Dec. 19, 1933. C. I. BURGMAN 1,940,444

AUTOMOBILE BODY AND TOP

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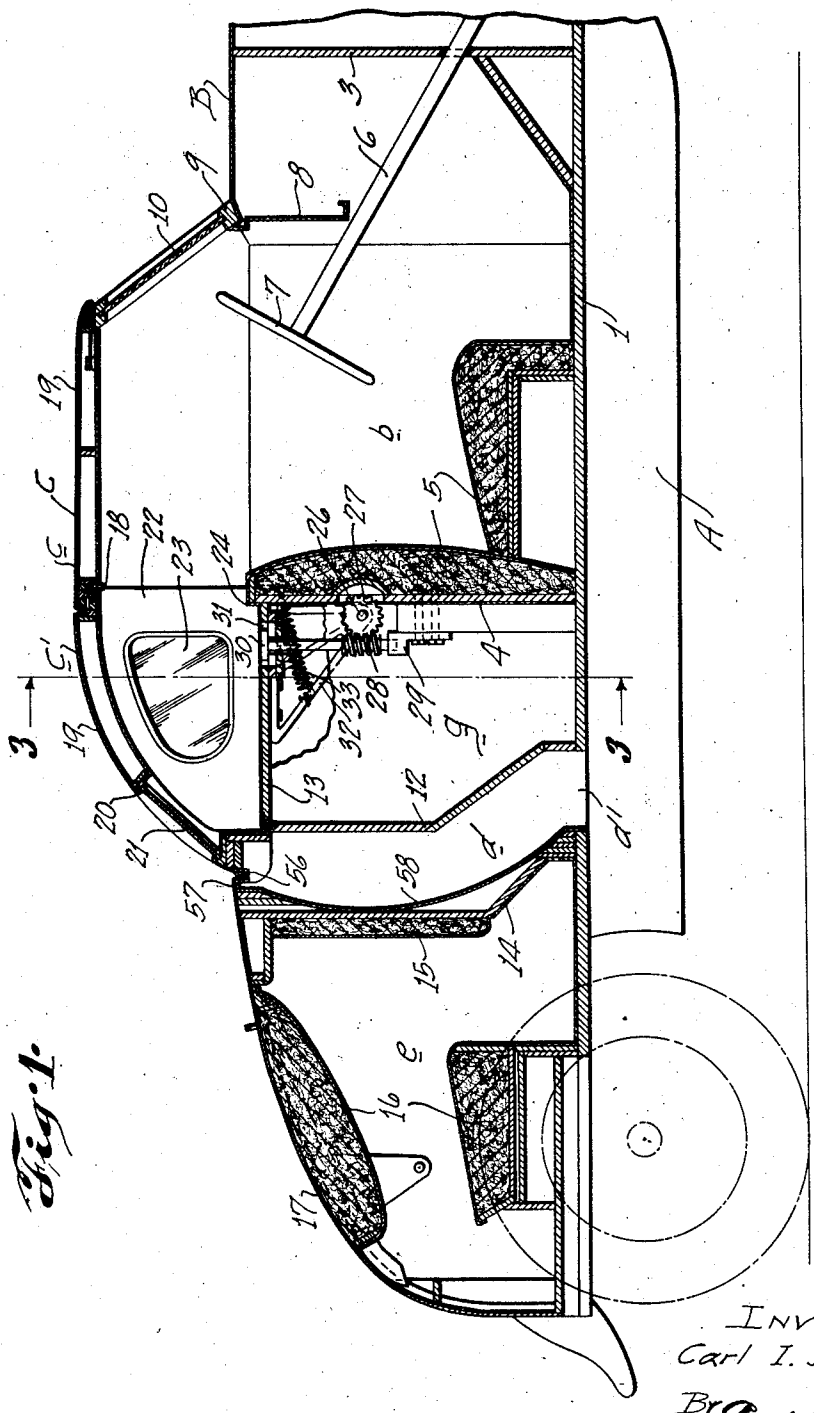


Fig. 1.

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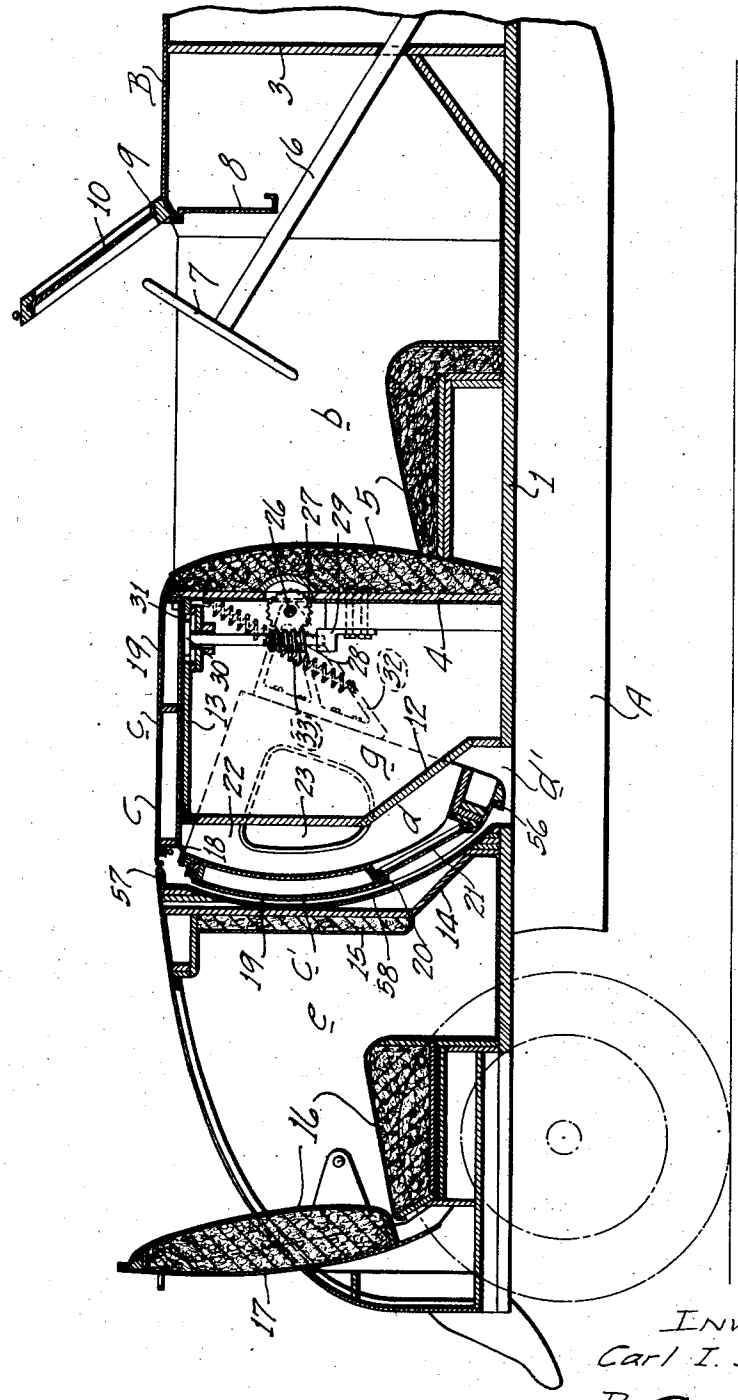


Fig. 2.

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AUTOMOBILE BODY AND TOP

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Fig. 3.

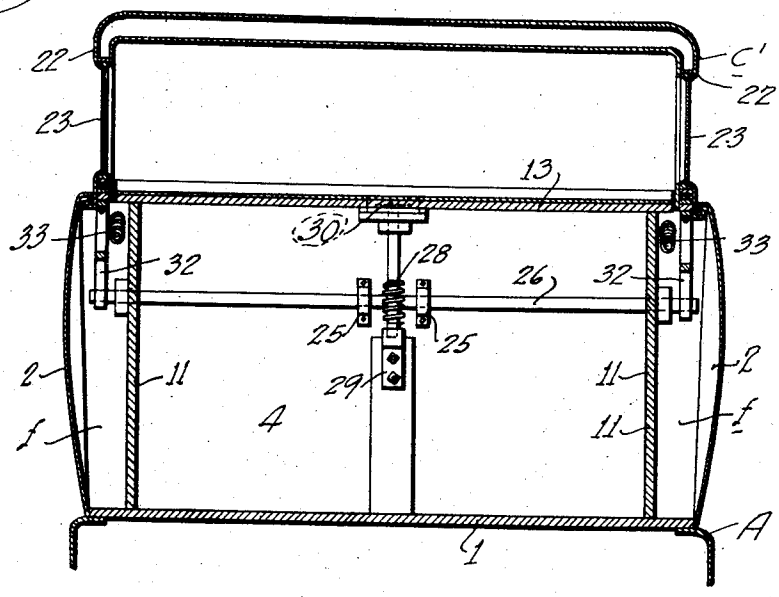
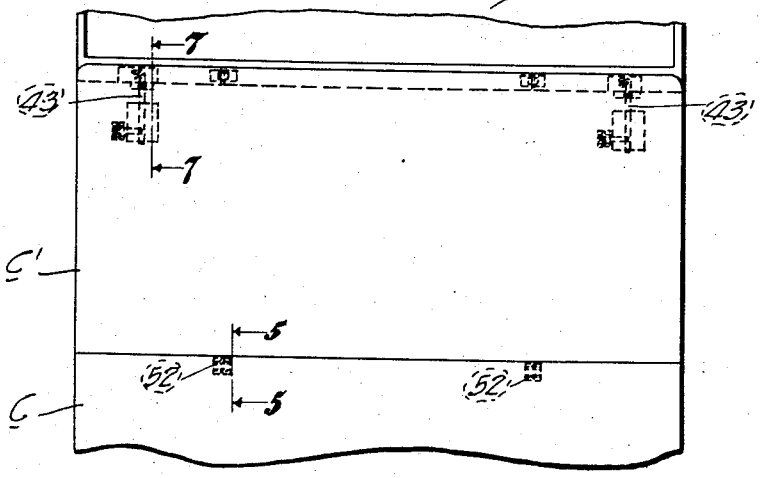


Fig. 4.



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AUTOMOBILE BODY AND TOP

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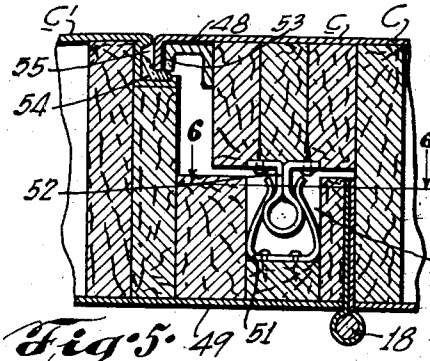


Fig. 5.

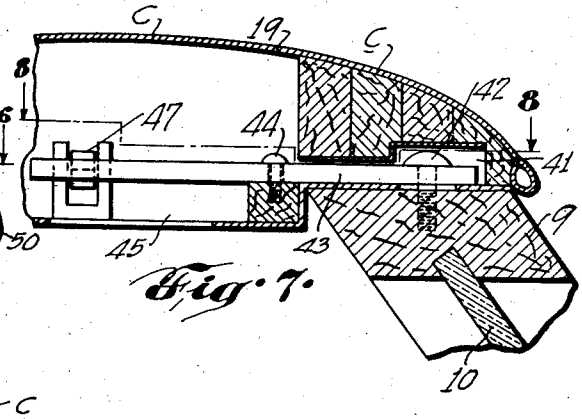


Fig. 7.

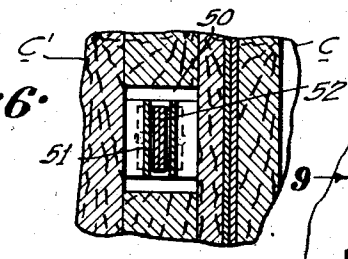


Fig. 6.

Fig. 8.

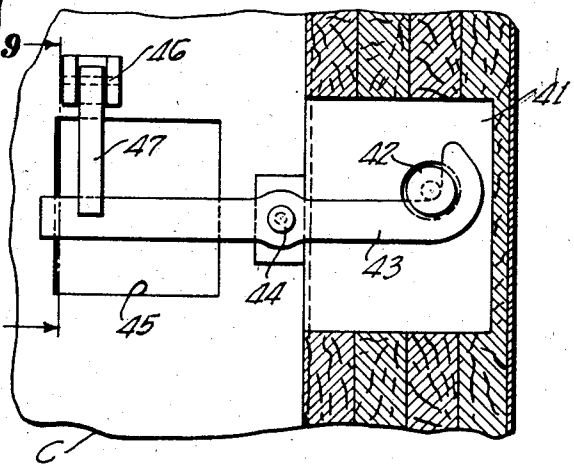


Fig. 9.

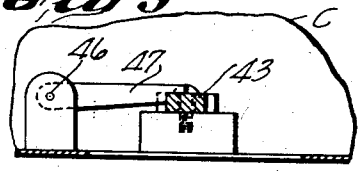


Fig. 10.

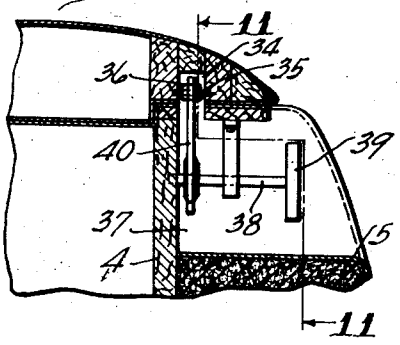
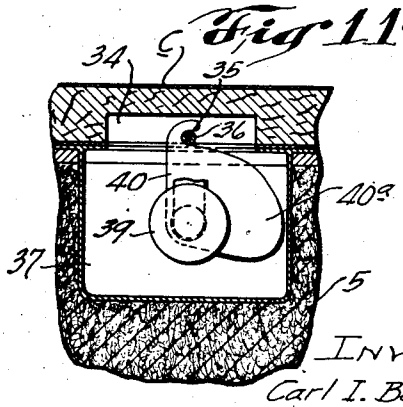


Fig. 11.



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UNITED STATES PATENT OFFICE

1,940,444

AUTOMOBILE BODY AND TOP

Carl I. Burgman, St. Louis, Mo.

Application October 23, 1930. Serial No. 490,643

5 Claims. (Cl. 296—107)

This invention relates generally to automomobiles and, more particularly, to a certain new and useful improvement in automobile-bodies and tops.

My invention has for its chief object the provision of an automobile-body equipped and constructed with a shiftable top that may not only be selectively actuated to raised operative or body-covering position or to lowered inoperative position, but which also, when in such latter position, is partly concealed from view and partly serviceable in completing the finish of the interior of the body.

My invention has for a further object the provision of an automobile-body and top of the type stated in which the top may be readily, easily, and conveniently shifted to occupy either its operative or inoperating positions, which may be economically manufactured and produced, and which is efficient in the performance of its intended functions.

And with the above and other objects in view, my invention resides in the novel features of form, construction, arrangement, and combination of parts hereinafter described and pointed out in the claims.

In the accompanying drawings, four sheets,—

Figure 1 is a fragmental longitudinally sectional view of an automobile-body equipped with a shiftable top in accordance with and embodying my invention, the top being shown in its operative or raised position:

Figure 2 is a similar view, with the top in inoperative or lowered position:

Figure 3 is a vertical sectional view of the body taken approximately on the line 3—3, Figure 1:

Figure 4 is a fragmental plan view of the top or cover when in raised operative position:

Figure 5 is an enlarged detail sectional view taken approximately on the line 5—5, Figure 4;

Figure 6 is a similar view taken approximately on the line 6—6, Figure 5:

Figure 7 is a similar view taken approximately on the line 7—7, Figure 4:

Figure 8 is a similar view taken approximately on the line 8—8, Figure 7:

Figure 9 is a similar view taken approximately on the line 9—9, Figure 8:

Figure 10 is an enlarged fragmental view of the cover or top and body, showing the retaining means for releasably securing the top in lowered inoperative position; and

Figure 11 is a sectional view taken approximately on the line 11—11, Figure 10.

Referring now more in detail and by reference characters to the drawings, which illustrate a preferred embodiment of my invention, the chassis or frame A may be of any standard or special form and dimensions, supported on which is the floor 1 of the body B. Suitably fixed to, and upstanding from, the floor 1 in spaced relation longitudinally, and extending between the side walls 2, of the body B, are walls 3 and 4 defining, as it may be said, the front seat or driver's compartment *b*, located within which is a suitable seat 5, the steering-pedestal 6 and wheel 7, the instrument or dash-board 8, and the like: and suitably fixed to, and upstanding obliquely and rearwardly on, the body B, as is customary, is a wind-shield-frame 9 provided, as is usual, for vision with a glass or other transparent section or sections 10.

Disposed longitudinally the body B adjacent its opposite side walls 2, and at their front margin engaging the rear face of wall 4, are upstanding walls 11, 11, and extending transversely of body B and engaging the rear margin of the walls 11, is a wall 12 having preferably the shape or contour in vertical section best seen in Figures 1 and 2. The walls 11 are of such length relatively to the length of the body B as to define, in association with the cross or transverse walls 4, 12, a compartment or chamber *g* disposed approximately in or adjacent the longitudinal center of the body B, for purposes presently appearing, such compartment being closed at its top by a horizontal wall or lid 13.

Disposed in spaced relation rearwardly of, and extending transversely of the body B in approximate parallelism with, the wall 12, is an upstanding wall 14, which, in association with the body side walls 2 and said cross wall 12, define a third compartment or chamber *d*, also for purposes presently appearing. As best seen in Figures 1 and 2, the chamber *d* is open at its top, and at its bottom the floor 1 may be cut away or otherwise formed to provide an opening, as at *d'*, for facilitating occupancy of such compartment by a portion of the top when in lowered position, as presently fully appearing.

Rearwardly of the chamber *d*, the body B is suitably provided with a fourth compartment *e*, preferably suitably upholstered, as at 15, and equipped with a foldable rumble seat 16 and closure 17 of approximately standard type and structure.

C designates the top, which includes a relatively flat forward frame *c* and an arcuate rear frame *c'* suitably endwise jointed for articulation, as at 18, and both covered as is common in

automobile tops, with any suitable preferably rubberized fabric or the like 19, the covering 19 of the frame *c'* being suitably cut away, as at 20, to provide a rear sight-opening preferably closed or covered by a section 21 of glass or other transparent material. The arcuate or rear top portion also includes suitable preferably rigid side walls 22—22, each of which is fixed in any suitable manner to the frame *c'*, and each of which is also provided with a preferably suitably covered sight-opening, as at 23.

As best seen in Figures 1 and 2, the compartment top-wall 13 projects horizontally in a plane somewhat below the plane of the upper margin of the wall 4 and the attached back of the seat 5, and the top frames *c* and *c'* and the top side walls 22 are of such relative dimensions that, when the top C is in raised operative position, as shown in Figure 1, the top-frame *c* is adapted to rest at its forward margin on the upper margin of the fixed wind-shield frame 9 and that the top side walls 22 extend at their lower margin for the most part in approximately the plane of said wall 13 and rest at their lower forward corners on the top of the wall 4 and of the seat-back 5, said side walls 22 being suitably rabbeted, as at 24, for the purpose. It is also to be noted that the top C is somewhat reduced in width relatively to the over-all width of the body B, so as to neatly fit between the body side walls 2 when in lowered inoperative position, and that the top side walls 22 are so relatively located as to largely fit, also when the top C is in lowered inoperative position, in the communicating compartments *f*, *f*, provided at the opposite sides of the body B intermediate its side walls 2 and the compartment walls 11, best seen in Figure 3.

Extending transversely of the body B and mounted for rotation in suitable bearings 25 arranged on the walls 4 and 11, is a shaft 26, fixed on which is a suitable pinion or gear 27, adapted for meshing engagement with a worm-shaft 28 extending vertically of, and mounted for rotation in suitable bearings 29 fixed on, the wall 4, as best seen in Figures 1, 2, and 3, the shaft 28 being provided at its upper end with an actuating hand-wheel, crank, or the like 30 disposed for convenient manual engagement in an opening 31 provided for the purpose in the compartment top wall 13, and suitably fixed to the top side walls 22 and also suitably fixed on the cross-shaft 26, are brackets 32.

Hence, in use and operation, assuming the top C to be in raised operative position, as illustrated in Figure 1, and its forward frame *c* to be disconnected, as presently appearing from the frame 9, on suitable actuation of the worm 28 by means of its attached manipulating member 30, the top C will be shifted rearwardly, whereupon the arcuate frame *c'* and its attached side walls 22 will pivotally disappear into, and then be concealed in, the communicating compartments *d* and *f*, and the forward top-frame *c* will then neatly and snugly fit, in body finishing position between the body side walls 2 and over said compartment wall 13 and overlap at its forward margin on the top of the seat-back 5, all as best seen in Figure 2, suitable coil-springs 33 attached at their opposite ends to the pivoted brackets 32 and to the fixed wall 4 being adapted to yieldingly retard and balance such disappearing movement of the described portion of the top C.

On its rear face and in its forward margin, the forward top frame *c* is recessed, as at 34, to accommodate a short shaft 35, on which is mounted for rotation a suitable roller 36; and co-operatively, adjacent its upper margin, the seat-back 5 is suitably recessed and chambered, as at 37, in which a short shaft 38 is suitably journaled for rotation, all as best seen in Figures 10 and 11. Fixed upon the forward end of shaft 38, is a manipulating member 39, and fixed on the shaft 38 adjacent its rear end is a hook or latch-member 40 adapted for engagement with the roller 36, on proper manual manipulation of the member 39, when the top C is in its said lowered position with its frame *c* in overlapping relation upon the upper margin of the seat-back 5, for releasably securing the top C in such position. However, the top manipulating member 30 is covered and concealed when the top C is in such lowered position, as shown in Figure 2, and the hook-member 40 is hence provided or formed with a cam-extension 40ª adapted, on continued release actuation of the manipulating member 39, for cam-wise engagement with the roller 36, following disengagement therewith of the hook-member 40, for elevating the top-frame *c* sufficiently to permit convenient manual engagement with the manipulating member 30 for suitably actuating the same for again raising the top C to fully open operative position or into the position thereof as illustrated in Figure 1.

The forward top-frame *c* is also at spaced points along, and upon the under face of, its forward margin, recessed or cut-away, as at 41, to accommodate studs or pins 42 upstanding from the fixed wind-shield-frame 9, as best seen in Figure 7, and for the engagement with such studs 42 of hook-members 43 for releasably securing the top C in its described raised operative position, the hook-members 43 being suitably pivoted intermediate their end, as at 44, upon the top-frame *c* for convenient operative engagement and manipulation by the car-occupant through an opening, as at 45, provided for the purpose in the under portion of the top-fabric 19. And also suitably pivoted upon the top-frame *c* for swinging movement, as at 46, as best seen in Figures 7 and 8, are latches 47 adapted for detachable engagement with the respective hook-members 43 for retaining the same in top-securing engagement with the studs 42, the latches or arms 47 being readily swingably elevated out of engaging relation with the studs 42 when it is again desired to shift the top C to lowered inoperative position.

And at their joint 18, the top-frames *c*, *c'*, are formed with opposed rabbeted extensions 48, 49, adapted to freely overlap when the top C is raised, as best seen in Figure 5, the rear or under extension 49 being suitably recessed, as at 50, for accommodating spring-jaw members 51 adapted, when the top C is raised, for engagement with suitable co-operative members 52 fixed to, and projecting from, the forward or upper extension 48 for yieldingly retaining the top-frame *c* and *c'* hingedly in relatively open or raised position.

To prevent the entrance of rain, dust, or the like into the body B at the joint 18 between the top-frames *c* and *c'* when the top C is raised, the top-frame *c* is preferably provided with a further rearward extension 53 adapted to impinge edgewise upon suitable cushioning material 54 disposed for the purpose in a recess or pocket 55 provided, as best seen in Figure 5, in the forward margin of the top-frame *c'*.

Likewise the top-frame *c* at its rear margin is suitably formed with a lip 56 adapted to impinge a co-operating lip 57 suitably provided on the body B at or adjacent the upper margin of the compartment-wall 14 to completely close the upper end of the compartment *d* when the top C is raised, as best seen in Figure 1.

Preferably, as shown, the compartment *d* may be suitably lined, as at 58, and the several body-walls may be attractively covered with or by any suitable material, and it is also to be understood that various modifications or changes in the several parts of the body and top may be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. The combination with an automobile body, of spaced upstanding compartment-forming walls fixed within the body, a horizontally disposed wall fixed within the body adjacent the upstanding walls, and a top pivotally attached to the body for shiftable movement into raised or lowered position relatively to the body, the top including front and rear hingedly connected frames, the rear frame being adapted to disappear within said compartment and the front frame being adapted to rest on said horizontal wall when the top is shifted into lowered position.

2. In combination, an automobile body having a seat, an open upper end chamber spaced rearwardly from the seat, and a horizontally disposed support intermediate the seat and chamber, a top including a first frame comprising rigid side walls and an arcuate top wall pivotally attached at its side walls to the body, a second approximately flat top frame, and means hingedly connecting the second frame at its rear end to the forward end of the arcuate top wall of the first frame, and means for pivotally shifting the top for raising or lowering said frames relatively to the body, the first frame being concealed within the chamber of the body and the second frame being disposed flatwise on the support when the top is in lowered position.

3. In combination, an automobile body having a seat and a chamber spaced rearwardly from the seat, a top including a first frame comprising rigid side walls and an arcuate top wall pivotally attached at its side walls to the body, a second approximately flat top frame, and means hingedly connecting the second frame at its rear end to the forward end of the arcuate top wall of the first frame, means for pivotally shifting the top for raising or lowering said frames relatively to the body, the first frame being concealed within the chamber of the body and the second frame being forwardly projected over the space intermediate said seat and chamber with its forward end disposed adjacent the seat when the top is in lowered position, and co-operating members on the seat and the forward end of the second frame for releasably securing the top in said lowered position.

4. In combination, an automobile body having a seat, an open upper end chamber spaced rearwardly from the seat, and a horizontally disposed support intermediate the seat and chamber, a fixed upstanding support on the body, a top including a first frame comprising rigid side walls and an arcuate top wall pivotally attached at its side walls to the body, a second approximately flat top frame, and means hingedly connecting the second frame at its rear end to the forward end of the arcuate top wall of the first frame, means for pivotally shifting the top for raising or lowering said frames relatively to the body, the first frame being within the chamber of the body and the second frame being disposed flatwise on said horizontal support when the top is in lowered position and said frames being disposed over the seat with the second frame resting at the forward end on said upstanding support when the top is in raised position.

5. In combination, an automobile body having a seat, an open upper end chamber spaced rearwardly from the seat, and a horizontally disposed support intermediate the seat and chamber, a fixed upstanding support on the body, a top including a first frame comprising rigid side walls and an arcuate top wall pivotally attached at its side walls to the body, a second approximately flat top frame, and means hingedly connecting the second frame at its rear end to the forward end of the arcuate top wall of the first frame, means for pivotally shifting the top for raising or lowering said frames relatively to the body, the first frame being concealed within the chamber of the body and the second frame being disposed flatwise on said horizontal support when the top is in lowered position and said frames being disposed over the seat with the second frame resting at the forward end on said upstanding support when the top is in raised position, and means for detachably securing the top at the forward end of the second frame to said support when the top is in raised position.

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