J. F. HIXSON.

ADJUSTABLE HINGE.

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1,067,114. Patented July 8, 1913.

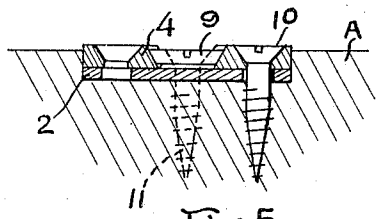


Fig. 5

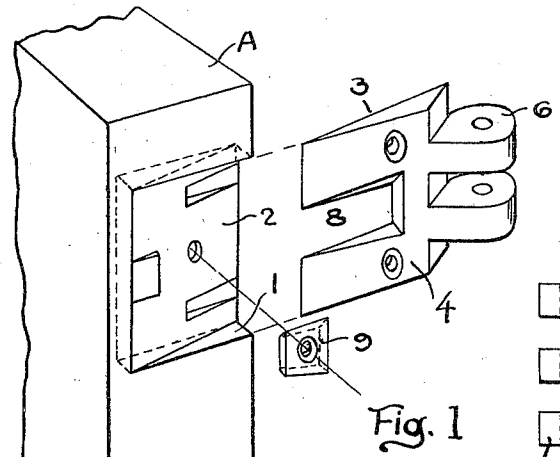


Fig. 1

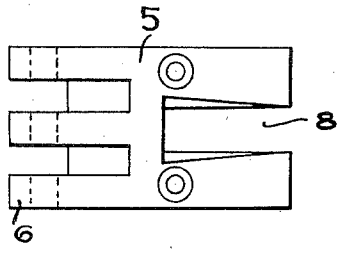
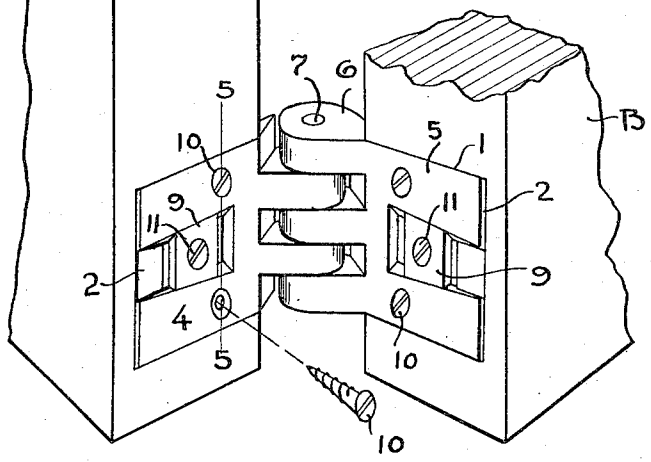


Fig. 3



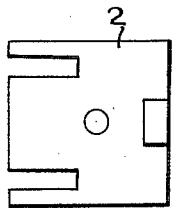


Fig. 4

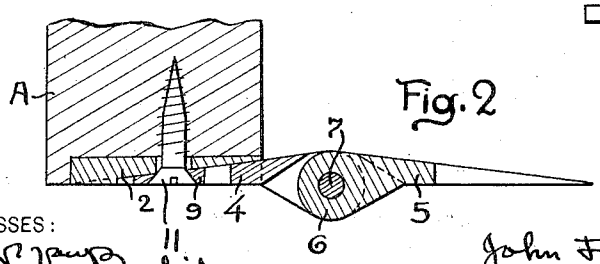


Fig. 2

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ADJUSTABLE HINGE.

1,067,114. Specification of Letters Patent. Patented July 8, 1913.

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To all whom it may concern:

Be it known that I, JOHN F. HIXSON, a citizen of the United States, residing at Ypsilanti, county of Washtenaw, State of Michigan, have invented a certain new and useful Improvement in Adjustable Hinges, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to hinges and has in view a hinge for hanging a door upon an automobile body.

It has for its object a hinge adjustable laterally of the plane of the body to effect an adjustment of the door laterally with respect to the plane of the body and in the plane of the body.

In the drawings: Figure 1, is a perspective of the hinges showing one hinge assembled and one disassembled. Fig. 2, is a horizontal section of a portion of the body and hinge. Fig. 3, is an elevation of one of the hinge plates. Fig. 4, is an elevation of the seating plate. Fig. 5, is a section on the line 5—5 of Fig. 1.

A, is the door which is hung upon the body B by the two hinges shown in perspective in Fig. 1. Mortises 1 are cut in the door A and in the body B and in these fits a wedge shaped seating plate 2. The front face is the beveled face and this is arranged to engage with the inclined face 3 of the hinge plate 4. It will be readily understood that by moving the hinge plate 4 toward the left in Fig. 1 that the hinge plate is projected farther out from the door along the plane of the door and that by drawing the hinge plate to the right of Fig. 1 that the hinge plate sets deeper in the mortise of the door and is adjusted toward the door in the plane of the door. The same holds true of the hinge plate 5 that is adjustable with respect to the body in exactly the same manner. The hinge plates 4 and 5 are provided with knuckles 6 which are arranged to engage adjacent each other and which hold a knuckle pin 7 that forms the pivot of the hinge.

The center of the hinge plates is cut away as at 8 and the side walls beveled to form a track which may slide along the securing member 9 which is a sort of square piece with sides correspondingly beveled. When the fastening screws 10 are taken out, the hinge plates are still held to the door and the body by the securing plates 9. By slightly loosening the screw 11, the hinge plate may be slid laterally with respect to the door or the body (depending upon which member it is fastened to). When the desired adjustment has been secured, the securing plate 9 may be tightened upon the hinge plate by turning the screw 11. It will be noticed in Figs. 1 and 4 that the seating plate 2 is slotted instead of having a customary circular perforation for the passage of the screw 10. This allows the driving of the screw in any point of lateral adjustment that the hinge plate may occupy with respect to the seating plate.

It will be obvious that when the door is closed with respect to the body and is flush therewith, that if it is desired to adjust the door so that it fits better with respect to the door post, (the member against which the door jams) that is, so that it fits closer thereto, or if it is decided to adjust the door so that it is removed slightly therefrom to prevent binding, all that will be necessary will be to move the hinge laterally with respect to both the door and the body—in the case of fitting the door closer to the door post, the hinge will be slid laterally inward (it being assumed that the knuckles and the pin are on the outside). This will cause the door and the post to be further spaced apart on account of the wedging faces of the hinge plate and the seating plate; in the case of the door being too close to the front door post, the hinge will be moved outward with respect to both the door and the post, thus relieving any binding. When the fault wished to be corrected is a failure of the door to lie flush with the body, then one of the hinge plates will have to be moved laterally to correct this fault and if this correction throws the door too far away from the door post or too close, then this fault may be corrected by adjusting both of the hinge plates with respect to the body and the door in the manner already described. These adjustments are very easily secured, as the securing plate allows the hinge to be readily moved and temporarily secured in its new position until the correct adjustment is attained.

My invention may be used to take up the sag in a door or to force the upper corner down when it is raised up too high. This

is readily accomplished by the use of the wedging arrangement upon which my hinges are designed. As, for instance, when the door sags the lower hinge may be pushed in and the screws reset. This will thereby force the bottom of the door out and take up the sag. When the door is raised up too high at the upper corner, this fault may be corrected by pushing in on the upper hinge and resetting the screws. Or, if either of these actions cause the door to bind with the front door post, the fault in the case of the sag in the door might be corrected by resetting the upper hinge by adjusting it outward and in case of the door being raised up too high the fault might be corrected by adjusting the lower hinge outward.

From the above description it will be seen that there is almost a universal adjustment that may be achieved by resetting the hinge plates in or out, one or both plates, or one or both hinges.

I do not wish to be understood as limiting my invention to automobile hinges alone for its usefulness extends to all hinges that are used to support a swinging member with respect to another body.

What I claim is:—

1. The combination with a seating-surface which is beveled, of a hinge comprising a pair of hinge-plates, one of the plates having one of its two larger faces inclined and adapted to lie against the beveled seating surface, knuckles attached to each hinge-plate and a hinge-pin passing through the knuckles, whereby the adjustment of the inclined-face hinge plate along the beveled seating surface tends to project the hinge or withdraw the hinge in a direction at right angles to the direction of adjustment, substantially as described.

2. A hinge, having in combination, a pair of hinge-plates, one provided with a cut-away portion having beveled side walls forming a track, knuckles attaching to the hinge-plates, a hinge-pin passing through the knuckles and an adjustable block provided with beveled sides and located in the track so that the hinge plate may slide along the block when the same is loosened, the said block being adapted to be tightened down upon the hinge plate so that the beveled surfaces engage to secure that hinge-plate temporarily in a given position of lateral adjustment, substantially as described.

3. A hinge, having in combination, a pair of hinge-plates one having an inclined face, knuckles carried by the hinge-plate, a hinge-pin passing through said knuckles, a seating-plate having a beveled face engaging with the inclined face of the hinge plate and a securing member for temporarily holding the hinge plate while it is being adjusted laterally, substantially as described.

4. The combination with a door, and door post, one of which is provided with beveled hinge-seating surfaces, of a plurality of hinges, each hinge provided with a hinge-plate, one of the two main faces of which is inclined and adapted to seat upon the beveled hinge-seating surface, whereby the individual hinges may be projected out and withdrawn in with respect to the door and post to raise and lower the free end of the door, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

JOHN F. HIXSON.

Witnesses:
STUART C. BARNES,
AMELIA C. KOLIN.

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