136,538

PATENT SPECIFICATION

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Application Date (in United Kingdom), Dec. 3, 1919. No. 30,199/19.
Complete Accepted, May 13, 1920.

COMPLETE SPECIFICATION.

Improvements in or relating to Automobile Cars.

We, LANCIA & C., of 99, via Monginevro, Turin, Italy, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention has reference to automobile cars of the type in which the chassis frame is dispensed with and the wheels are connected to the body of the car. In the hitherto known cars of this type the body is so constructed that the portions of the car-body immediately above the wheel axles and the floor of the car are higher than the said wheel axles.

According to the present invention the car body is provided with a longitudinal and a transverse channel projecting upwardly from the base or floor of the car, said channels being adapted for the accommodation respectively of the power transmission shaft and the back axle with its differential gear. The presence of the upwardly projecting channels permits of the floor of the car body being disposed at a lower level than the wheel axles, permits the centre of gravity of the car as a whole to be lowered thus rendering it safer and less liable to be overturned, increases the seating capacity of a given size of car, and materially strengthens it.

The invention as applied to a four-seater automobile is illustrated in the accompanying drawings wherein,

Figure 1 is a side view of the car;
Figure 2 is the longitudinal section thereof;
Figure 3 is the plan view;
Figure 4 is a front view, and
Figure 5 is a transverse section on *y—y* Figure 2.

As shown in the accompanying drawings, a rigid shell forming the body is suspended between the front axle 1 and the rear axle 2. The shell is preferably constructed of stamped steel sheet, and has the function of the chassis frame, the frame itself being dispensed with.

The resilient connection between the shell 3 and the wheel axles is made by means of springs, as for instance, in the manner shown in the drawings in which a front stirrup 4, secured to the shell 3, bears on a semi-elliptical spring 5 which is arranged in the same vertical plane as the front axle and has its ends connected with said axle, whilst on the sides of the shell are secured springs 6 having their ends connected to the rear axle 2.

The connection of the shell 3 with the front axle 1 is improved by means of

two rods 7 pivoted at their ends and intended to hold the axle 1 in its ordinary position.

The shell 3 contains seats secured therein; said seats when the shell is made of sheet metal, may be solid with the shell. In any case their frames 8 form transverse stiffeners for the shell.

A longitudinal channel 11 and a transverse channel 12 are provided in the bottom of the shell 3 for the purpose of leaving a space for the accomodation of the transmission shaft 9, the differential case 10 and the rear axle 2, said channels being adapted to extend upwardly to about the seat level. It is possible by these means to lower the shell and therefore the plane of the seats and to bring the base of the shell as near the ground as is safely possible.

The longitudinal channel or rib may be obtained by stamping the sheet metal forming the bottom or the lower portion of the shell to form a longitudinal strengthening member, thus improving the stiffness of the shell without seriously affecting the use of the inner space of the shell, said rib being provided at the middle of the car and between the adjacent side seats.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. An automobile car of the type referred to characterised by the fact that the base or floor of the car body is provided with upwardly projecting longitudinal and transverse channels for the accommodation of the transmission shaft and the back axle with its differential gear for the purposes specified.

2. An automobile substantially as described or substantially as illustrated in the accompanying drawings.

Dated this 2nd day of December, 1919.

BOULT, WADE & TENNANT,
111 & 112, Hatton Garden, London, E.C. 1,

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FIG. 1

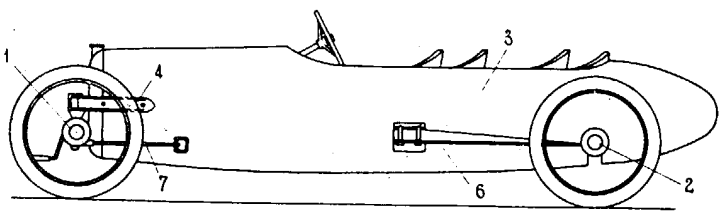


FIG. 3

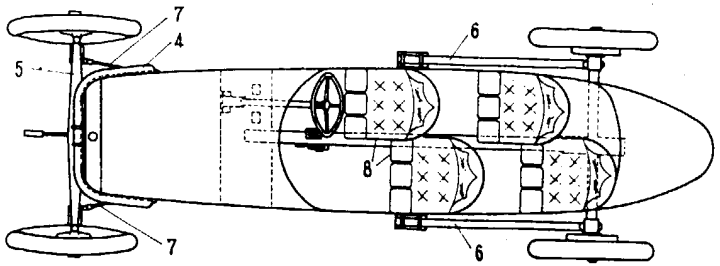


FIG. 2

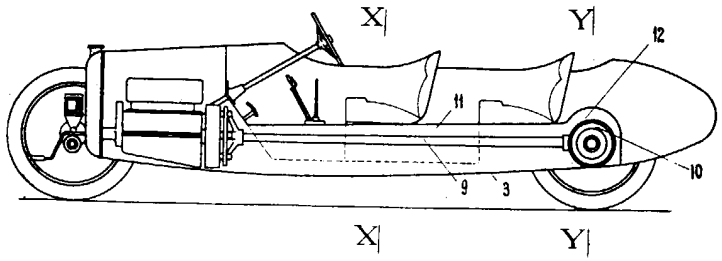


FIG. 4

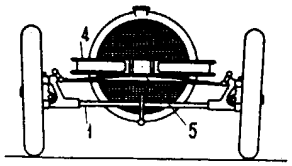


FIG. 5

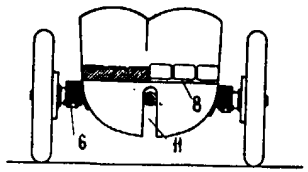
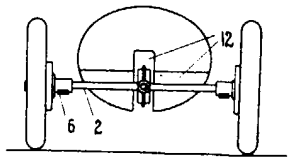


FIG. 6



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