W. E. STEELE.

HINGE.

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1,253,641.

Patented Jan. 15, 1918.

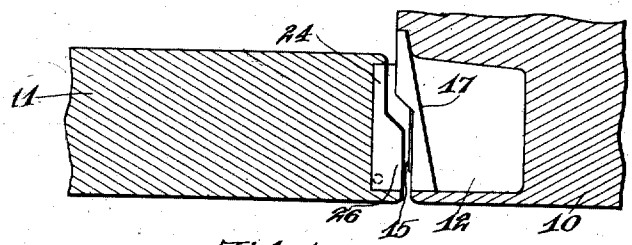


Fig. 1.

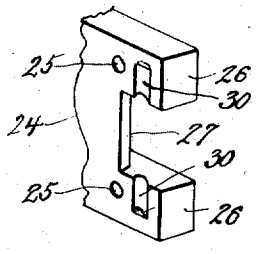


Fig. 6.

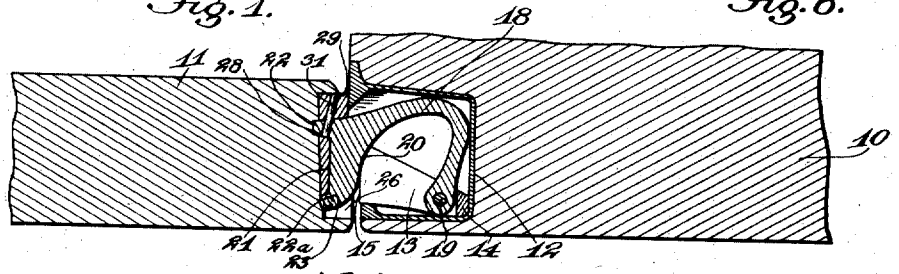


Fig. 2.

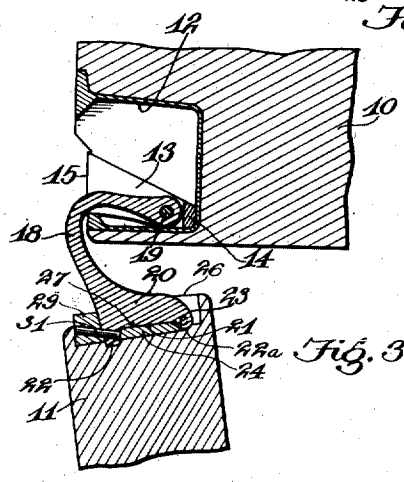


Fig. 3.

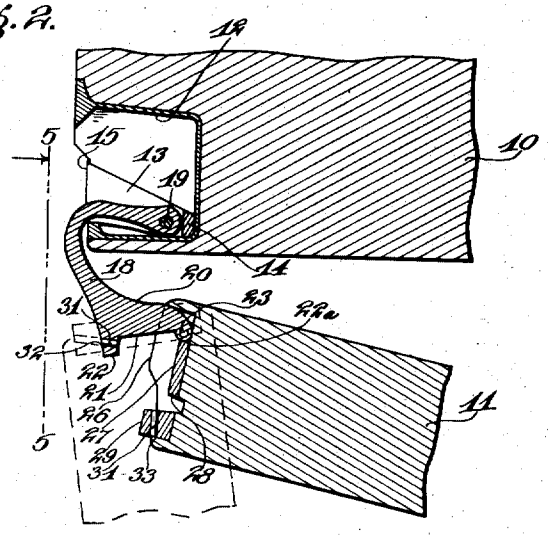


Fig. 4.

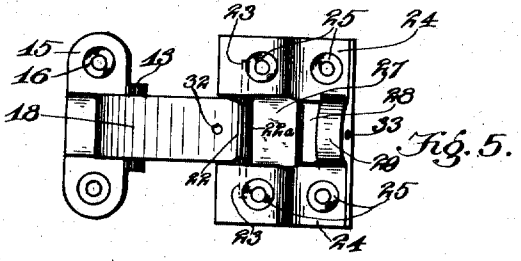


Fig. 5.

William E. Steele

INVENTOR.

BY Miller & Thomas

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM E. STEELE, OF CHICAGO, ILLINOIS.

HINGE.

1,253,641. Specification of Letters Patent. Patented Jan. 15, 1918.

Application filed April 10, 1917. Serial No. 161,054.

To all whom it may concern:

Be it known that I, WILLIAM E. STEELE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Hinges, of which the following is a specification.

The hinge which is the subject matter of the present application for patent is designed more particularly for the doors of automobiles and other vehicles, and its object is to provide a hinge having a frangible connection with the door so that if the latter should be left open it will not be torn off the hinges when striking an obstruction.

The object stated is attained by means of a novel combination and arrangement of parts to be hereinafter described and claimed, and in order that the same may be better understood, reference is had to the accompanying drawing forming a part of this specification.

In the drawing

Figure 1 is a horizontal section through the door at its hinge connection with the body of the car, showing one of the hinges in plan view;

Fig. 2 is a horizontal section through the hinge;

Fig. 3 is a horizontal section through the hinge showing the position of the parts when the door is open;

Fig. 4 is a view similar to the last preceding showing the action of the hinge if the door is forced beyond the limit of its ordinary swing;

Fig. 5 is an elevation as viewed from the line 5—5 of Fig. 4, and Fig. 6 is a detail in perspective.

Referring specifically to the drawing, 10 denotes a fragment of the car body, and 11 a fragment of the door. In the hinge edge of the body is sunk a casing 12 for the stationary member of the hinge assembly, the same being a casting of U-form having broad top and bottom parts 13 and a rear vertical connecting part 14, with outturned flanges 15 at the forward ends of the parts 13, said flanges having screw countersinks 16 and being sunk into the visible top and bottom flanges 17 of the casing 12 so as to be almost flush with the hinge edge of the body 10.

The movable member 18 of the hinge assembly is a broad hook-shaped forging, having one end pivoted by means of a vertical pin 19 between the parts 13 and close to the connecting part 14 of the latter, the pin seating at its ends in apertures in the parts 13. The other end of the member 18 is enlarged as shown at 20 and formed with a broad face 21. One end of this face has a projection 22 which is slightly tapered, while the other end is formed with a rounded projection 22^a which corresponds to the height of the member 18 and has projecting top and bottom pins 23.

The movable member 18 is not connected directly to the door 11 but is pivotally connected to a securing or base member to which it may be locked as will be presently described, the base member however being permanently fastened to the door. This base member consists of a rectangular plate 24 having countersunk screw holes 25 and an enlarged or thickened portion 26, which latter is recessed midway between its top and bottom, as shown at 27. The main portion of the plate 24, adjacent to the recess 27, is slotted, as shown at 28, the outer wall of this slot forming part of another thickened portion 29 of the plate. Fig. 2 shows the manner in which the hinge member 18 fits these parts, the face 21 resting squarely against the recessed portion 27 and the projection 22 seating in the slot 28.

That part of the plate with which the projection 22^a and the pins 23 are associated is clearly shown in Figs. 2 and 5. When the projection 22^a is directed toward the plate 24 it fits between the outstanding ends 26 thereof, and the pins 23 will seat in grooves 30 in said parts 26, so that the parts 18 and 24 are hingedly connected. While the pins may be easily fitted in the grooves when the plate 24 is free, separation is prevented after the plate has been fastened to the door 11 by screws passing through the holes 25.

To couple the parts 18 and 24 and thus lock the door to the former a soft, relatively easily frangible pin 31 is driven through alined apertures 32 and 33 made in the lapping parts 22 and 29,

With the parts assembled as shown in Figs. 1 to 3, the hinge operates in the same manner as an ordinary blind hinge. If the door should be left open, it will, when striking an obstruction swing from the dotted line to the full line position shown in Fig.

4, the pin 31 shearing in two and allowing the door to swing relative to the hinge member 18, so that it is saved from damage.

I claim.

1. A door hinge having a swinging member provided with means for attachment to a door frame, and having an attaching member for connection to the door, said members being pivotally connected, and a frangible means for locking said members against relative movement.

2. A door hinge having a swinging member, an attaching member for connecting the swinging member to the door, a pivotal connection between said members, lapping apertured parts on the members, and a frangible pin seating in the apertures of said parts for locking the two members against relative movement.

3. A door hinge having a swinging member, an attaching member for connecting the swinging member to the door, a pivotal connection between said members, one of said members having a recess and the other member having an apertured projecting part seating in the recess, and a frangible pin passing through the recessed part of one of the members into the aperture of the projecting part of the other member.

In testimony whereof I affix my signature.

WILLIAM E. STEELE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."