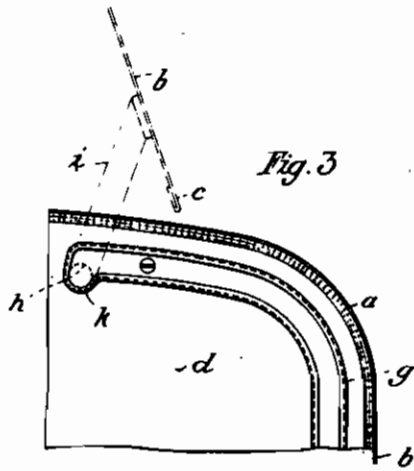
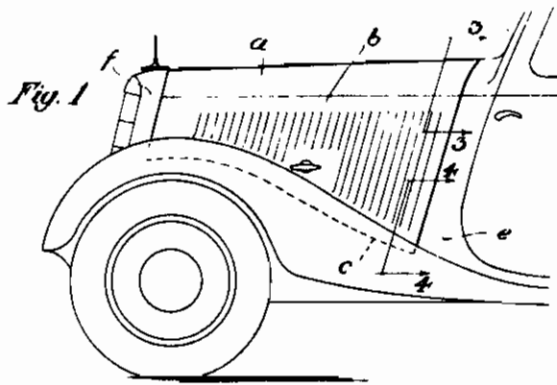


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E. HITZELBERGER
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VEHICLES AND ADAPTED TO PREVENT DAMAGES
OF MUD GUARDS, HEADLIGHTS AND OTHER
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MOTOR VEHICLES
Filed Oct. 4, 1941

Serial No.
413,658

2 Sheets-Sheet 1



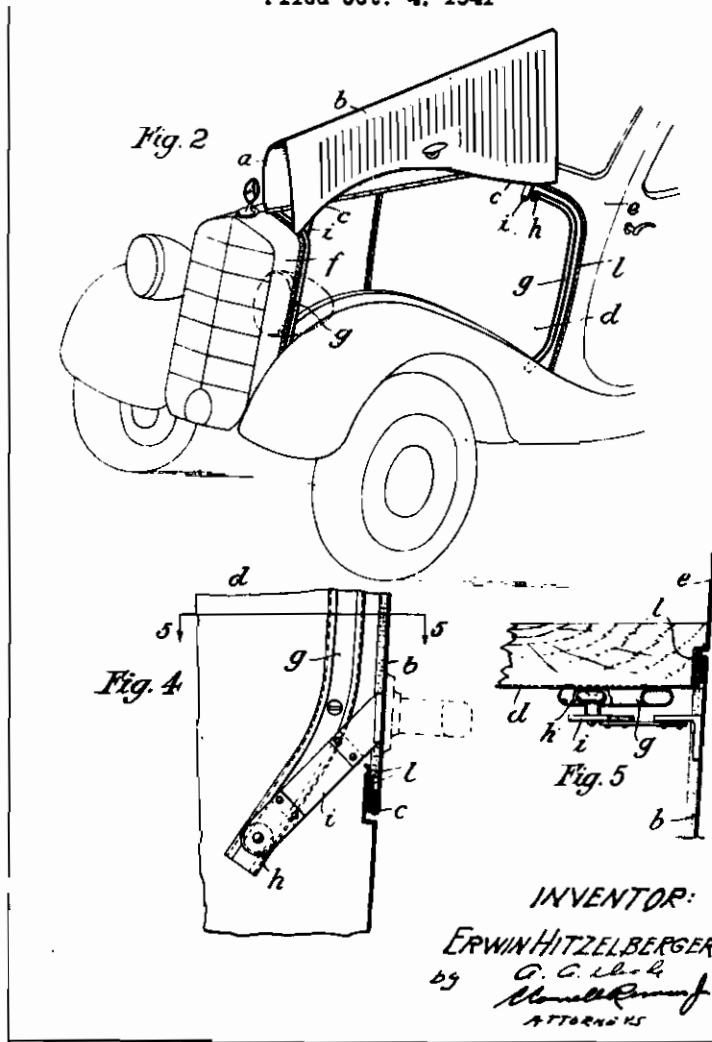
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ALIEN PROPERTY CUSTODIAN

DEVICE TO BE USED IN CONNECTION WITH MOTOR VEHICLES AND ADAPTED TO PREVENT DAMAGES OF MUD GUARDS, HEADLIGHTS AND OTHER MEMBERS OF THE CARRIAGE BODY OF MOTOR VEHICLES

Erwin Hitzelberger, Rohr, Germany; vested in the Alien Property Custodian

Application filed October 4, 1941

The present invention relates to a device to be used in connection with motor vehicles and adapted to prevent damages of mud guards, headlights and other members of the carriage body of motor vehicles during opening and closing of engine bonnets provided with a plurality of bonnet members hingedly connected to each other.

With regard to the clefts present due to the mud guards and headlights and owing to their low own stability, these relatively large and substantially unstiffened engine bonnets may, with much trouble only, be brought into and out of their position of rest without stumbling against members of the carriage body so that in a relatively short period of time the members of the carriage body lying in the range of the swinging movement of the engine bonnet are scratched and consequently subjected to a rapid corrosion.

The engine bonnets known already and formed as blinds or links displaceably mounted in the longitudinal direction of the vehicle respectively could not remedy this trouble, because such motor bonnets, besides requiring an unnecessary additional space, due to stresses, particularly twisting stresses of the vehicle body, occurring on account of unevennesses of the track or road, very soon loose their exact guidance and jam during opening and closing. Moreover, the slightest damages of the motor bonnet are sufficient to render them immovable.

Relatively to the known devices, the novelty of the present invention consists in positively guiding in a curved way the free ends of freely swingably hinged parts of the motor bonnet. According to a further modification of the invention the corners of the freely swingably hinged parts of the engine bonnet are guided by the aid of projections by rails arranged at the body of the vehicle and defining the swinging range of the bonnet free of obstacles. These projections may be non-resilient and provided with axially displaceable rollers.

In the accompanying drawings the invention is shown by way of example.

In these drawings:

Fig. 1 is a side elevation of the front portion of a motor vehicle,

Fig. 2 shows a perspective view of the front portion of a motor vehicle illustrating the positively guided engine bonnet in the open position,

Fig. 3 is a cross section on the line 3—3 in Fig. 1 through the motor bonnet showing in elevation the upper end of the guide rail,

Fig. 4 is a cross section on line 4—4 of Fig. 1 through the motor bonnet illustrating in eleva-

tion the lower guide rail slightly bent towards the motor, and

Fig. 5 is a cross section on the line 5—5 of Fig. 4 through the guide rail shown in Fig. 4.

To prevent damaging of the mud guards, headlights and the like during opening and closing of motor bonnets provided with a plurality of hingedly connected bonnet members *a*, *b* the free ends *c* of the freely swingably arranged members *b* of the engine bonnet are positively guided. According to the construction shown in Fig. 2 the positive movement of the bonnet members is effected by arranging at both sides of the engine bonnet, at the front wall *d* of the carriage body *e* and at the side of the cooler *f* facing the motor, hollow rails *g* in which run the rollers *h* mounted on the projection *i* fixed to the free ends *c* of the freely swingably hinged members *b* of the engine bonnet.

The rails *g* are so arranged that during opening and closing of the bonnet the members of the latter are prevented from stumbling against any of the members of the carriage body.

As shown in Figs. 2 and 3 a supporting notch *k* is provided at the upper end of the rails *g* into which drops the roller *h* carried by the projection *i* when the bonnet is opened so that the latter is kept in the opened position. As illustrated in Fig. 4, the lower end of the rails *g*, however, is slightly bent in the direction of the motor, whereby pressing of the bonnet members *a* and *b* against their supporting points *l* in the closed position of the bonnet is ensured.

As, however, the rails *g* provided at the same side of the engine bonnet, due to the different shapes of the bonnet, not always extend in parallel to each other, the projections *i* are resilient in the direction of gauge alteration, see Fig. 5. This resiliency, however, may also be obtained in connection with rigidly arranged projections *i* by the fact that the rollers, eventually loaded by springs, may be axially displaced which, however, is not shown in the drawings.

Within the scope of the invention, links pivoted to the vehicle body and hingedly connected to the members of the engine body and which eventually are loaded by springs may be provided instead of the guide rails mentioned above.

In a further form of construction links, preferably spring loaded, are provided at suitable points of the vehicle, i. e. two points near the front and rear of the bonnet and on the upper part of it, e. g. on the radiator and on the front wall of the carriage body.

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