

May 14, 1940.

G. A. McNULTY

2,200,699

HINGE

Filed July 5, 1938

2 Sheets-Sheet 1

Fig. 1.

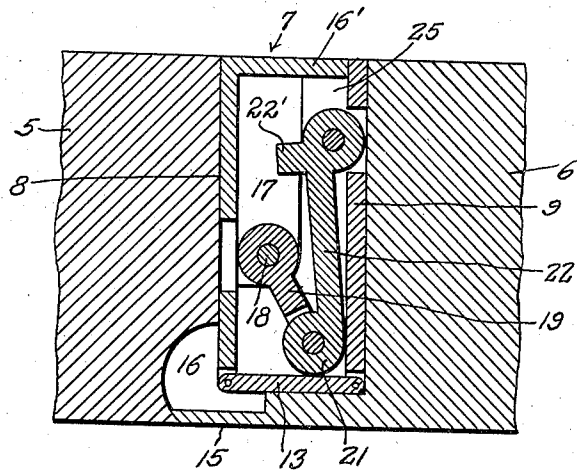


Fig. 3.

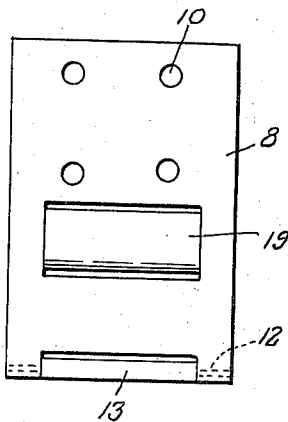


Fig. 4.

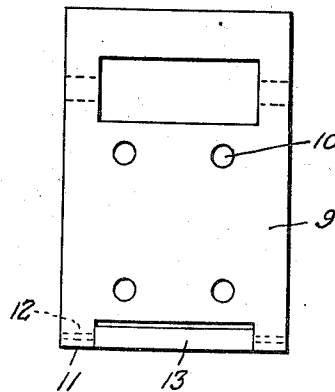
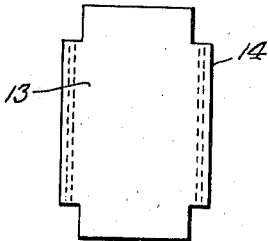


Fig. 8.

Inventor

Gerald A. McNulty.

By

Clarence A. O'Brien
and Hyman Berman
Attorneys

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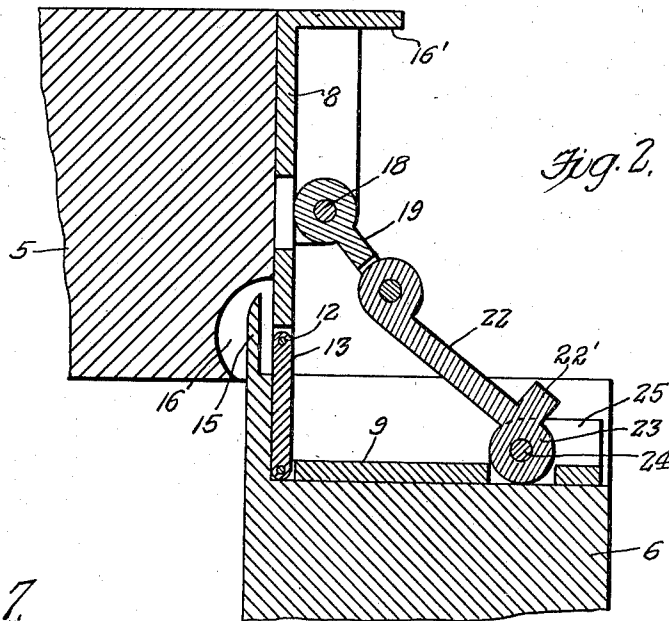
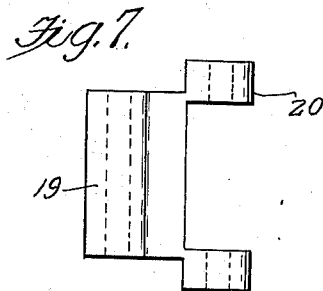
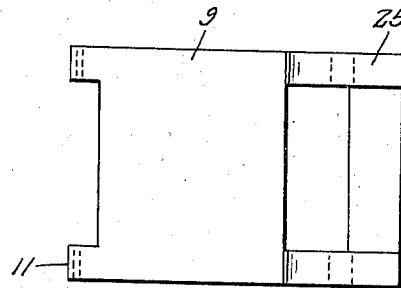
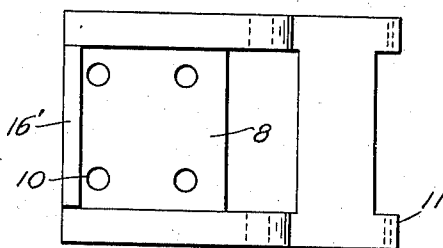
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2 Sheets-Sheet 2



Inventor
Gerald A. McNulty.

By *Clarence A. O'Brien*
and *Hyman Berman*
Attorneys

UNITED STATES PATENT OFFICE

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HINGE

Gerald A. McNulty, West St. John, New
Brunswick, Canada

Application July 5, 1938, Serial No. 217,610

1 Claim. (Cl. 16—164)

This invention relates to hinges and has for the primary object the provision of a device of this character which is especially useful on motor vehicle bodies and other similar devices wherein it is desired to have a smooth and unobstructed appearance to the body and its door, the hinge being entirely concealed when the door is in a closed position and which may be easily lubricated without the lubricant coming in contact with the outer face of the body or its door and which also provides an efficient check for limiting the opening of the door to relieve strain on the pintles of the hinge and other associated parts.

With these and other objects in view, the invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a fragmentary longitudinal sectional view showing a hinge applied to a fragmentary portion of a motor vehicle body and a fragmentary portion of the door of said body and constructed in accordance with the present invention.

Figure 2 is a view similar to Figure 1 showing the door in an open position.

Figure 3 is a plan view illustrating one of the attaching plates of the hinge.

Figure 4 is a plan view illustrating the other attaching plate of the hinge.

Figure 5 is a plan view illustrating the opposite side of the attaching plate from that shown in Figure 4.

Figure 6 is a plan view illustrating the opposite side of the attaching plate from that shown in Figure 3.

Figure 7 is a plan view illustrating one of the links.

Figure 8 is a plan view illustrating a hinge plate.

Referring in detail to the drawings, the numeral 5 indicates a fragmentary portion of a motor vehicle body or the post of a motor vehicle body onto which a door 6 is hinged. In the drawings only a fragmentary portion of the door 6 is shown. The post and door 6 in opposing faces to each other are provided with recesses for the accommodation of a hinge 7 forming the subject matter of the present invention. The hinge is so arranged in the recesses of the post and door that it is concealed from view from a point ex-

teriorly of the motor vehicle body when the door is in a closed position.

The hinge 7 consists of attaching plates 8 and 9 provided with openings 10 to receive screws or like fasteners for securing the plates in the recesses of the post and door. The plate 8 is secured in the recess of the post 5, while the plate 9 is secured in the recess of the door 6. The plates 8 and 9 at one end thereof are provided with spaced pintle barrels 11 to receive pintles 12. A hinge plate 13 is provided with pintle barrels 14 at opposite edges thereof through which the pintles 12 extend. Thus it will be seen that the hinge plate hingedly mounts the door on the post.

The recesses of the post and door do not open outwardly through the outer faces of the post and door. The door is provided with an extension 15 operating within a pocket or recess 16 formed in the post. When the door 6 is in a closed position the extension 15 is flush with the outer face of the post 5 so as to conceal the joint between the door and post. However, when the door 6 is swung into an open position the extension moves into the pocket or recess 16, as clearly shown in Figure 2.

The plate 8 has formed on one end thereof an end wall 16' on which the plate 9 rests when the door is in a closed position. The end wall 16' conceals the interior part of the hinge from the inside of the motor vehicle body, as clearly shown in Figure 1.

Side flanges 17 are formed on the plate 8 and extend from the end wall 16' and provide a support for pintle 18, the side flanges being provided with openings to receive the pintle 18 and journaled on the pintle 18 is a link 19 having formed on one end thereof spaced pintle barrels 20. Received between the pintle barrels 20 is a pintle barrel 21 forming an integral part of a link 22. The pintle barrel 21 is formed on one end of the link 22 while a pintle barrel 23 is formed on the opposite end thereof and receives a pintle 24 journaled in openings formed in side plates 25 formed on the attaching plate 9. The links 22 and 19 being pivotally connected to each other and to the side walls of the attaching plates 8 and 9 provide an effective door check for limiting the opening of the door. This is clearly shown in Figure 2 and further it will be seen that these links readily fold onto each other when the door assumes a closed position, as clearly shown in Figure 1. The links 19 and 22 and their pintles are completely concealed from view when the door is in closed position due to the

construction of the attaching plates 8 and 9. The joints between the attaching plates and the hinge plate 13 and the joints between the links and the attaching plates can be easily lubricated when the door is in an open position. However, the lubricant will be prevented from 5
spilling out over the outer face of the door as well as the body of the motor vehicle when the door is in a closed position, consequently permitting the outer surface of the motor vehicle 10
including the door to be kept in a clean condition. Thus it will be seen through the use of this type of hinge a very efficient and smooth joint may be provided between the door and the door post 15
with no portions of the hinge protruding beyond the outer face of the motor vehicle body, consequently adding to the appearance of the latter.

The link 22 adjacent the pintle 24 is provided with a lateral rib 22' fitting endwise between 20
the flanges 17 on the plate 8 in the folded position of the links 19, 22, and the plates 8, 9, or leaves, to brace said plates against relative sagging in the closed position thereof.

It is believed that the foregoing description, 25
when taken in connection with the drawings will fully set forth the construction and advantages of this invention to those skilled in the art to which such a device relates, so that

further detailed description will not be required.

What is claimed is:

In a hinge, a pair of plate-like substantially rectangular hinge leaves adapted to be swung one relative to the other laterally into open and 5
closed positions, respectively, said leaves in the closed position thereof being opposed in side by side spaced apart relation to form opposite sides of a chamber, a narrow elongated plate pivoted at its side edges to ends of said leaves to connect 10
the latter for swinging of the one relative to the other and for swinging of said plate in the closed position of the leaves to close one end of said chamber, a right angled flange on one leaf for closing the other end of said chamber in the 15
closed position of the leaves and forming a stop limiting swinging of the one leaf toward closing position, a pair of lateral flanges on each leaf, and a pair of plate-like links fitting between the 20
pairs of flanges, respectively, and pivoted together and to said pairs of flanges for folding and unfolding about axes parallel with that of the pivots of said plate in the closed and opened positions of said leaves, respectively, one of said 25
links having a lateral rib fitting endwise between the flanges of one of said pairs in the folded position of the links to brace the leaves against relative sagging in the closed position thereof.

GERALD A. McNULTY.