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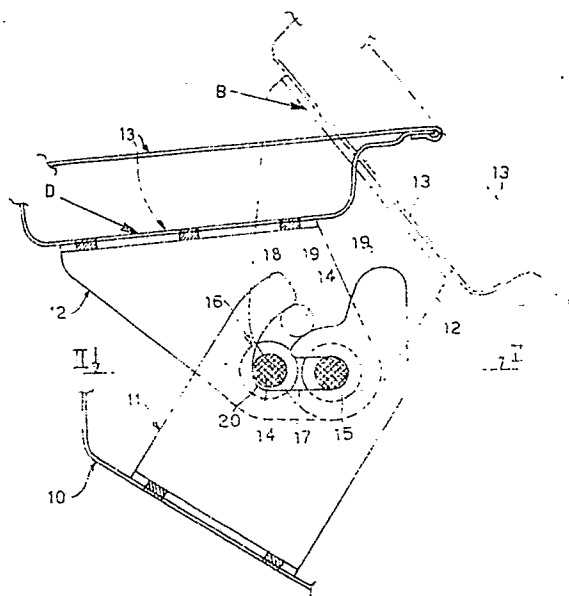
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(54) Hinge for hoods and luggage compartment lids of motor vehicles.

(57) A hinge for motor vehicles hoods and luggage compartment lids (13) foresees that into an appendix (11) of a body (10) attached to the hood or the compartment a substantially L-shaped open seat (16) be obtained to house two abreast riveted pins (14;15) onto an appendix (12) of the lid (13); the seat (16) and the pins (14;15) are such to allow a rotation of the lid (13) with respect to the motorcar body (10) between two end positions, one of which having a maximum angularity corresponding to the initial assembly stage and one having a minimum angularity corresponding to the closure of the lid (13).

Fig. 1

Tav. I



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POOR QUALITY

HINGE FOR HOODS AND LUGGAGE COMPARTMENT LIDS OF MOTOR VEHICLES

The invention refers to a hinge for motor vehicle hoods and luggage compartment lids.

The hinges employed in this sector at the moment consist of two parts hinged to each other by means of a riveted pin.

The two above elements are then fastened to the framework of the lid and to the motor vehicle by means of screws.

The assembly of this type of hinges usually requires manual intervention as some operations are needed that cannot be carried out by an automated device.

The purpose of the invention is to propose a particular type of hinge for hoods and for luggage compartment lids, suitable for the assembly on motor vehicles by automated devices (robots, for instance) without the intervention of workers for the hinge fastening. This is a remarkable advantage as motor vehicle manufacturers lately tend to eliminate the greatest part of manual intervention.

In order to reach this and other purposes which will be better understood as the description follows, the invention proposes to realize a hinge for motor vehicle hoods and luggage compartment lids characterized in that into an appendix of a body attached to the hood or the compartment a substantially L-shaped open seat is obtained to house two abreast riveted pins onto an appendix of the lid; the seat and the pins are such to allow a rotation of the lid with respect to the motorcar body between two end positions, one of which having a maximum angularity corresponding to the initial assembly stage and one having a minimum angularity corresponding to the closure of the lid.

The hinge according to the invention will now be described and reference will be made to the enclosed drawings, as follows:

Figure 1 is a section view on the motor vehicle near the hinge unit according to the invention;

Figure 2 is the section view according to the outline II-II of Fig. 1;

Figure 3 represents the same section of the motor vehicle of Fig. 1, and the various positions of the lid during the motor vehicle assembly are illustrated.

The hinge which is the subject of the invention consists of an immovable part welded on the body 10 of the vehicle; and a movable part 12 welded on the framework of the lid 13. On the movable part 12 two pins 14 and 15 are riveted, while on the plate 11 a substantially L-shaped seat is obtained for the housing of such pins 14 and 15. The seat

16, in particular, presents a straight-line base portion 17 radiused to a rounded portion 18 that has a V-opening 19 at the mouth of said seat.

The automatic assembly of the lid 13 on the body of the vehicle will take place, for instance, in the following way: an adequately preset robot will lift the lid 13 on the side of the assembly line and will position it on the vehicle so that its pins 14 and 15 engage in the seat 16, as illustrated in position A of Fig. 3 where the pins 14 and 15 are indicated in full line and hatched. When the pin 15 will reach corner 20, the robot will rotate the lid 13 until position B of Fig. 1 is reached, that is when the pin 15 finds itself at limit stop in the straight-line seat 17 and the pin 14 is permanently fitted in the rounded seat 16. Position C of Fig. 3, where the pins 14 and 15 are simply hatched is an intermediate position between A and B represented to illustrate clearly the assembly stages.

When the lid 13 will have reached position B, a second robot or a worker will fasten to the said lid a prop operating as a limit stop, or a traditional gas damper in order to limit at this position the opening angle of the lid, which could otherwise be released from the motorcar body.

At the end of such operation the robot will leave the grip of the lid 13 which will reach closure position D where both pins 14 and 15 are to be found in the horizontal seat section 17.

Claims

1. Hinge for motor vehicles hoods and luggage compartment lids characterized in that into an appendix of a body attached to the hood or to the compartment a substantially L-shaped open seat is obtained in order to house two abreast riveted pins onto an appendix of the lid; the seat and the pins are such to allow a rotation of the lid with respect to the motorcar body between two end positions one of which having a maximum angularity corresponding to the initial stage of assembly and one having a minimum angularity corresponding to the closure of the lid.

2. Hinge according to claim 1 characterized in that the seat has a substantially V-shaped opening, converging towards the mouth of same seat, which is radiused to a first rounded seat section which is radiused to a second straight-line section closed at the end.

3. Hinge according to claim 2 characterized in that the distance between the pins is substantially equal to the length of the straight-line section of the seat.

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Fig. 1

Tav. I

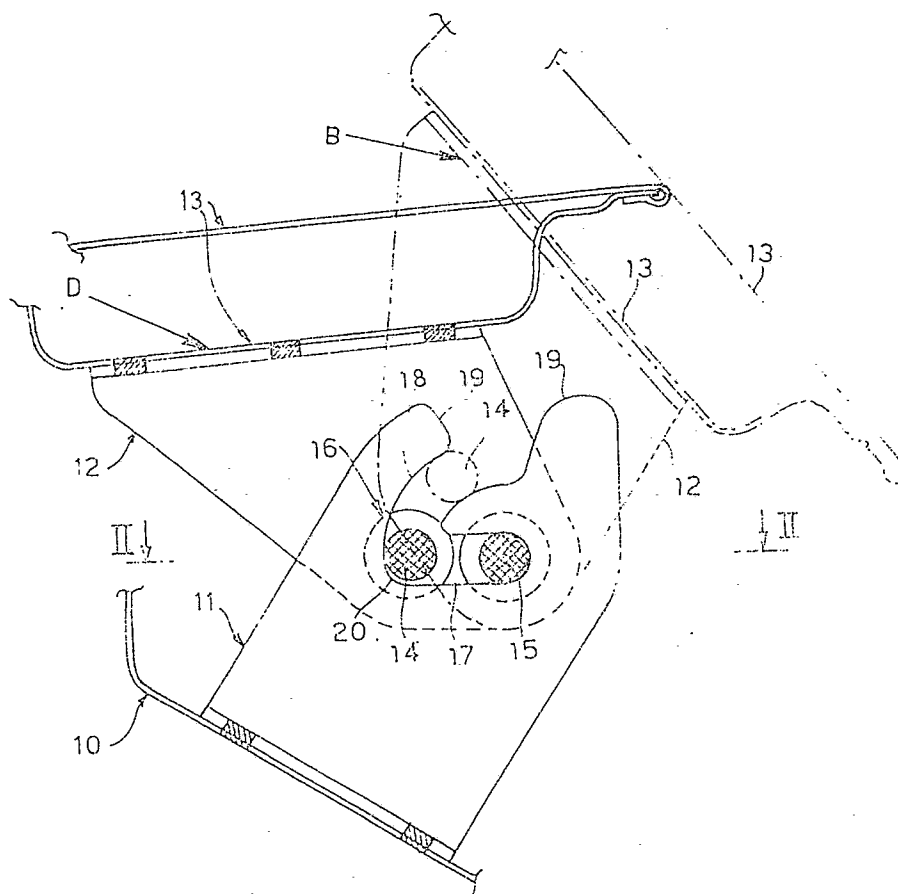
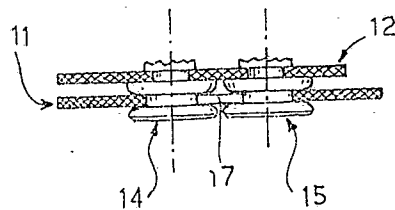
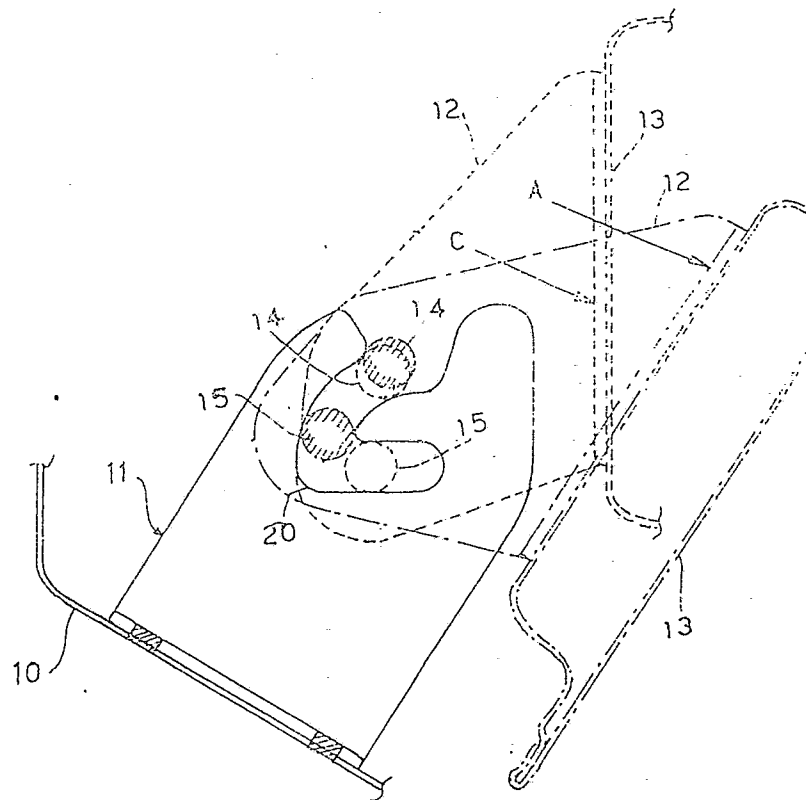


Fig. 2



Tav. II

Fig. 3



POOR QUALITY



DOCUMENTS CONSIDERED TO BE RELEVANT																			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)																
A	FR-A-1 302 645 (AUTOMOBILES BERLIET) * Page 1, column 2, paragraphs 2,3; page 2, column 1, paragraph 1; figure 4 *	1	E 05 D 7/10																
A	--- GB-A- 784 280 (S.W. BENGTSOON) * Figures 1,2,4,10 *	1																	
A	--- AU-A- 17 468 (WITCO HARDWARE MANUFACTURING(1970)) * Page 5, last paragraph; page 6, paragraph 1 *	1																	
A	--- US-A-2 920 341 (AMSTUTZ) * Column 2, lines 25-71; figures 1-3 *	1																	
A	--- GB-A-2 047 311 (BENGTSOON) * Page 1, abstract *	1,2																	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)																
			E 05 D B 62 D																
The present search report has been drawn up for all claims																			
Place of search THE HAGUE		Date of completion of the search 16-02-1989	Examiner NEYS B.G.																
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