

[0044] The upper main connecting rod C2 is connected by a joint CS7 to the connecting rod B2 of the upper four-bar linkage B. This rod B2 has a long sidepiece, which extends between the swivel joints BS3 and BS4; the swivel joint BS4 establishes the connection between the connecting rods B2 and B3. In addition, the rod B2 also has a short sidepiece, designated CS5, which connects the swivel joint BS4 to the swivel joint CS7 connecting the rods B2 and C2. In the diagram according to FIG. 2, the swivel joint CS7 is in front of the connecting rod B3 but is not connected directly to it; instead, the connection is established by way of the pivot joint BS4. By means of the push-pull lever C4, therefore, torque can be exerted on the angled rod B3 around the joint BS4, so that the force exerted by the pull lever C4 cause the upper four-bar linkage B to open or close.

[0045] The upper and lower multi-bar linkages B and A and the synchronizing linkage C located between them cooperate to form overall a multi-joint linkage 15, the connecting rods of which are all connected to each other merely by swivel joints; there is no need for any translational movement such as that which might occur in a guide link. The overall swiveling movement of the roof 4 is brought about solely by the swiveling of the individual connecting rods forming part of the multi-joint linkage 15 with respect to each other. Because of the mediating role of the synchronizing linkage C, only a single drive 14 per side is sufficient for actuation. It would also be possible to provide a central drive, which acts synchronously in the same way on each side of the vehicle by way of, for example, direction-changing gears. As a result, only one drive unit would then be necessary, but this one unit would still be able to exert the required force in the same way on both sides of the vehicle in a synchronous manner.

[0046] To open the roof 4 from its closed position, a pulling force is exerted on the piston rod 18 of the drive 14. By way of its joint with the connecting rod A4 of the lower four-bar linkage A, this force is transmitted to the four-bar linkage in such a way that the connecting rod A4 is swiveled in the direction of the arrow 19 around the swivel joint AS2. As this occurs, the lower four-bar linkage A is opened, as a result of which the connecting rod A2, which is rigidly connected to the rear roof part 6 by the connecting element 16, is moved downward; corresponding to the nearly fully formed linkage parallelogram A, the movement is essentially a vertical stroke, upon which only a slight pivot angle is superimposed.

[0047] As a result of the downward movement of the connecting rod A3, the push-pull lever C3, which is connected to it at the joint CS3, is also moved downward, as a result of which the forward end (with respect to the travel direction F) of the main lever C1 of the synchronizing linkage C is moved downward with respect to the support point of the linkage on the rear roof part 6. At the same time that the rear roof part 6 is moving downward, a relative motion of the roof parts 5 and 6 with respect to each other is also occurring as a result. The downward-swiveling movement of the main lever C1 is transmitted via the pull lever C4, which is connected to the free end CS5 of the main lever C1, to the four-bar linkage B. The angled lever B3 is thus swiveled around its support point BS4, by which it is held on another connecting rod B2 of the upper four-bar linkage B, as a result of which the upper four-bar linkage B as a whole is opened, and the forward roof part 5 hinged to

this joint via the connecting plate 17 is shifted inward and downward with respect to the rear roof part 6.

[0048] As the piston rod 18 of the drive element 14 continues to retract, the lower four-bar linkage A continues to open, as a result of which the downward shift of the rear roof part 6 via the connecting plate 16 between the four-bar linkage A and the rear roof part 6 continues until this roof part 6 is supported in a nearly vertical position underneath the window apron line 20 of the car body. As this is happening, the main lever C1 of the synchronizing linkage C is swiveled further downward by the pull lever C3, as a result of which this main lever swivels the angled lever B3 of the upper four-bar linkage B further downward via the pull lever C4 and thus ensures that there is a ratio between the angle around which the lower roof part 6 swivels and that around which the upper roof part 5 swivels. While these roof parts are at a large angle to each other in the closed position of the roof, the forward roof part 5 being nearly horizontal and the rear roof part 6 being nearly vertical, the fact that the forward lever B3 swivels around an angle of approximately 90° means that the roof parts 5, 6 can therefore both be brought into a vertical position in which they are parallel to each other in the stowed position. Via its joint on the connecting rod B1, which is rigidly connected to the upper roof part 5, the forward lever B3 thus pulls the upper roof part 5 into a position in which it is parallel to the rear roof part 6.

[0049] The sequence of movements by which the roof 4 is closed is the same except executed in reverse. The pull levers C3 and C4 act in this case as push levers on the associated four-bar linkages.

[0050] FIG. 6 shows the outline 21 of the head of a so-called "95% man". This makes it clear that, during the entire roof-opening or roof-closing operation, the headroom of the occupants remains fully preserved. Nevertheless, because of the synchronized movements of the roof parts 5, 6 accompanying the opening movement of the complete roof 4, only a limited amount of external height is required during any one phase of the operation. The roof 4 can thus also be opened in low spaces such as garages without the danger that the forward edge of the roof will collide with a low ceiling. This is explained by the fact that the roof parts 5 and 6 begin to telescope into each other at the same time that the rear roof part 6 is being lowered, and thus one of the individual phases does not have to be completed before the next one begins.

1. Convertible vehicle (1) with a roof (4) consisting of at least two parts, comprising a rear roof part (6) and a roof part (5) which is in the forward position when the roof is closed, where, when the roof is open, the rear roof part (6) is essentially vertical and the roof part (5) in the forward position with respect to the direction of travel (F) is essentially parallel to the rear part, characterized in that a common drive (14), one of which is on each side of the vehicle, is used to move both the rear roof part (6) and the roof part (5) in front to open and close the roof (4).

2. Convertible vehicle (1) with a roof (4) consisting of at least two parts, comprising a rear roof part (6) and a roof part (5) which is in the forward position when the roof is closed, where, when the roof is open, the rear roof part (6) is essentially vertical and the roof part (5) in the forward position with respect to the direction of travel (F) is essen-