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HINGE

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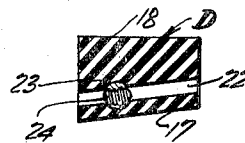
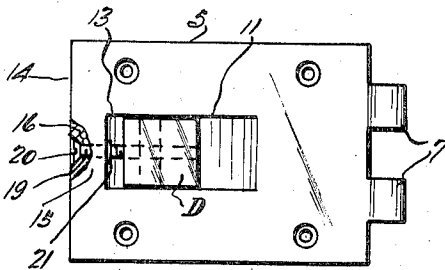
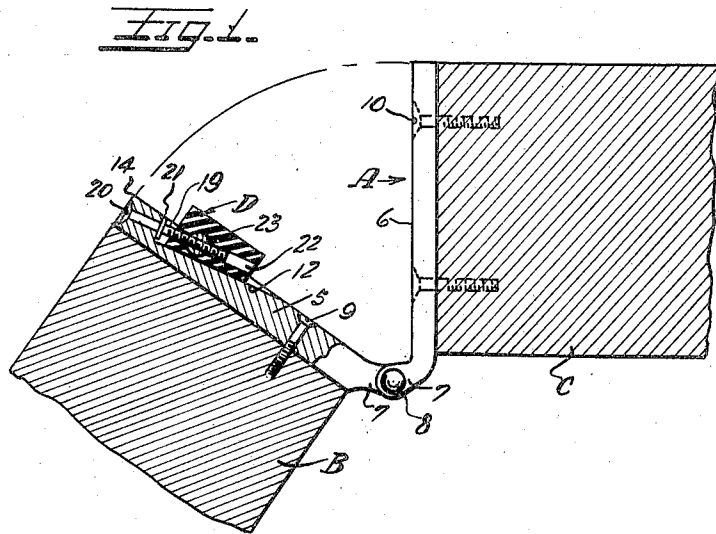


Fig 3

Fig. 2

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HINGE

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2 Claims. (Cl. 16—191)

This invention relates to improvements in hinges.

In the mounting of certain doors, notably automobile doors, it is necessary not only to hinge the door but to provide a resilient bumper means which is so placed as to be put under compression as the door is closed in order to prevent the door from rattling. This bumper must also be adjustable in some manner in order to compensate for wear as it occurs both in the bumper and in the hinge itself. With these points in mind, it is the primary object of my invention to provide a combination hinge and bumper in which the bumper element is a part of the hinge and in which the bumper element is readily adjustable in order to take up for wear as it occurs.

Another object is to provide a hinge and bumper unit of this kind in a simple, practical and durable form.

The foregoing and other more specific objects of my invention will be made apparent in the course of the following detailed specification, reference being had to the accompanying drawing, wherein

Figure 1 is a horizontal and fragmental section through a door and jamb showing my improved hinge and bumper unit in use thereon.

Figure 2 is an inside elevation of the inner face of the hinge leaf carrying the bumper element.

Figure 3 is an enlarged cross section through the bumper element alone.

Referring now with more particularity to the drawing, my improved hinge is designated generally at A and shown as in use in connecting the door B to the door support or jamb C. The hinge A comprises two similar hinge leaves or plates 5 and 6, each having one edge provided with spaced eyes 7 arranged in interfitting relation and receiving the hinge pin 8 to pivotally connect the two leaves. The leaf 5 is secured by screws 9 to the door B and the leaf 6 is similarly secured at 10 to the jamb C. The eyes 7 are offset somewhat from the plane of the leaves 5 and 6 in such manner that, when the door B is fully closed, there will be a narrow space between the two leaves.

The foregoing completes the hinge structure, per se, but in accordance with my invention one leaf, as 5, is provided near its free end with a longitudinally and medially extended groove or recess 11 which is cut deeper near the free end of the hinge leaf and gradually diminishes in depth toward the other end to thus provide a cam-acting face 12 angularly extended relative to the inner face of the hinge leaf. The deeper end 13 of this groove is spaced some distance from the free end 14 of the hinge leaf 5, thus leaving a shoulder 15,

and through this shoulder is provided a bore 16 extended longitudinally along the center line of the hinge leaf and in a plane parallel with the groove face 12.

The bumper element D takes the form of a rubber or other resilient block of generally rectangular shape but having one edge 17 faced or beveled off from end to end at an angle corresponding to the angle of the groove face 12. The block D is of such width as to nicely fit into the groove 11 and, the edge 17 being placed against the cam-acting face 12, it will be readily evident that the opposite or working side 18 of the block will stand parallel with, but spaced outwardly from, the inner face of the hinge leaf 5. It will also be noted that by adjusting the position of the block D in the groove 11, the projection of the block from the hinge leaf 5 may be readily varied.

For the purpose of adjusting the block D in the groove 11, I provide the screw 19 which is journaled through the bore 16 and is locked against axial displacement by engagement of its head 20 with the outer end 14 and by a collar 21 which is secured on the screw and bears against the inner face of the shoulder 15. The threaded end of the screw 19 then extends parallel with the groove face 12 and enters loosely a bore 22 which is cut through the bumper block D from end to end and parallel with the edge 17. A rod or pin 23 is extended transversely and rigidly through the block D at right angles to the bore 22 and traversing the same. This pin 23 has a diametrically extended and tapped recess 24 which receives the threaded end of the screw as shown.

In use the screw 19 is adjusted to draw the block D toward the deeper end of the groove 11 in which position the block will contact the hinge leaf 6 as the door B is closed and will be compressed slightly to put a tension on the door such as will prevent rattling.

As wear occurs the screw 19 may then be adjusted to move the block D along the groove 11 towards its shallower end and thus increase the projection of the block from the hinge leaf 5.

It is understood that I may vary from the specific assembly herein shown and described, so long as such variations lie within the spirit and scope of the appended claims.

I claim:

1. A hinge comprising a pair of leaves pivotally connected at one margin, one of the leaves being formed with a transversely extended recess tapered inwardly from a relatively deeper to a relatively shallow portion so as to form a cam surface disposed angularly relatively to the inner

face of the leaf, the outer deeper portion of the recess being defined by a shoulder formed by the margin of the leaf, a resilient bumper element slidably mounted within the said recess, and an
5 adjustment screw passed through the marginal shoulder of the recess and through the bumper element, in threaded engagement therewith, whereby the bumper element may be moved along the recess to increase or lessen its projection
10 beyond the inner face of the leaf.

2. A hinge comprising a pair of leaves pivotally connected at one inturned margin to provide an intermediate space, one of the leaves being formed with an elongate, tapered recess transversely extended on its inner face, a resilient bumper element slidably confined within the said recess, and
5 means for adjusting the location of the bumper element within the recess.

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