking and unlocking mechanism may be a resilient channel clip within the internal member 72, FIGS. 18-20. As shown in FIGS. 13-14, attaching means between the base supporting member 70 and the backrest top 150 can comprise split-wing toggle bolts 18 and 20, as depicted in FIG. 13, screws, 80 and 82, as illustrated in FIG. 14, or similar attaching apparatus, which are received by the frame assembly within the seat backrest top 150 and secured thereto. The base 70 and internal member 72 can be constructed of metal or plastic.

[0041] The above description is included to illustrate the operation of the preferred embodiments and is not meant to limit the scope of the invention. The scope of the invention is to be limited only by the following claims. From the above discussion, many variations will be apparent to one skilled in the relevant art that would yet be encompassed by the spirit and scope of the invention.

1. Apparatus for seat back caddy affixed to a top surface of a seat back rest, comprising an extension above and perpendicular to the top surface near an edge of the top surface whereby articles comprising looped attachments including purses, backpacks, shopping bags, and items on conventional hangers may be hung.

2. The apparatus of claim 1, comprising:

   a rectangular base comprising a top surface, a bottom surface, a longitudinal centerline, two long sides of predetermined length, two short sides of predetermined length, and two holes through the base top and bottom surfaces, each hole at an equal distance from each short side on the base longitudinal centerline;

   a frame of predetermined height, length and width, fixedly attached to the base top surface and extending upwards perpendicularly therefrom, whereby the frame width is equal in dimension to the base short sides, the frame length is less than the base long sides, and the frame length is centered on the base longitudinal centerline such that the holes through the base are at equal distances beyond the frame length; and

   means for fixedly attaching the base bottom surface to the seat back rest top surface.

3. The apparatus of claim 2, wherein means for attaching the base bottom surface to the top surface of the seat back rest is chosen from a group consisting of p liên bond, split-wing toggle bolts, and screws.

4. The apparatus of claim 2, wherein the base and frame comprise metal and plastic.

5. The apparatus of claim 1, suitable for manufacture into a top surface of a seat back rest, comprising:

   a frame;

   an internal member housed within the frame;

   means to position the internal member above and perpendicular to the frame;

   means to secure the internal member positioned above and perpendicular to the frame; and

   means for fixedly attaching the frame into the top surface of the seat back rest.

6. The apparatus of claim 5, wherein the frame comprises an open rectangular box of predetermined length, width, and depth, having a bottom, two long sides, two short sides, an open top, wherein the frame bottom has a top side and a bottom side, and wherein the frame rests within the top surface of the seat back rest such that the frame is flush with the top surface.

7. The apparatus of claim 6, wherein the internal member comprises a rectangular box of predetermined length, width, and depth, having a bottom, a top, two long sides, two short sides, and which is sized to fit within the frame and rotate therein to a position above and perpendicular to the frame, and wherein when the internal member is closed its top side is flush with the top surface of the seat back rest.

8. The apparatus of claim 7, wherein means to position the internal member above and perpendicular to the frame and means to secure the internal member positioned above and perpendicular to the frame are chosen from a group consisting of:

   an external hinge attached to one short side of the frame and one short side of the internal member;

   an internal hinge attached to one short side of the internal member and top side of the frame bottom;

   means for locking/unlocking the internal member in a position above and perpendicular to the frame; and

   a recessed portion of the frame short side opposite the attached hinge allowing access to the internal member when it is in a closed position flush with the top surface of the seat back rest.

9. The apparatus of claim 8, wherein means for locking/unlocking the internal member above and perpendicular to the frame further comprises:
a first and second curved, biased member each having uniformly flat top and bottom sides, two ends, and identically sized channels having two ends conforming to the members’ curves through the member sides, wherein the first and second members are identical in size and curved shaped, wherein one end of a first member is attached at a position on one long side of the internal member and one end of the other member is attached to a position corresponding to the other long side of the internal member, and wherein each attached end of the curved members has a locking notch at the end of curved channel therein;

an inside surface on each frame long side;

a first and second pin of equal sizes, wherein each pin is fixedly attached to the inside surface of each of the long sides of the frame such that the pins oppose each other and define a horizontal plane parallel to the top surface of the seat back rest top surface of the seat back rest, wherein each pin is sized to fit and be received within the channel of one curved member and guide the curved member through its length of travel as the internal member travels from closed to open position within the frame and to fit and be received within the locking notch of the channel end; and

whereby the internal member is released from an open, locked position by pressure simultaneously exerted on each respective curved, biased member towards each frame long side.

10. The apparatus of claim 4, wherein the base, internal member, means to position the internal member above and perpendicular to the frame, and means to secure the internal member positioned above and perpendicular to the frame comprise metal and plastic.

11. The apparatus of claim 1 for seat back caddy suitable for attachment to a top surface of a seat back rest, comprising:

a base member comprising a top mounting surface having a center point, a housing of predetermined length, width, depth and uniform cross-sectional area connected to the mounting surface, whereby the housing defines a longitudinal centerline which is co-existent with the mounting surface center point, and two holes through the base member mounting surface, each hole at an equal distance from the base center point;

an internal member of predetermined size and uniform cross-sectional area to be received and reside within the housing;

means to position the internal member above and perpendicular to the base member;

means to secure the internal member positioned above and perpendicular to the base member; and

means for fixedly attaching the base member to the top surface of the seat back rest.

12. The apparatus of claim 11, wherein means to position the internal member above and perpendicular to the base member and means to secure the internal member positioned above and perpendicular to the base member are chosen from a group consisting of:

coil spring within the internal member; and

resilient channel clip within the internal member; and

means for locking/unlocking the internal member in a position above and perpendicular to the base member.

13. The apparatus of claim 11, wherein means for attaching the base member to the top surface of the seat back rest is chosen from a group consisting of ploibond, split-wing toggle bolts, and screws.

14. The apparatus of claim 11, wherein the base member, internal member, means to position the internal member above and perpendicular to the frame, and means to secure the internal member positioned above and perpendicular to the frame comprise metal and plastic.

15. The apparatus of claim 11, wherein the internal member cross-section defines geometries selected from the group consisting of circle, square, rectangle, triangle, and ellipse.

16. The apparatus of claim 1, suitable for manufacture into a top surface of a seat back rest, comprising:

a base member comprising a top mounting surface having a center point, a housing of predetermined length, width, depth and uniform cross-sectional area connected to the mounting surface, whereby the housing defines a longitudinal centerline which is co-existent with the mounting surface center point;

an internal member of predetermined size and uniform cross-sectional area to be received and reside within the housing;

means to position the internal member above and perpendicular to the base member;

means to secure the internal member positioned above and perpendicular to the base member; and

means for fixedly attaching the base member into the top surface of the seat back rest.

17. The apparatus of claim 16, wherein means to position the internal member above and perpendicular to the base member and means to secure the internal member positioned above and perpendicular to the base member are chosen from a group consisting of:

coil spring within the internal member;

resilient channel clip within the internal member; and

means for locking/unlocking the internal member in a position above and perpendicular to the base member.

18. The apparatus of claim 16, wherein the base member, internal member, means to position the internal member above and perpendicular to the frame, and means to secure the internal member positioned above and perpendicular to the frame comprise metal and plastic.

19. The apparatus of claim 16, wherein the internal member cross-section defines geometries selected from the group consisting of circle, square, rectangle, triangle, and ellipse.

20. A kit for installation on the top surface of a seat back rest to facilitate hanging articles comprising looped attachments including purses, backpacks, shopping bags, and items on conventional hangers, the kit comprising in combination:

a rectangular base comprising a top surface, a bottom surface, a longitudinal centerline, two long sides of predetermined length, two short sides of predetermined
length, and two holes through the base top and bottom surfaces, each hole at an equal distance from each short side on the base longitudinal centerline;

a frame of predetermined height, length and width, fixedly attached to the base top surface and extending upwards perpendicularly there from, whereby the frame width is equal in dimension to the base short sides, the frame length is less than the base long sides, and the frame length is centered on the base longitudinal centerline such that the holes through the base are at equal distances beyond the frame length; and
two split-wing toggle bolts sized to fit through the holes in the base for fixedly attaching the base bottom surface to the seat back rest top surface.

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