Sept. 30, 1930. W. M. McGLAUGHLIN 1,777,146

CHAIN FASTENER FOR DOORS

Filed Aug. 3, 1928

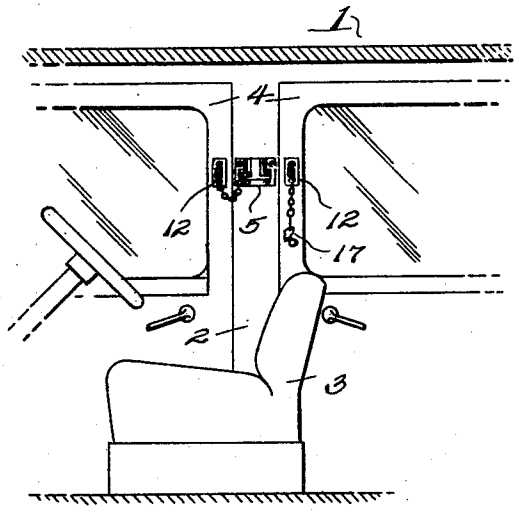


Fig. 1

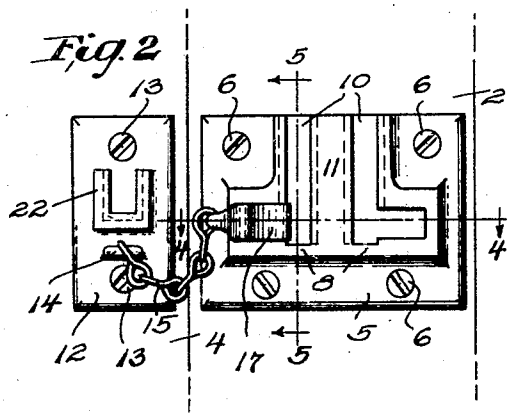


Fig. 2

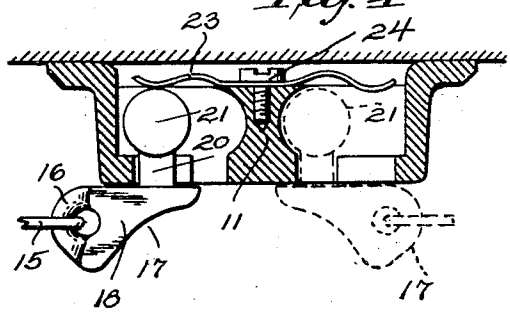


Fig. 4

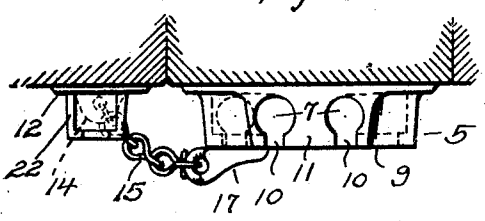


Fig. 3

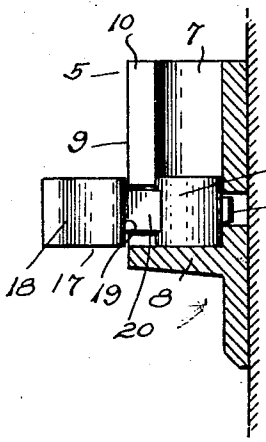


Fig. 5

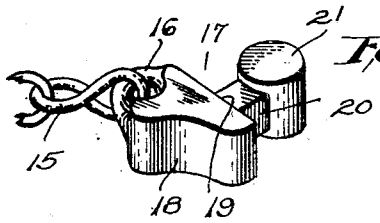


Fig. 6

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UNITED STATES PATENT OFFICE

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CHAIN FASTENER FOR DOORS

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This invention relates to improvements in door fasteners, and has for its primary object to provide a door fastener which, in certain of its specific aspects, is adapted for use in connection with the bodies of motor vehicles for the purpose of providing auxiliary or supplemental fastening means for preventing and limiting the opening movement of such vehicle doors.

It frequently happens that through accident or the stresses and strains of operation the doors of a motor vehicle body will open inopportunely. Particularly is this true when the vehicle is carrying children who are apt to carelessly manipulate the normal latch mechanism with the result that the doors are opened and physical injury to the vehicle occupants is apt to ensue.

It is therefore, the principal object of the invention to produce a simple yet effective form of supplemental fastening means so situated that when operatively positioned accidental opening of the doors will be effectively precluded and thereby eliminate the possibility of injury to the vehicle occupants by reason of fortuitous opening of the vehicle doors.

It is another object of the invention to provide a supplemental fastening of the character aforesaid which when not in active use will be out of the way and which will not interfere with the normal opening and closing of the vehicle doors.

A further object resides in a fastener of the character set forth which is of simple construction, efficient and durable and which may be readily applied to the body of the vehicle for use when needed.

With these and other objects in view which will appear as the description proceeds, the invention consists in the novel features of construction, combination of elements and arrangements of parts hereinafter to be fully described and pointed out in the appended claims.

In the accompanying drawing:

Figure 1 is a view in vertical section taken through the body of a motor vehicle and illustrating in its applied position the supplemental door fastener comprising the present invention,

Figure 2 is a side elevation on a somewhat enlarged scale of the door fastener,

Figure 3 is a top plan view of the fastener,

Figure 4 is a horizontal sectional view taken on the plane indicated by the line 4—4 of Figure 2,

Figure 5 is a detailed vertical sectional view on the line 5—5 of Figure 2,

Figure 6 is a detailed perspective view of the bolt member.

Referring more particularly to the drawing the numeral 1 designates the body of a motor vehicle which in this instance is of the closed type although the invention is equally applicable in connection with vehicle bodies of the so-called "open" type. In the form of the vehicle body here illustrated, however, said body is formed to include a stationary upstanding post 2 arranged, as usual, adjacent to the forward or driver's seat 3 of the vehicle. The swinging doors of the body are designated by the numeral 4, and it will be understood that these doors may be mounted in the usual manner so as to swing about hinges (not shown) from open to closed positions and vice versa.

In this instance there is mounted on the post 2 above the seat 3 and between the doors 4 a stationary socket plate 5. This plate is preferably formed from cast metal and is provided with openings adapted for the reception of screws or the like 6, which are utilized in firmly and stationarily securing the plate 5 in applied operative relation to the post 2. When the plate is employed in connection with a pair of doors the said plate is formed to include a pair of vertically extending sockets 7, which open to the top of the plate and are provided with closed bottom

walls 8. The front walls 9 of said sockets are formed to include substantially L shaped slots 10, which are also formed with closed bottom portions and which open freely to the top of the plate. The sockets 7 are separated by an intervening web or vertically extending wall 11 so that a pair of sockets are arranged independently of each other and provided in the plate.

Secured to each of the doors 4 in a position close to the plate 5 when said doors are closed, are anchor brackets 12, the said brackets being fastened to the vertical side edges of the doors 4 by means of screws or their equivalent 13. Each of the brackets 12 is formed with a pierced horizontally extending integral lug or ear 14, to which is firmly secured the inner or fastened end of a strong steel wire chain 15, the outer end of the chain being connected with an apertured lug 16 formed upon a bolt member 17, one of said bolt members being carried by each of the anchor brackets 12.

Each bolt member is formed to include an enlarged body portion 18 which terminates in a flat vertically extending wall 19. From this wall there integrally projects a substantially square but reduced shank 20, and the shank terminates in an enlarged cylindrical head 21.

It will be seen that the shank is of such proportions as to readily pass through the L shaped slots 10 provided in the plate 5 and similarly, the head 21 will pass through the enlarged socket 7. To fasten the doors the locking bolt is thus inserted into the plate 5 and forced to the extreme lower portion of the slot 10, the bolt then being moved laterally so that the shank will occupy the horizontally extending lower part of the slot 10. Due to the fact that the head 21 is larger than the slot 10 the bolt cannot be withdrawn from its applied position within the socket 7 unless said bolt is moved laterally in a horizontal plane and then upwardly in a vertical plane until its head is free of the plate 5. Such movement, of course, cannot readily take place through accidental causes but must be positively effected to permit of the release of the doors.

Each door is provided with one of the locking bolts and therefore in the event the vehicle body is provided with but two doors it will be unnecessary to provide the double sockets in the stationary plate 5 and in which event the plate 5 is provided with but a single socket. The anchor brackets 12 are also provided with substantially U shaped sockets 22, in which the shank and head 20 and 21 of the associated locking bolt is positioned when the supplemental fastener is not in active use. The socket 22 serves to prevent rattling or looseness of the bolt and also retains the chain 15 in an out of the way position when the doors 4 of the vehicle are being opened and closed.

To prevent rattling of the bolt members when the latter are actively positioned within the socket 7 and to prevent undue movement of the bolts from said active positions, I have provided the web 11 of the plate 5 along its inner wall with a flat leaf spring 23, the latter being held securely in its operative position by a screw 24. The free ends of the spring 23 are so arranged that they frictionally press upon the heads 21 of the bolt members when the latter are operatively secured within the lower portions of the sockets 7. This construction serves to overcome looseness and rattle and prevents the bolt members from working loose and losing their fastening positions.

In view of the foregoing it will be seen that the present invention provides a simple yet efficient supplemental fastening device for the purpose set forth. The fastener may be readily applied to a standard vehicle body and operates in conjunction with the main fastening devices of a motor vehicle door for the purpose of preventing uncontrolled or accidental opening of such doors. It is preferable to place the supplemental fastening device in the position illustrated in Figure 1, wherein it is out of the way and cannot be conveniently reached by children which in this connection will serve as a safety measure to prevent children from being injured by surreptitiously or accidentally opening the doors of the vehicle while the latter is in motion and without the knowledge of those concerned.

While I have described what I consider to be the preferred form of the invention, nevertheless it will be understood by those skilled in the art that various changes may be made in the design of the fastener from the construction herein specifically set forth and described without departing from the spirit and scope of the invention as the latter has been defined in the following claims.

What is claimed is:

1. A chain fastener for doors comprising a plate stationarily mounted contiguous to a door opening, said plate being provided with a substantially L shaped socket, said socket opening to the top of said plate and being closed at its lower end, the lower end of said socket being terminated in a horizontally extending portion laterally off-set with respect to the extrance portion of the socket, and a bolt member flexibly carried by an associated door, said bolt member having the outer portion thereof provided with an enlarged head arranged to be positioned in the socket of said plate member and to occupy normally the horizontally off-set portion provided at the lower end of said socket.

2. A chain fastener for doors comprising a plate stationarily mounted contiguous to a

door opening, said plate being provided with a socket including a vertical portion opening to the top of said plate and being closed at its lower end, the lower end of said socket being terminated in a horizontally extending portion laterally offset with respect to the entrance portion of the socket, and a bolt member flexibly carried by an associated door, said bolt member having the outer portion thereof provided with an enlarged head arranged to be positioned in the socket of said plate member and to occupy normally the horizontally offset portion provided at the lower end of said socket.

In testimony whereof I affix my signature.

WILLIAM M. McGLAUGHLIN.