Aug. 2, 1932. E. G. HEUER 1,869,423

AUTOMOBILE BODY

Filed Dec. 29, 1927

Fig. 1

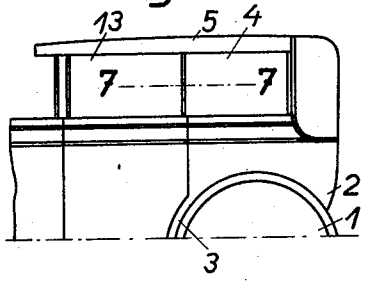


Fig. 2

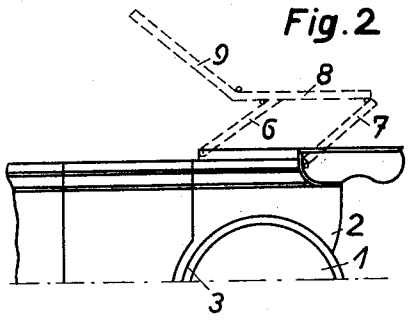


Fig. 3

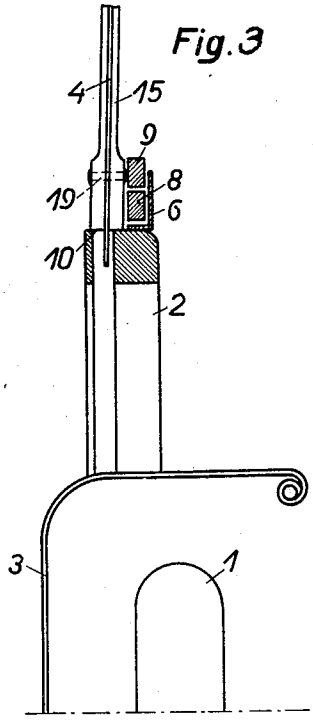


Fig. 4

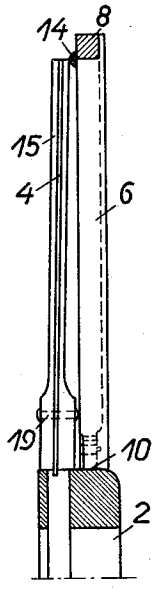


Fig. 5

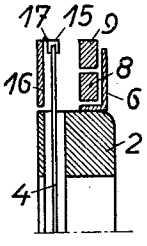
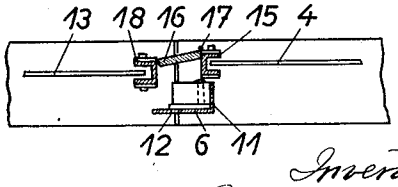


Fig. 6



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UNITED STATES PATENT OFFICE

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AUTOMOBILE BODY

Application filed December 29, 1927, Serial No. 243,383, and in Germany August 27, 1927.

In automobile bodies having a collapsible hood or top it is usual to arrange adjacent the recessed portions of the body over the rear wheels side windows which can be raised or lowered to close or open them by means of a crank or handle. When the top is folded back, the rear side windows must be lowered so as not to project above the upper edge of the rigid part of the body. The strut members in this position rest on such edge. Since by reason of the provision on the body of portions which are set back, to provide space for the rear wheels, only limited amount of height is available in the panel, the window on the one hand must be kept very low while on the other hand the upper edge of the body must be carried fairly high. The body is thereby given an unsightly appearance while the other dimensions of the body are unfavourably affected.

In contradistinction thereto the present invention consists in making the lateral members of the top, which rest on one another when the top is folded back, so narrow and arranging them in such manner that they rest on the upper edge of the fixed part of the body externally of but close alongside the window.

With such an arrangement the window may be maintained in normal height yet the upper edge of the rigid part of the body need not be carried upwards. On the window being down it projects to a certain extent above the upper edge but does not interfere with the folding of the top as the folded members of the top lie to one side of the upwardly projecting part of the window. It is easy to arrange for the upper edge of the window to lie flush with the upper edge of the folded members so as to provide a flat surface.

Since usually when the top is folded back the three struts will be in superposed relation this structure lying on the top edge of the body will be unnecessarily high. Such a disadvantage is avoided in accordance with the present invention by forming the pillar or upright member between the rear side window and the door window as an angle rail in such manner that on the top being folded such rail rests with one face on the upper rigid edge of the body and serves to receive within the angle the other two struts superposed on one another.

The invention is illustrated in the accompanying drawing in which Fig. 1 shows the relative parts of a body with the top or hood in raised position. Fig. 2 is a similar view with the top or hood partly folded back. Fig. 3 shows in vertical cross section the new arrangement with the window in closed or raised position and the top or hood folded back. Fig. 4 shows also in vertical cross section the improved arrangement with the window closed and the top or hood in raised position. Fig. 5 shows the improved arrangement with the window down and with the top folded back. Finally, Fig. 6 is a transverse section on the line 6—6 of Fig. 1.

Adjacent the rear wheels 1 the rigid part 2 of the body is offset at 3 as indicated particularly in Fig. 3 to provide the wheel housing. This offset portion limits the possible downward movement of the side window 4 located adjacent the rear wheel.

The top or hood 5 is foldable in the usual manner. Such top or hood is carried by the parallelogram links 6, 7 and by the foldable members 8, 9 which are moved as shown in Fig. 2 to fold back the top or hood.

In accordance with the present invention the parallelogram linkage 6, 7 and the associated cant rails 8, 9 are made so narrow and are disposed laterally of and externally of the window in such manner that on being folded as shown in Fig. 5 they rest alongside the window 4 on the upper edge 10 of the rigid part of the body. The window 4 itself may be kept of the usual height without the need for carrying upwards the upper edges 10 of the rigid part of the body. The window 4 may be lowered so far as the offset for the wheel housing permits in which position its upper portion may project beyond the edge 10. In this position the projecting part of the window 4 is hardly visible, if at all, from the exterior when the hood or top is folded back since in such position the folded members 6, 8 and 9, as shown in Fig. 5, mask the upwardly projecting part of the window. The rear window can be raised

even with the top or hood folded, as indicated in Fig. 3, so as to form a wind screen in conjunction with the raised door window.

In order to afford a saving in height the pillar 6 between the door window and the rear side window is formed as an angle member suitably of metal, as indicated in Figs. 3, 5 and 6. This angle member when the top or hood is folded rests with one flange 11 on the upper edge of the rigid part of the body while the other flange 12 extends upwards at right angles, the members 8 and 9 being received within the angle. These members 8, 9 are, as it were, sunk into such angular space.

As is indicated in Fig. 6, the rear side window 4 is set inwards in relation to the door window 13. The rear side window as indicated in Figs. 3 and 4 is thus guided in an inwardly and downwardly inclined direction in such manner that the upper edge of the window when the top or hood is raised bears against the rubber packing 14 of the upper horizontal top member or cant rail 8. The inclined position of the window 4 permits of the necessary space between the folded members of the top and the window itself (see Fig. 5) which space must be provided to permit of raising and lowering the window without friction, in particular when the top is folded back and the window raised.

There is secured to the guide rail 15 of the rear side window 4 adjacent the window 13 a flap 16 hinged at 17. This flap may, as shown in Fig. 6, be moved into a position to close the space between the guide rail 15 and the adjacent guide rail 18 for the door window 13. Moreover on turning the guide rail 15 on its hinge 19 (see Figs. 3 and 4) the flap may be turned so as to cover the part of the window projecting above the rigid part 2 as indicated in Fig. 5. In this manner the part of the window projecting above the rigid part of the body is substantially enclosed at both sides.

I claim:

1. In combination with an automobile body having a rear wheel housing and a rigid body portion above said housing, a slidable door window and a rear side window set inwards in relation to the door window, a foldable top including parallelogram links and cant rails, one of said links, when said top is up forming a pillar member adjacent the space between said windows, said pillar member being formed as an angle bar and foldable with one face of said bar to lie on said rigid body portion when said top is folded back, said cant rails being adapted to lie in superposed relationship along said side window and between said window and the other face of said angle bar.

2. In combination with an automobile body having a rear wheel set in portion and a rigid body portion above said set in portion, a slidable door window, a side window adapted to be lowered into said rigid body portion, a foldable top, including parallelogram links and cant rails, one of said parallelogram links when said top is up forming a pillar member adjacent the space between said windows, and being formed as an angle bar, one face of said angle bar being adapted when said top is folded back to lie on the top edge of said rigid body portion along side said side window, the other face of said angle bar projecting upwardly and forming a space between it and said side window, said cant rails being adapted to lie in superposed relationship within said last named space when said top is folded back.

3. In combination with an automobile body having a rear wheel set back portion and a rigid body portion above said set back portion, a slidable door window therefor, a side window adapted to be lowered into said rigid body portion, a foldable top including parallelogram members and side members, one of said parallelogram members being formed as an angle bar and foldable with one face of said bar to lie on the edge of said rigid body portion externally of said side window when said top is folded back, said side members being adapted to lie in superposed relationship alongside said side window, between said window and the other face of said angle bar, and means adapted to bridge the space between said windows when they are in raised position and also adapted to complete the enclosure surrounding said side window when said top is folded back and said window is lowered.

4. In combination with an automobile body having a rear wheel set in portion and a rigid body portion above said set in portion, a slidable door window, a side window adapted to be lowered into said rigid body portion, side members of a foldable top adapted when said top is folded back to lie externally of and along one side of said side window, guiding means for said windows, means attached to the guiding means of said side window, adjacent said door window, adapted when said windows are in raised position to close the space between said last named guiding means and the adjacent guiding means on said first named window, and also adapted to swing to complete the enclosure surrounding said side window when said top is folded back and said side window is lowered.

5. In combination with an automobile body having a rear wheel set in portion a rigid body portion above said set in portion and a foldable top whose members when said top is folded back are adapted to lie along the external side of said side window, a slidable door window, a side window adapted to be lowered into said rigid body portion, pivoted guide rails for said windows, a flap pivotally attached to the guide rail of said side

window adjacent said door window, adapted when said windows are in raised position to close the space between said last named guide rail and the adjacent guide rail on said door window, and also adapted to swing to cover the exposed side of said side window remaining when said top is folded back and said side window is lowered.

6. In combination with an automobile having rear wheel housings, a body portion formed over said housings, and side windows slidably mounted in said body portion over said housings, a foldable top having a parallelogram linkage pivotally mounted to said body portion adjacent each side window, one member of each linkage being in form of an angle bar, and cant rails pivotally connected to each linkage, one flange of each angle bar lying on said body portion alongside the respective side window, the other flange of each angle bar projecting upwardly and being spaced from the respective side window and said pivotally connected cant rails lying in superposed relationship in the spaces between the upwardly projecting flanges and respective side windows when said top is folded back.

7. In combination with an automobile having rear wheel housings and a body portion over said housings, a slidably mounted side window in said body portion over each of said housings, a foldable top including a pair of parallelogram linkages, one mounted to each side of said body portion, cant rails connected to each linkage, one member of each linkage being formed as an angle bar which is foldable along the top edge of said body portion with one flange of said bar adapted to lie on said body portion along one of said side windows and said connected cant rails lying in the space between said last named side window and the other flange of the respective angle bar when said top is folded back.

In testimony whereof I affix my signature.

EMIL GEORG HEUER.