To all whom it may concern:

Be it known that I, HORACE T. THOMAS, United States citizen, residing in Lansing, Michigan, have invented the following described Improvements in Door-Latch Constructions.

The invention has special reference to the door-holding means of automotive vehicles, its object being to simplify the manufacture and improve the appearance of the latch and jamb structures of such vehicles, and to facilitate the adjustment of the latch mechanism and of the bumper so that the door may be easily kept tight against rattling. These and other objects are attained by the structure herein disclosed, the several features of which will be seen to be capable of independent use although they are more suitably used in a single combination as illustrated in the accompanying drawing which shows the preferred form of the invention.

Fig. 1 represents the inside surface of a part of the side wall and the door of a motor vehicle according to this invention. Fig. 2 shows the door jamb and its socket member in elevation on larger scale; Fig. 3 is a larger scale horizontal section through the latch mechanism; Fig. 4 is a similar scale detail of the socket member in position; and Fig. 5 illustrates the mode of adjustment thereof.

In these drawings, the door comprises a suitable frame 1 provided on its outer side with a covering of sheet metal 2, and on its inner side with fabric or the like, as usual. It is hinged to one of the similarly covered jambs of the frame of the vehicle body, and carries a suitable lock or latch 3, the bevelled bolt of which is adapted to engage the striker and keeper members on the opposite jamb 4. The detail of the structure of the door and vehicle body is unimportant. The door however is formed with a projecting flange 5 in substantially the plane of its outer covering arranged to overlap or conceal the crevice between the door and body wall and such flange may be formed by merely extending the sheet metal covering 2 beyond the door stile or edge of the door body and folding it back on itself, but I prefer to fasten an angle bar 6 to the face of the door stile and fold the metal covering over the projecting web of this bar as indicated in the drawing, thereby providing a neat overlap which has sufficient stiffness to serve also as a stop-flange for the door to limit its closing movement. The other web of the angle bar 6, which is screwed to the door stile, may be covered with any suitable trim or may itself serve as the permanent finish of the door edge, such edge being flat, i.e., without the usual rabbeted shoulder. When the overlap serves as a stop-flange the bumper against which it strikes and to which it is held by the latch mechanism, is formed as a thin flat strip 7 of rubber or other yielding material mounted at or in the corner of the door jamb and extending a considerable vertical distance thereon, preferably for the full height of the door opening, so that it gives the general appearance of an ornamental bead on the jamb. Such a bumper affords an effective contact surface for engagement by the door and may be secured in place in various ways but it is preferably set into a rabbet groove cut in the jamb post 4 and held in place therein by a metal strip or plate 8 screwed directly to the jamb, or edge face of the body wall. By preference this plate covers substantially the whole of the jamb, as shown in Fig. 2, in which case it may be said to constitute a jamb-lining for the doorway giving a neat flat surface to the edge of the wall like the opposing edge of the door, i.e., without the customary shoulder or stop bead. The edge of the body covering 9 (Fig. 3) is turned into the bumper groove so as to be concealed by the bumper, and so that the latter forms the corner of the jamb giving a neat and pleasing effect. It is apparent, that as the bumper strips wears down in use it can be readily set outward by removing the jamb lining and inserting a piece of cardboard or the like behind it.

The plate 8 may also serve as the striker for the bolt 3 of the latch-mechanism, i.e., as the member first engaged by the bevelled side of the bolt, or along which it slides when the door is closed, but the keeper or socket for the bolt is independent of the striker plate, is more or less concealed by it and is adapted to be adjusted independently of it.

As exemplified by the preferred form
herein shown, the keeper is made of a flat metal blank bent to form a socket or bolt-holding part, marked 10, and an attachment plate, marked 11, which latter is disposed at a right-angle to the socket part and provided with screw holes so that it may be screwed directly to the side face of the wall structure as shown in the drawings, in which position it supports the socket part 10 in a recess 12 cut in the jamb post directly behind an aperture or notch in the striker plate or jamb-lining 8 and where the latch bolt may enter it. The bolt-holding part of the keeper is thus supported between the proximate edges of the door and wall independently of the plate 8, although it may be additionally supported by said plate or by the recess 12 or both as will be evident. The attachment plate 11 may be nickelled or enameled so that it can be exposed on the interior surface of the wall as shown in the drawings, where it is applied over the guimp 13 of the interior lining of the vehicle body, but it may obviously be placed under the guimp if desired so as to be concealed thereby. In either case the bolt-holding part 10 can be adjusted inward or outward, that is to say, in the direction of the door-closing movement by the simple expedient of backing off the keeper screws and removing or inserting shims under the attachment plate as indicated at 14 in Fig. 5 and in this manner the door can be made to close and latch tightly against its stop or bumper.

The bolt-engaging part of a keeper capable of adjustment in the manner above described may be variously shaped and variously mounted in the jamb, or in the case of a reversal, in the door stile, and it may be so shaped as to furnish an auxiliary or safety socket for the bolt as sometimes used. It is preferably rigidly mounted and confined behind the margin of the notch in the plate so as to be the least conspicuous from the outside although, again, the functions and many of the advantages of the construction would not be impaired if the said socket member were otherwise disposed.

I claim—

1. In combination, an automobile door frame having a covering constituting the external wall of the door extended in substantially the plane of the outer surface of the door and serving as an overlap and stop-flange, a jamb having a bumper of extended vertical dimension engaged by the stop-flange, and bevel latch mechanism to retain said engagement.

2. In combination, an automobile door structure hinged to one of the jams of the vehicle body and stopped in its closing movement by its engagement with the other jamb and comprising an overlapping stop-flange, the latter jamb having a bead-like bumper of extended vertical dimension disposed along its outer corner and latch mechanism adapted to hold the stop-flange against the bumper.

3. In door latch construction for automotive vehicles, a door having an overlapping stop-flange, a jamb carrying a bead-like vertical strip bumper engaged by the flange and an attached jamb-lining confining the bumper.

4. Door latch construction for automotive vehicles, comprising in combination with the door and its latch bolt, a jamb provided with a bumper of extended vertical dimension, a keeper on the jamb and a plate, formed independently of said parts, covering substantially the whole of said jamb and overlying the bumper and keeper.

5. Door latch construction for automotive vehicles comprising a door having a non-rabbeted edge and provided with a stop-flange in the plane of its outer surface and with a latch bolt, in combination with a jamb having a strip bumper for engagement by the stop-flange and a substantially flat plate confining the bumper to the jamb and covering substantially the whole of said jamb, and provided with an aperture for the entry of the bolt.

6. Door latch construction comprising in combination with the structure of the door and wall, a latch bolt on one structure and a keeper on the other, the latter comprising a bolt-holding part adapted to occupy a position between the proximate edges of said structures and an attachment plate for supporting said bolt-holding part, which plate is adapted to be secured to, and parallel with, the side surface of one of said structures and to be spaced therefrom, whereby the position of the said bolt-holding part is adjustable in the direction of the door closing movement.

7. Door latch construction comprising in combination with the structures of the door and its wall, a latch bolt on one structure and a bumper and keeper on the other, said keeper comprising a bolt-holding part between the proximate edges of the said structures, and a supporting plate for said part extending parallel with the plane of said structures and adapted to be secured to one of them at different distances from the bumper.

8. Door latch construction for automotive vehicles, comprising in combination with the structures of the door and wall, a bumper located at the corner formed by the edge and outer surfaces of the wall structure, a keeper comprising an attachment plate secured to the inner surface of said wall structure and a socket member occupying a position between said structures and supported in such position by said attachment plate.

9. Door latch construction for automotive vehicles comprising, a door carrying a
latch bolt and having a non-rabbeted edge and provided with a projecting stop-flange in the plane of its outer surface, in combination with a wall also having a flat or non-rabbeted edge opposite the edge of the door, and a keeper having an attachment plate secured to the inner side of said wall and supporting a bolt-holding socket 'in a recess formed in said non-rabbeted edge.

10. Door latch construction comprising an apertured plate secured to the door jamb, a bolt socket and keeper behind the aperture and means whereby said keeper may be adjusted and held in adjustment independently of the means which secure the plate to the jamb and parallel thereto.

11. In door latch construction, a jamb, a jamb-lining attached thereto and a keeper on the jamb behind the lining provided with supporting means whereby it may be adjusted independently of the attachment means of the lining in the direction of the door-closing movement.

12. Door latch construction comprising door and wall structure, an apertured plate secured to the edge of the wall structure and serving as a striker, and a keeper supported on the side surface of said wall structure and provided with a bolt socket behind said aperture.

13. Door latch construction comprising in combination, a bumper, an apertured plate securing the same in position and a bolt socket behind the aperture in said plate having means whereby it may be adjusted relatively to said plate and bumper.

14. Door latch construction comprising a jamb, a plate covering the whole of the jamb and serving as a striker, an aperture in the plate and an adjustable keeper in rear of the plate.

15. An automobile door hinged at one edge to one of two jambs of the vehicle body and arranged to be stopped in its closing movement solely by engagement with the other jamb, in combination with a strip bumper mounted on the latter jamb to simulate an ornamental bead running vertically thereon.

16. An automobile door, a vehicle body having a jamb and an outer covering therefor, and a strip form door bumper mounted on the jamb and concealing the edge of said body covering.

17. An automobile body wall having a jamb provided with a rabbet groove and an outer covering with its edge bent into the rabbet groove, a strip bumper in said groove and a jamb plate confining or overlying said bumper.

18. Door latch construction for automotive vehicles, comprising in combination a door and its latch-bolt, a jamb, a bumper on the jamb, a separately formed keeper on the jamb, a plate on the jamb covering both bumper and keeper, and means whereby said keeper may be adjusted in the direction of the door movement independently of said plate.

19. In combination, an automobile door structure hinged to one of the jambs of the vehicle body and provided with a latch bolt, a vertically extended strip-form bumper associated with the other jamb, a keeper for the latch-bolt mounted on the latter jamb and means whereby said keeper may be adjusted in the direction of the door-closing movement independently of said bumper.

In testimony whereof, I have signed this specification.

HORACE T. THOMAS.