May 19, 1942. W. M. BARBOUR 2,283,596

DOOR LOCKING MECHANISM

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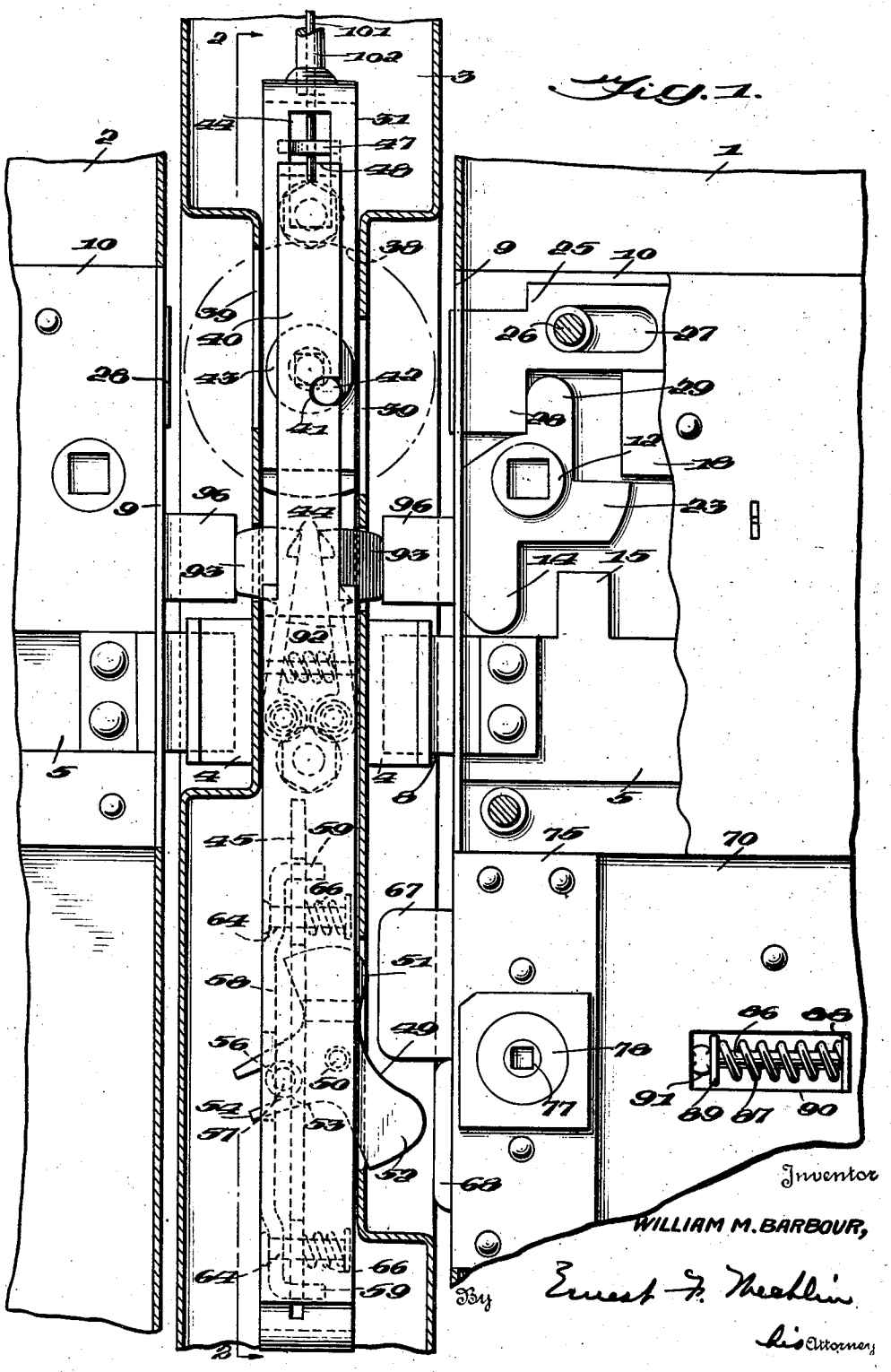


May 19, 1942. W. M. BARBOUR 2,283,596

DOOR LOCKING MECHANISM

Filed July 20, 1939 9 Sheets-Sheet 2

Fig. 2.

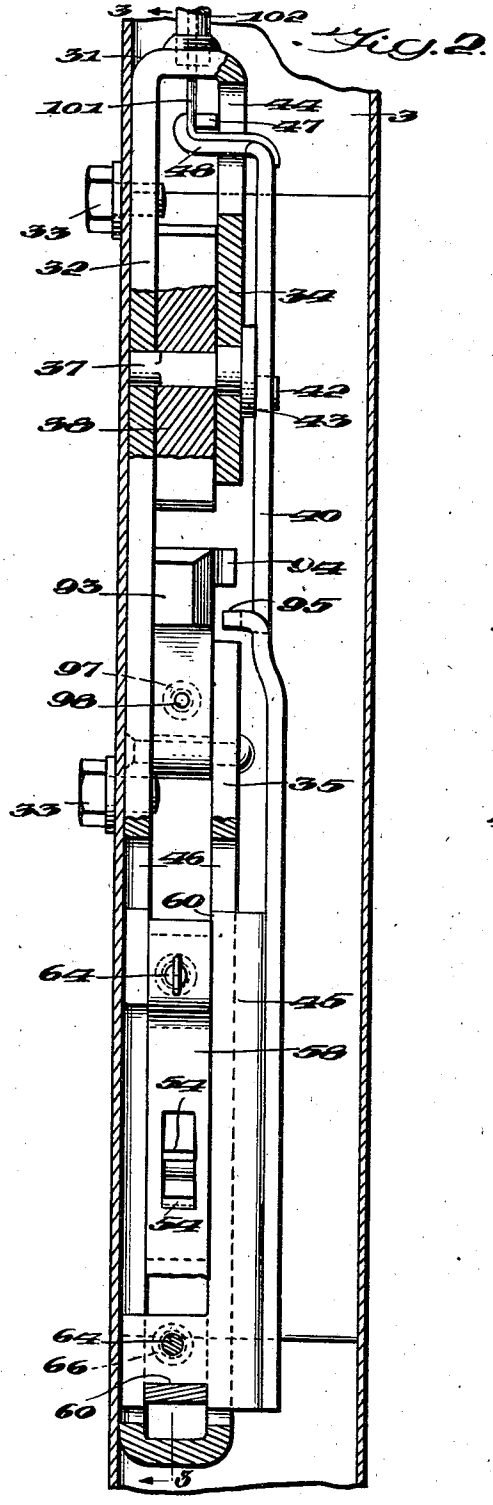
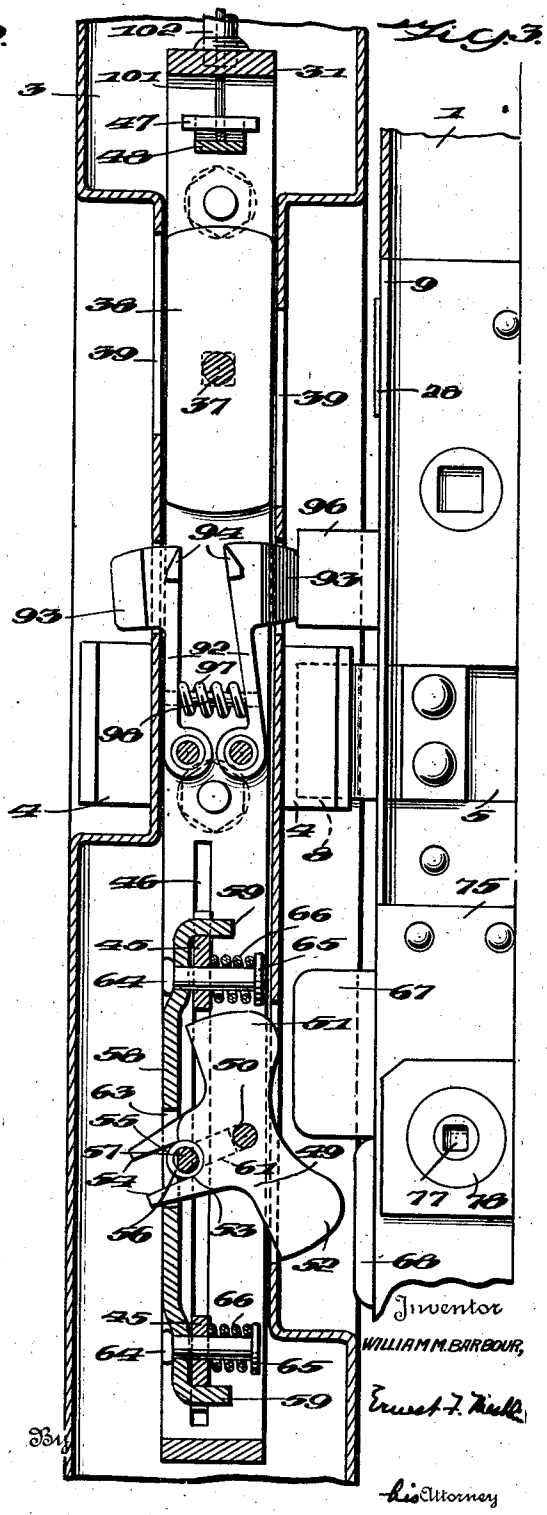


Fig. 3.



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May 19, 1942. W. M. BARBOUR 2,283,596

DOOR LOCKING MECHANISM

Filed July 20, 1939 9 Sheets-Sheet 3

Fig. 4.

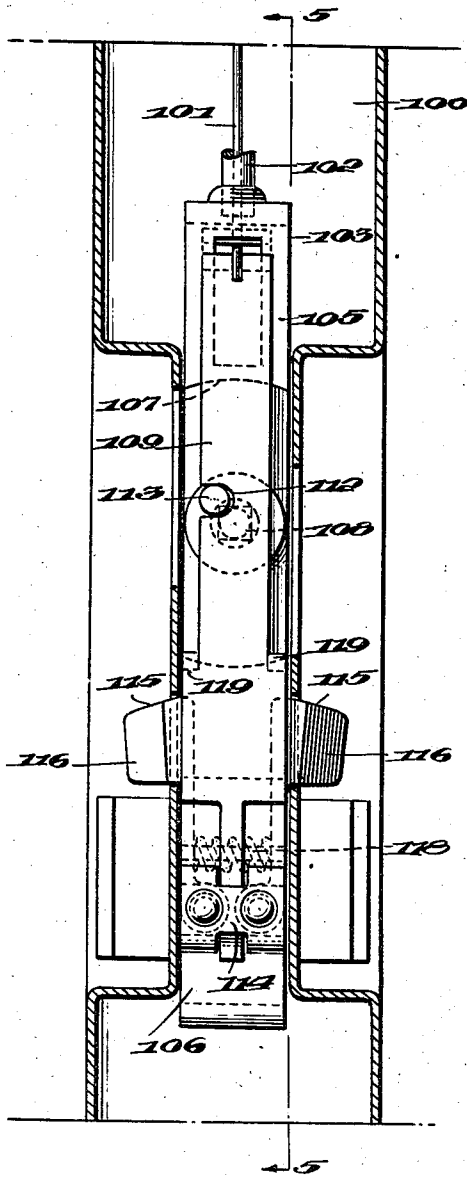
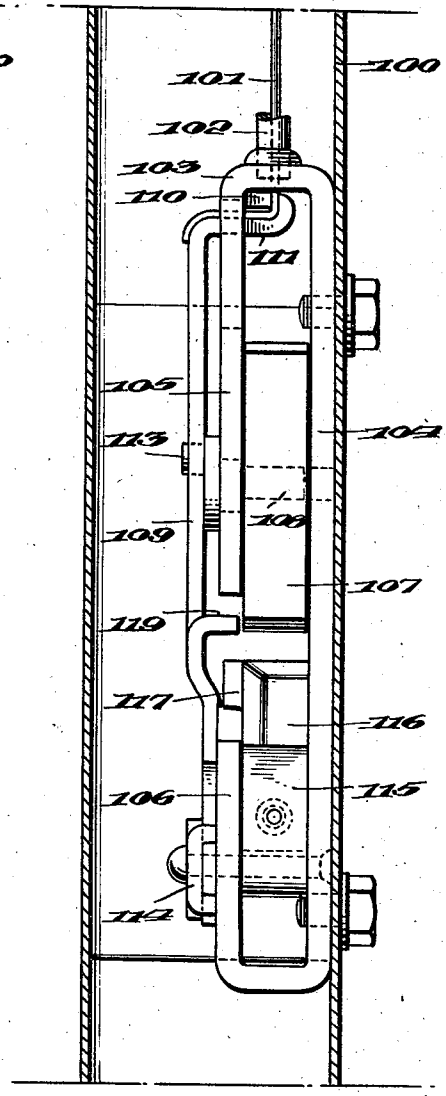


Fig. 5.



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May 19, 1942. W. M. BARBOUR 2,283,596

DOOR LOCKING MECHANISM

Filed July 20, 1939 9 Sheets-Sheet 4

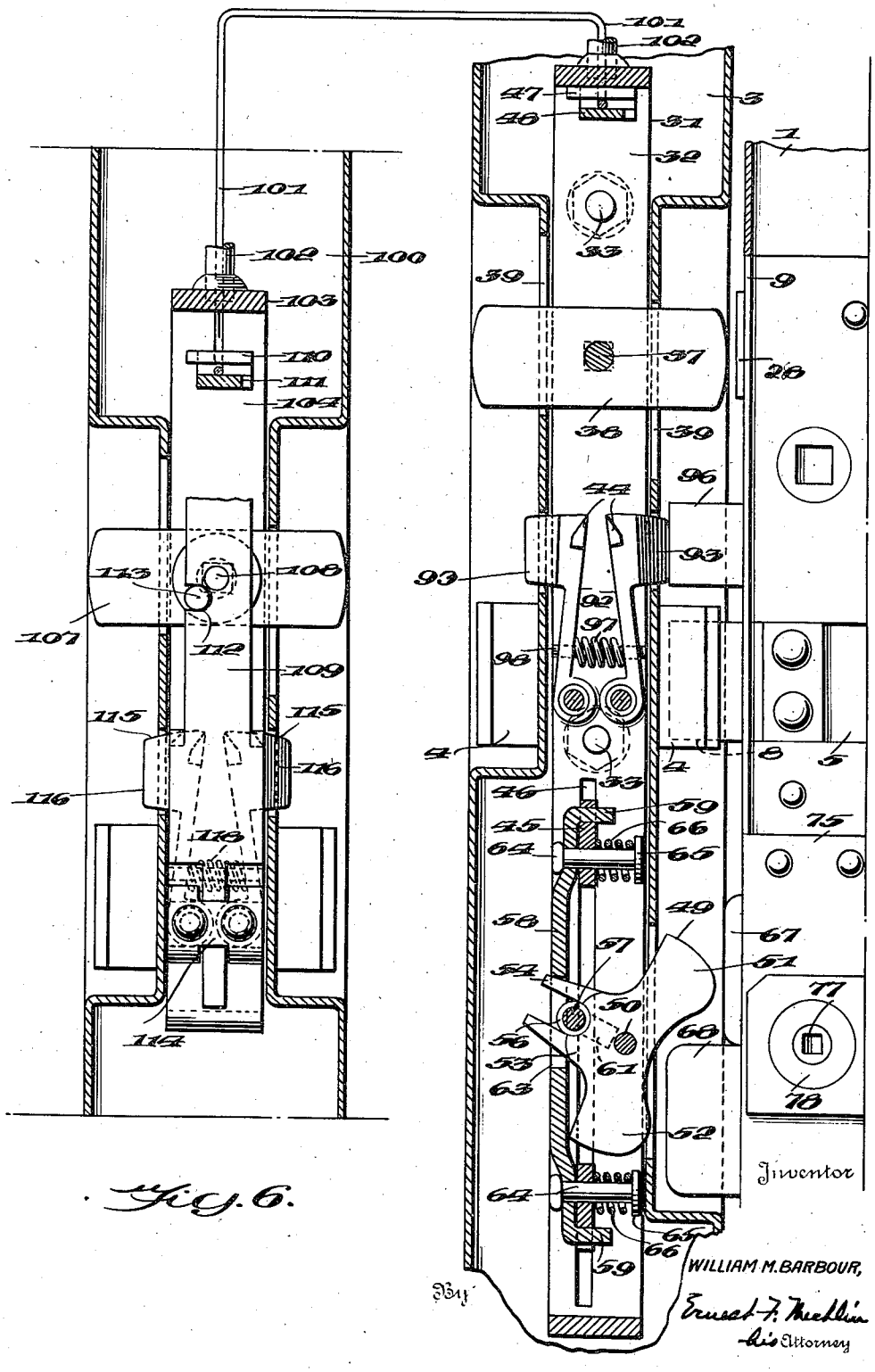


Fig. 6.

May 19, 1942. W. M. BARBOUR 2,283,596

DOOR LOCKING MECHANISM

Filed July 20, 1939 9 Sheets-Sheet 5

Fig. 7.

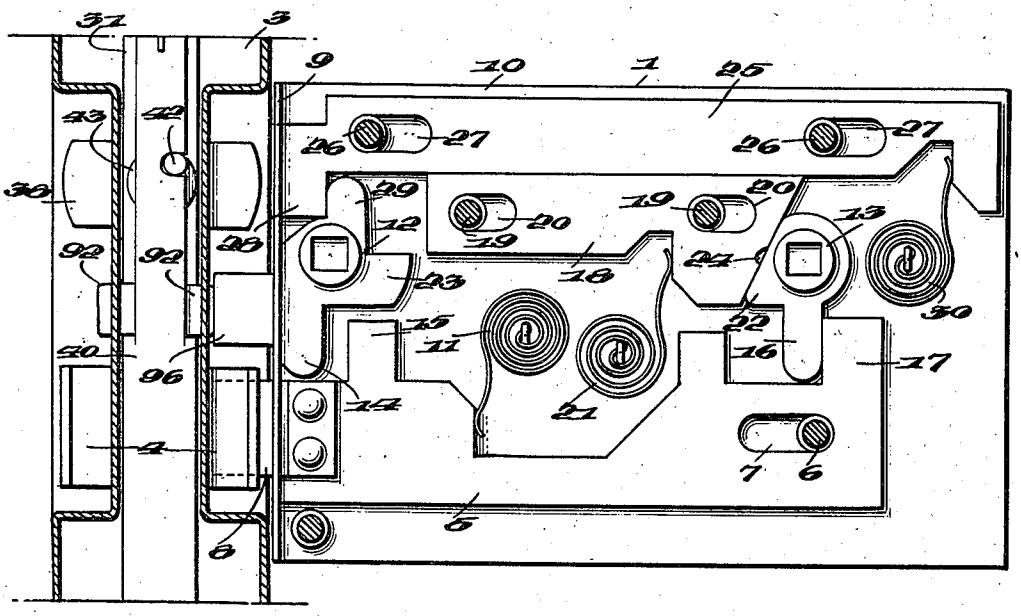
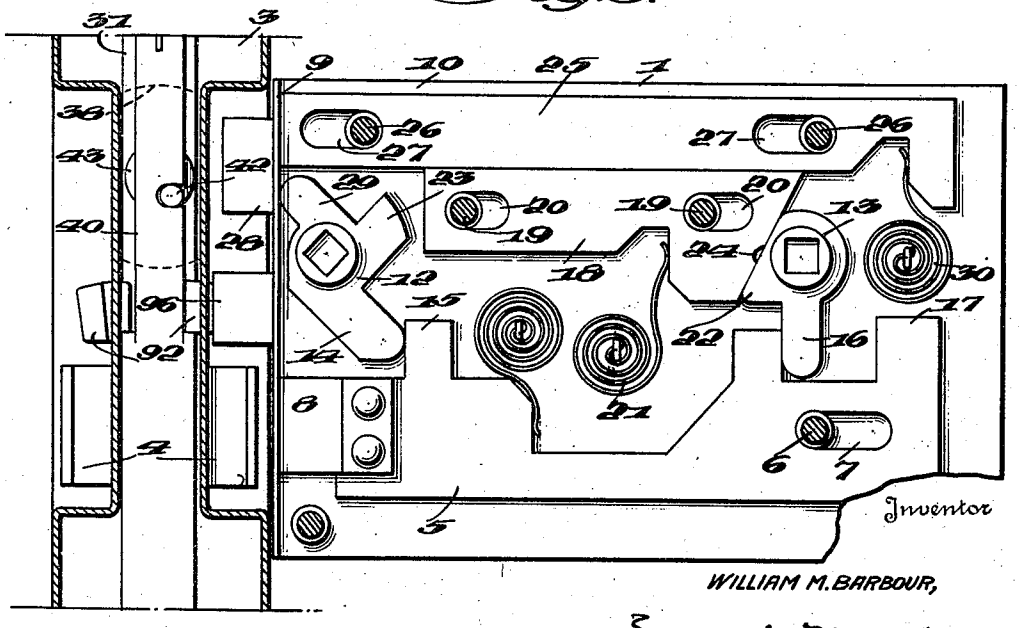


Fig. 6.



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May 19, 1942. W. M. BARBOUR 2,283,596

DOOR LOCKING MECHANISM

Filed July 20, 1939 9 Sheets-Sheet 6

Fig. 9.

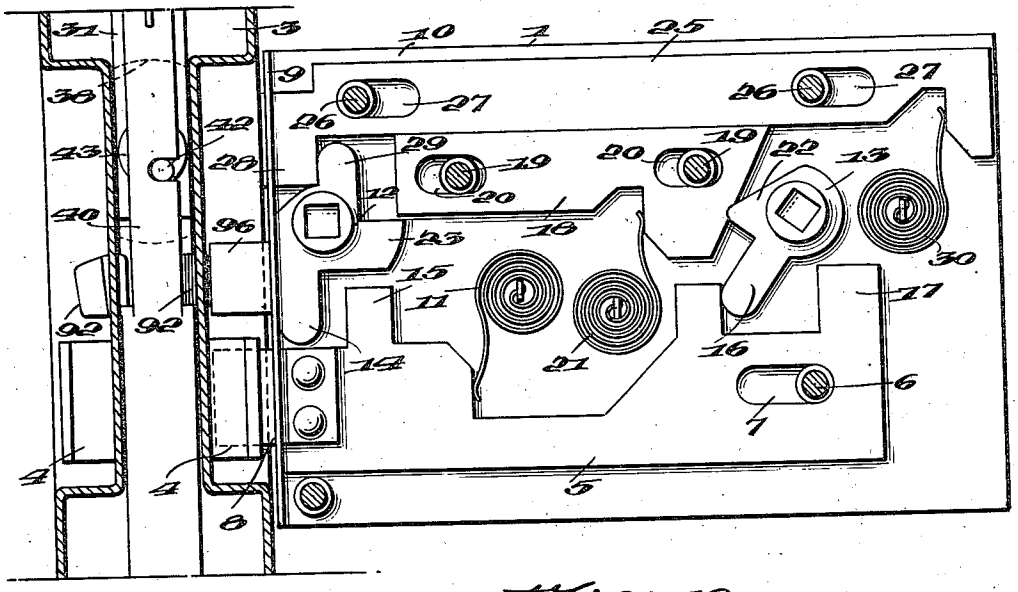
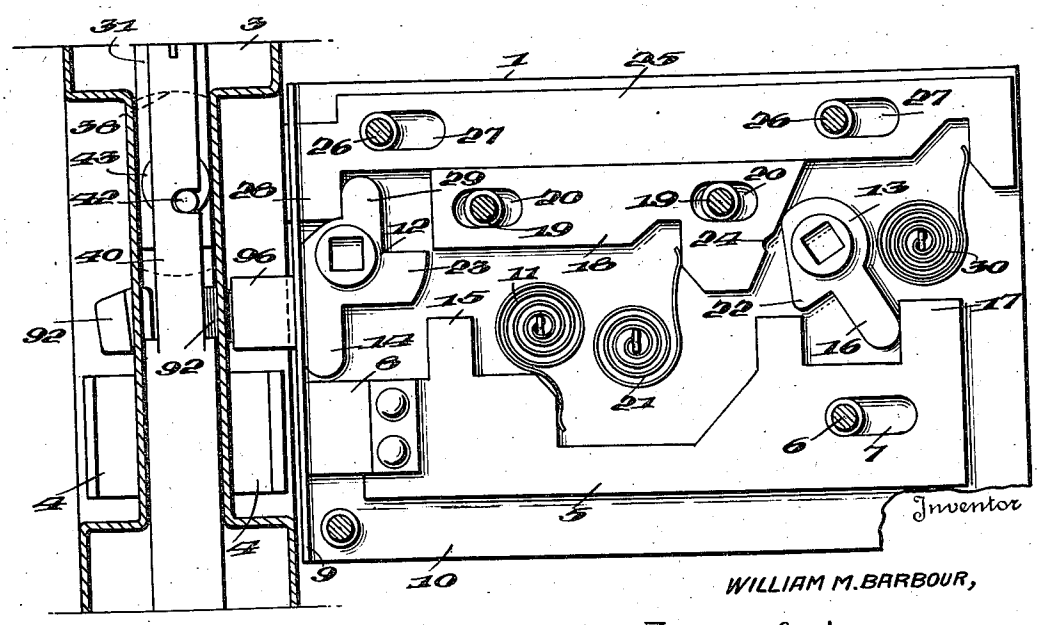


Fig. 10.



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May 19, 1942. W. M. BARBOUR 2,283,596

DOOR LOCKING MECHANISM

Filed July 20, 1939 9 Sheets-Sheet 7

Fig. 11.

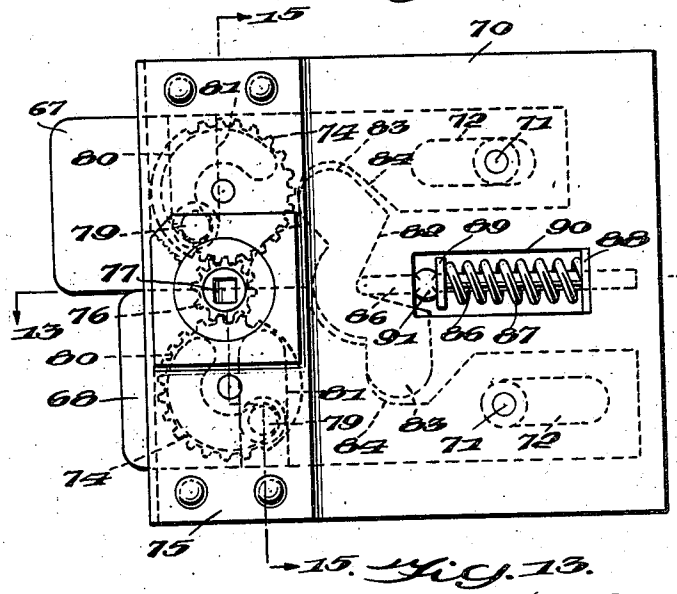


Fig. 12.

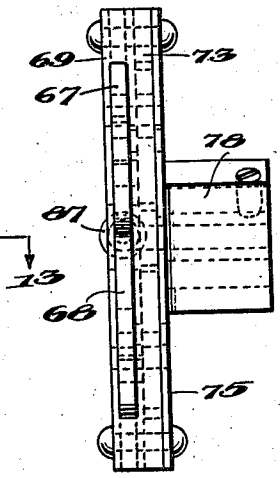


Fig. 13.

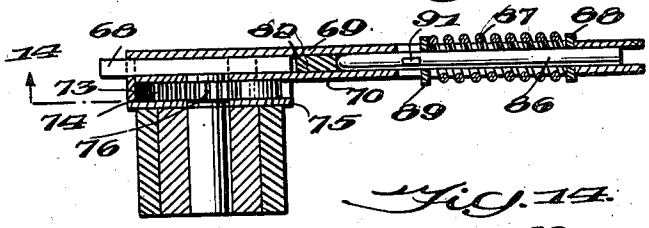


Fig. 15.

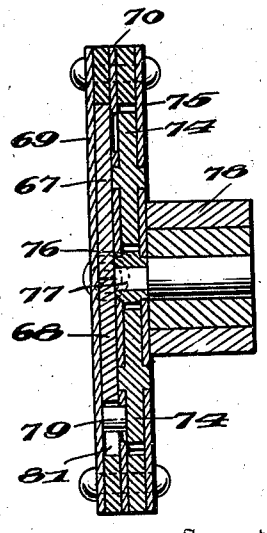
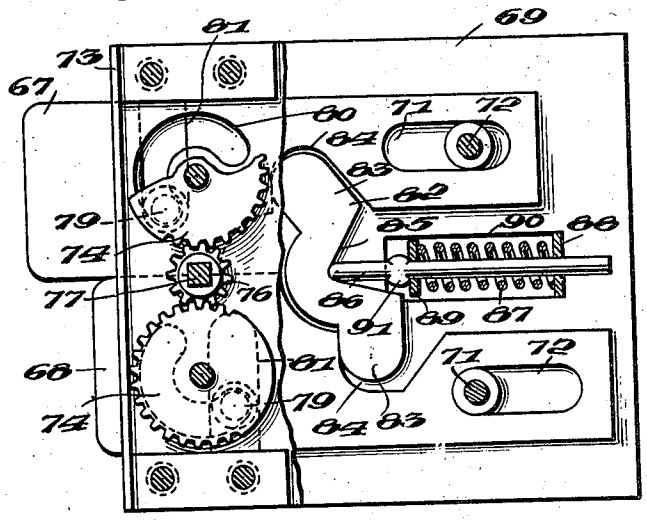


Fig. 14.



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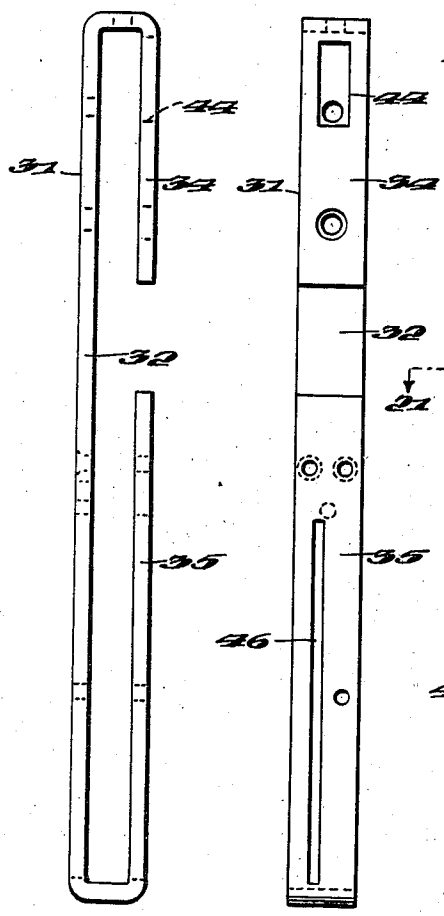
May 19, 1942. W. M. BARBOUR 2,283,596

DOOR LOCKING MECHANISM

Filed July 20, 1939 9 Sheets-Sheet 8

Fig. 16. Fig. 17. Fig. 18



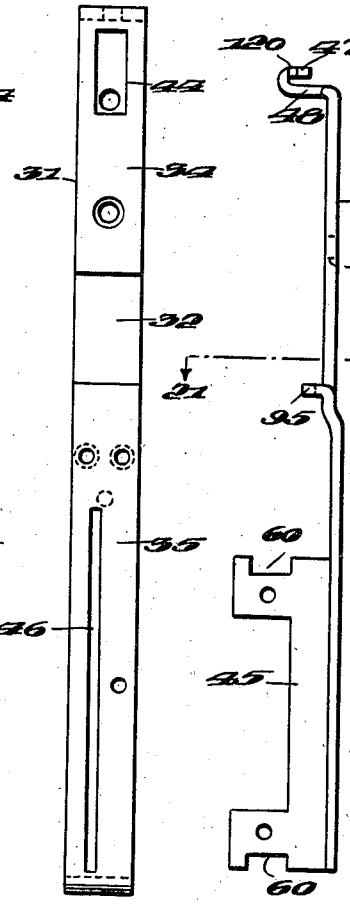


Fig. 19.

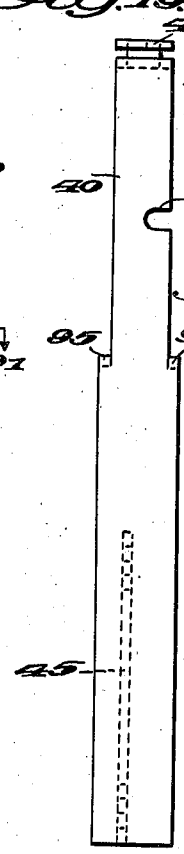


Fig. 20.

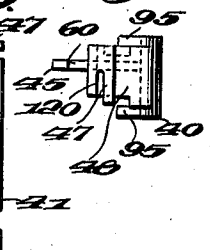


Fig. 21.

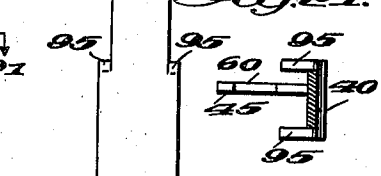


Fig. 22. Fig. 23.

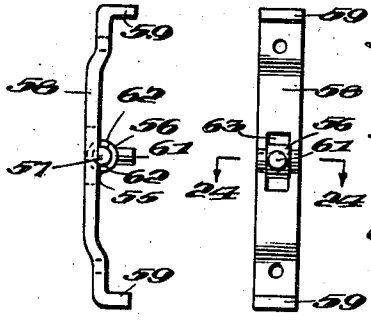


Fig. 24.

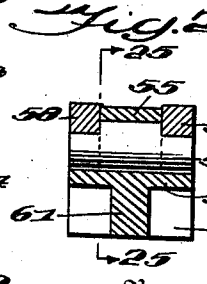
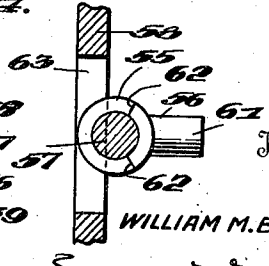


Fig. 25.



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May 19, 1942. W. M. BARBOUR 2,283,596

DOOR LOCKING MECHANISM

Filed July 20, 1939 9 Sheets-Sheet 9

Fig. 27.

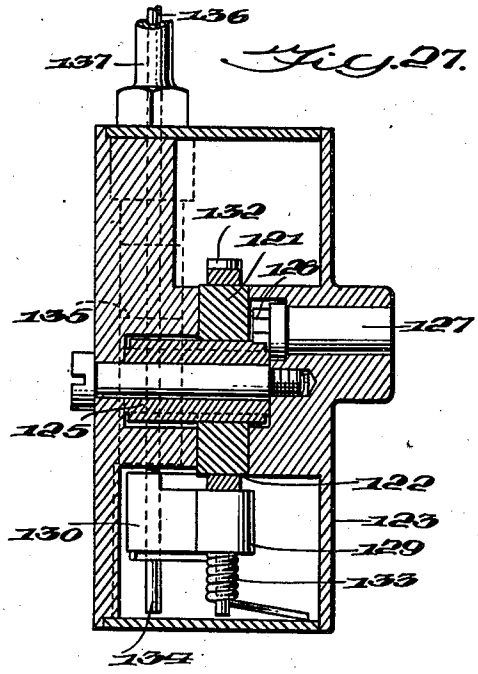


Fig. 26.

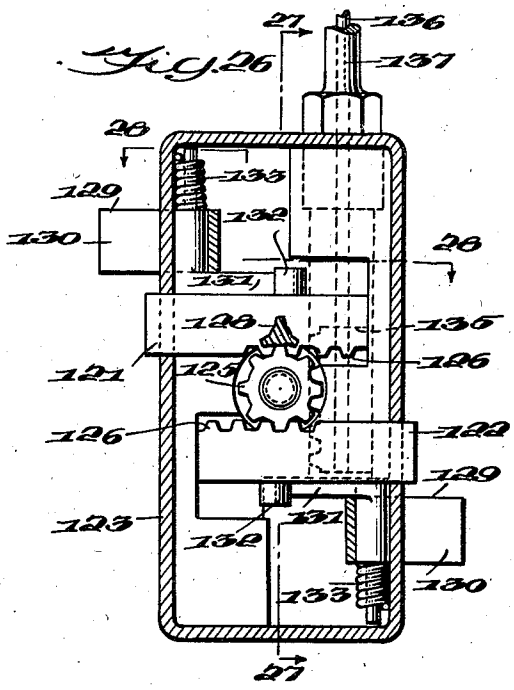


Fig. 29

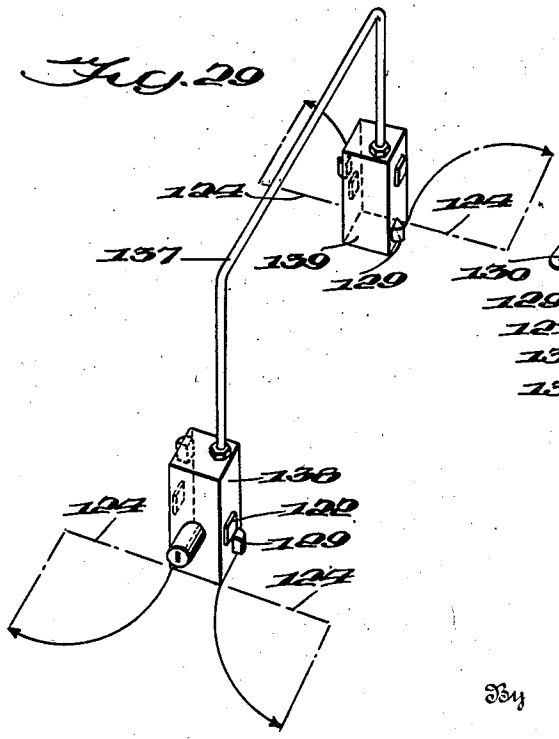
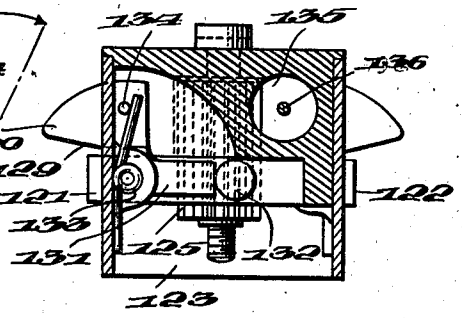


Fig. 28.



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By Ernest F. Mechlin

His Attorney

Patented May 19, 1942 2,283,596

UNITED STATES PATENT OFFICE

2,283,596

DOOR LOCKING MECHANISM

William M. Barbour, Roanoke, Va.

Application July 20, 1939, Serial No. 285,616

13 Claims. (Cl. 70—264)

My invention relates to door locking mechanisms for vehicles and its principal object is to provide simple and reliable means operable from one point on a vehicle for simultaneously locking a plurality of doors thereof.

One of the primary features of the invention consists in providing means for preventing the operation of the door locking mechanism until all of the doors under the control of the mechanism are closed.

Another feature of the invention consists in providing one of the doors with key operated means for controlling the operation of the locking mechanism.

A further feature of the invention consists in providing a vehicle with locking mechanism mounted in a stationary or fixed part thereof for preventing the latching devices of a plurality of doors from being operated from the outside of the vehicle, the means for operating the locking mechanism being mounted on one of the doors.

Other and more specific features of the invention, residing in advantageous forms, combinations and relations of parts, will hereinafter appear and be pointed out in the claims.

In the drawings,

Figure 1 is a fragmentary view, partly in section, of a door jamb and adjoining portions of a pair of doors, illustrating the locking mechanism in unlocked position.

Figure 2 is a sectional view taken on a line corresponding to line 2—2 of Figure 1.

Figure 3 is a sectional view taken on a line corresponding to line 3—3 of Figure 2 and showing a portion of one of the adjacent doors.

Figure 4 is a view similar to Figure 1 (omitting the doors) of the locking mechanism which is applied to the vehicle on the side opposite to which the mechanism illustrated in Figure 1 is applied and which is operable by the latter mechanism.

Figure 5 is a sectional view taken on a line corresponding to line 5—5 of Figure 4.

Figure 6 is a composite view of the two mechanisms respectively disposed on opposite sides of the car, both of the mechanisms being illustrated in a locking position.

Figure 7 is a view, partly in section, illustrating the latching device of one of the doors and a portion of the locking mechanism in locked position.

Figure 8 is a view similar to Figure 7 showing the locking mechanism in inoperative position and the parts of the latching device in the positions they respectively occupy when the latch bolt is retracted by means operable from the outside of the vehicle.

Figure 9 is a view similar to Figure 8 with the exception that the parts of the latching device are shown in the positions they respectively occupy when locked from the inside of the car.

Figure 10 is a view similar to Figure 8 with the exception that the parts of the latching device are shown in the positions they respectively occupy when the latch bolt is retracted by means operable from the inside of the car.

Figure 11 is a side elevational view of the means for operating the locking mechanism.

Figure 12 is an end elevational view of the structure illustrated in Figure 11.

Figure 13 is a sectional view taken on line 13—13 of Figure 11.

Figure 14 is a sectional view taken on line 14—14 of Figure 13.

Figure 15 is a sectional view taken on line 15—15 of Figure 11.

Figure 16 is a side elevational view of the supporting bracket or member on which the locking mechanism is mounted.

Figure 17 is a front elevational view of the bracket illustrated in Figure 16.

Figure 18 is a side elevational view of one of the vertically movable members of the locking mechanism.

Figure 19 is a front elevational view of the member illustrated in Figure 18.

Figure 20 is a plan view of the member illustrated in Figure 18.

Figure 21 is a sectional view taken on line 21—21 of Figure 18.

Figure 22 is a side elevational view of another movable member of the locking mechanism.

Figure 23 is a front elevational view of the member illustrated in Figure 22.

Figure 24 is an enlarged sectional view taken on line 24—24 of Figure 23.

Figure 25 is a sectional view taken on line 25—25 of Figure 24.

Figure 26 is a view, partly in section and partly in elevation, of a modified form of the invention.

Figure 27 is a sectional view taken on line 27—27 of Figure 26.

Figure 28 is a sectional view taken on line 28—28 of Figure 26.

Figure 29 is a diagrammatic view in perspective of the locking mechanisms of the character illustrated in Figures 26 to 28, inclusive, as applied to opposite sides of a vehicle.

Referring more particularly to the drawings, 1 and 2 respectively indicate a pair of hinged

doors of a vehicle which are mounted to have their free edges disposed adjacent an interposed jamb 3 when the doors are closed. Mounted on the door jamb are a pair of oppositely disposed keepers 4 which are respectively engageable by latch bolts 5 of the latching devices with which the doors are provided.

The latch bolt on each door is slidably supported by a rivet or bolt 6 extending within an elongated slot 7 adjacent the rear of the latch and by having its forward end 8, which cooperates with the associated keeper 4, extend through a suitable aperture in the end wall 9 of one of the housing plates 10 of the latching device.

Each latching device is provided with a spring 11 for normally maintaining the latch bolt in an operative position for cooperating with its keeper and a pair of rotatable members 12 and 13 are provided for selectively retracting the latch bolt into an inoperative position, member 12 being revoluble by conventional means (not shown) from the outside of the door and member 13 being revoluble by similar conventional means (not shown) from the inside of the door. Member 12 is formed with a finger 14 which, upon rotation of the member in a counter-clockwise direction as viewed in Figures 7 to 10, inclusive, is adapted to engage a lug or the like 15 projecting upwardly from adjacent the forward end of the latch bolt and thereby retract the latch. Similarly member 13 is provided with a finger 16 which is adapted, upon rotation of the member in a counter-clockwise direction as viewed in Figures 7 to 10, inclusive, to engage a lug or the like 17 projecting upwardly from the inner end of the latch for retracting the latch from engagement with its keeper.

So that the doors of the vehicle may be locked from the inside of the car, each latching device is provided with a slidable member 18 which is supported by rivets or bolts 19 extending within elongated slots 20 with which the member is formed. A spring 21 maintains member 18 in inoperative position but it is adapted to be projected forwardly by a projection 22 on member 13, when the latter is rotated in a clockwise direction, into overlapping relation with the upper face of a lug 23 preferably formed integrally with rotatable member 12. When in this position, as shown in Figure 9, member 18 effectively prevents rotation of member 12, and thus prevents the door from being unlatched from the outside of the car. The rear end of member 18 is preferably inclined so that it will efficiently cooperate with projection 22 of member 13 and it is formed with a recess or notch 24 into which the outer end of projection 22 is adapted to extend to maintain member 18 in its locking position.

For a purpose which will hereinafter appear, the latching device of each door is also provided with a sliding member 25 which may be supported in any suitable manner, such, for example, as by rivets 26 which extend through elongated slots 27 formed in the member. Adjacent its forward end, member 25 has a depending lug 28 engageable with another finger 29 which is preferably formed integrally with member 12, so that, when the latter is actuated to retract the latch bolt 5, the forward end of member 25 is projected beyond the free edge of the door through an aperture in the end wall 9 of the housing plate 10. When the means (not shown) for operating the rotatable member 12 is released to enable the latch bolt to return to its inoperative position, member 25 is retracted by a spring 30 so that its forward end no longer projects beyond the free edge of the door. While it will be perceived that each time member 12 is operated to retract the latch bolt 5, the forward end of member 25 will be projected beyond the free edge of the door, rotation of member 13 to retract the bolt 5 will produce no such movement of member 25.

Mounted on the jamb 3, which is interposed between the free edges of the doors 1 and 2, is mechanism operable from the outside of the vehicle for simultaneously locking both of the doors against being opened from the outside of the vehicle. This mechanism may be conveniently mounted on a bracket 31 which is preferably in the form of an open loop having a rear wall 32 secured to the jamb by bolts 33 and upper and lower front walls 34 and 35, respectively. Journaled in the rear wall 32 and the upper front wall 34 of the bracket 31 is a shaft 37 having an intermediate portion which is preferably square in cross section and extends through an opening of similar shape in a rotatable elongated locking block or member 38. Normally this block is disposed in a substantially vertical position, as clearly shown in Figure 3 of the drawings, but it is adapted to be rotated in a counter-clockwise direction through suitably located apertures 39 in the door jamb into a substantially horizontal position, as indicated in Figure 6. In this position, the outer ends of the block are respectively disposed in contiguous relationship with the forward ends of the members 25 of the latching devices of the respective doors so as to prevent those members from being projected beyond the free edges of the doors. By preventing members 25 from being moved in this manner, the doors are securely locked against being opened from the outside of the car for, to do this, it is necessary to rotate members 12 to retract the latch bolts 5 and this can not be accomplished without causing members 25 to be projected beyond the free edges of the door. It will thus be seen that effective means is provided on the door jamb for simultaneously locking both doors against opening movement from the outside of the vehicle.

To rotate the block 38 into and out of locking position, I provide a vertically movable actuating member 40 which is formed with a recess 41 for receiving a pin or lug 42 which projects laterally from an annular plate or disk 43 preferably formed integrally with the outer end of shaft 37. The lug 42 is eccentric with respect to the axis of shaft 37 so that, when member 40 is reciprocated vertically, the shaft and, therefore, the locking block 38 will be caused to rotate.

To slidably connect member 40 with bracket 31, the upper end thereof is formed so as to extend within an elongated slot 44 in the upper front wall 34 of bracket 31 and the lower portion of the member is provided with a substantially vertical plate-like portion 45 which extends into slots 46 formed in the rear wall 32 and the lower front wall 35 of the bracket. The upper end of member 40 which projects through slot 44 in the upper front wall of the bracket has upper and lower vertically spaced portions 47 and 48 respectively. The lower portion 48 which extends through the slot is of less width than the adjoining main body portion of the member so as to fit within the slot, while the upper portion

47 which is interposed between the rear and front upper walls of the bracket is of greater width than the slot so as to overlappingly engage the inner face of the upper front wall and thus prevent member 40 from being disconnected from the bracket so long as it remains in its normal position. To assemble member 40 with bracket 31, it is first necessary to dispose the member at substantially right angles to the bracket, then insert the offset upper end thereof through the slot 44 and subsequently rotate the member with respect to the bracket until the plate portion 45 thereof is in alignment with the slots 46 in the lower portion of the bracket, at which time the lower end of the member is moved toward the bracket to cause its plate portion to enter the slots 46.

While any suitable means may be mounted on the outside of the jamb to reciprocate member 40 in order to actuate the locking block 38, it is preferred to actuate member 40 by key operated means carried by one of the doors. For this purpose, a member 49 is rotatably mounted upon a pin 50 between the rear wall 32 and the lower front wall 35 of bracket 31. Member 49 is provided with laterally projecting portions 51 and 52 respectively disposed on opposite sides of the pivot pin 50 and with an arm 53, the forward end of which is bifurcated, as at 54, to straddle the hub portion 55 of a member 56 rotatably mounted upon a pin carried by a plate-like member 58 having flanged ends 59 disposed within notches or recesses 60 formed in the upper and lower edges of the plate portion 45 of the vertically movable member 40. By this construction, it will be apparent that rotation of member 49 will cause member 40 to move vertically and thereby actuate the locking block 38.

To limit the extent of rotation of member 49 and thus control the extent of movement of member 40, the rotatable member 56 is formed with an arm or the like 61 which extends within a cored recess in member 49 and also with laterally projecting shouldered portions 62 which are adapted to abut portions of plate member 58 on opposite sides of a slot 63 formed in the latter to receive a part of the hub portion 55 of member 56. As rotation of member 49 will induce rotation of member 56, it will be seen that, by providing the latter with shoulders 63 for limiting its rotation, simple and reliable means is afforded for limiting rotation of member 49.

Plate member 58 is connected to plate portion 45 of the vertically movable member 40 by rivets or the like 64. Interposed between the face of plate member 45 opposite to the one overlapped by plate 58 and the heads 65 on the adjacent ends of rivets 64 are compression springs 66 which, in addition to permitting plate member 58 to move laterally with respect to the plate portion 45 during rotation of member 49, will function to draw plate member 58 back against plate portion 45 after member 49 has been rotated through a little more than one-half of its arc of travel so as to impart a snap action to the latter member.

Mounted on one of the doors is key controlled mechanism for actuating the rotatable member 49 which includes a pair of reciprocable bolts 67 and 68 for respectively cooperating with the laterally projecting portions 51 and 52 of the member 49. The bolts 67 and 68 are slidably mounted between a base plate 69 and a cover plate 70, the inner ends of each bolt being formed with elongated slots 71 for receiving supporting rivets 72 and the forward ends of the bolts being movable within a rectangular opening formed in the end wall 73 of the base plate 69.

To cause the bolts 67 and 68 to simultaneously move in opposite directions, a pair of gears 74 are revolubly mounted on the outside of the cover plate 70, each of the gears being preferably provided with oppositely projecting trunnions which are respectively journaled in the cover plate and in an auxiliary plate 75 secured to the cover plate in overlapping relation to the outer faces of the gears. Interposed between the two gears 74 and 75 for rotating them in opposite directions is a pinion 76 which is mounted on one end of a key actuated shaft 77 of a tumbler lock 78. Each of the gears 74 has a boss 79 on its inner face which is adapted to project through an arcuate slot 80 in the cover plate 70 into a substantially vertical recess 81 in the associated bolt. By this means, rotation of the gears in opposite directions by the pinion 76 will cause the bolts 67 and 68 to simultaneously slide in opposite directions.

An equalizing bar 82 may be conveniently interposed between the base and cover plates 69 and 70 respectively for cooperating with the bolts 67 and 68. The equalizing bar is preferably provided with two arms 83 which extend within recesses 84 in the respective bolts and have rocking engagement therewith. The rear edge of the equalizer bar is recessed, as indicated at 85, to afford a bearing for the rounded forward end of a pinion 86 which is encircled by a compression spring 87 interposed between abutments 88 and 89 through which the pinion extends. The rear abutment 88 engages the end walls of aligned slots 90 which are respectively formed in the base and cover plates 69 and 70, while the forward abutment 89 which is movable within the slots is maintained by the spring in engagement with an upset portion 91 of the pin. The spring is assembled with its abutments under slight compression and, therefore, causes the pin 86 to exert pressure on the equalizing bar 82.

To prevent actuation of the mechanism for simultaneously locking the doors until both of the doors are closed, a pair of oppositely movable stop members 92 are pivotally mounted within the door jamb for respectively cooperating with the doors. Each of these stop members is provided with a head 93 having a laterally projecting lug 94. When the doors are open, the heads of the stop members project through apertures in the adjacent walls of the door jamb and the lugs 94 are then disposed in the paths of movement of offset portions 95 of the vertically movable member 40. Thus when both or either of the doors are in open position, it will be impossible to move member 40 sufficiently far to rotate member 38 into locking position. However, each of the doors is provided with an immovable portion 96 which is adapted just prior to the door assuming fully closed position to engage the protruding head 93 of the adjacent stop member and force it rearwardly so that the lug 93 thereof will no longer be disposed in the path of movement of the adjacent offset portion 95 of the vertically movable member 40. A spring 97 which may be conveniently mounted upon a pin 98 loosely projecting within the lower portions of the stop members 92 may be conveniently employed for causing the heads of the stop members to move outwardly when the doors are opened.

In order that actuation of the reciprocating

bolts 67 and 68 will function to not only simultaneously lock the doors on one side of the vehicle but will also function to simultaneously lock the doors on the opposite side of the vehicle, a locking mechanism similar to that which is mounted in door jamb 3 is mounted on door jamb 100 on the opposite side of the vehicle and the two mechanisms are connected by a cable 101 enclosed within a suitable conduit 102.

Like the door locking mechanism in jamb 3, the mechanism in jamb 100 has a supporting bracket 103 having a rear wall 104 secured to the jamb and upper and lower front walls 105 and 106 respectively. Interposed between the rear wall 104 and the upper front wall 105 is a locking block 107 which is identical with the locking block 38 and it is mounted upon a shaft 108 which is in all respects the same as shaft 37.

A member 109 somewhat similar to the vertically movable member 40 is employed for moving the locking block into and out of locking position, its upper end being provided with vertically spaced portions 110 and 111 identical with the portions 47 and 48 of member 40 and with a slot 112 for receiving the eccentrically disposed pin or boss 113 of the shaft 108. The lower end of member 109 which is of greatly reduced width is slidably maintained against the lower front wall 106 of the bracket by a suitably shaped member 114.

The door mechanism mounted in jamb 100 is also provided with stop members 115 identical with the stop members 92 of the locking mechanism first described, each being provided with a head 116 and a laterally projecting lug 117. Spring means 118 is employed for maintaining the stop members in such position that, when the doors are open, the lugs 117 will be disposed in the path of movement of offset portions 119 of the vertically movable member 109 and thus prevent the latter from moving to such an extent as to cause the locking block 107 to assume locking position. While the doors of the vehicle adjacent the jamb 100 are not shown in the drawings, it will, of course, be understood that they cooperate with the stop members 115 to move them into inoperative positions when the doors are closed and that the locking mechanism in door jamb 100 cooperates with the latching mechanisms of the adjacent doors in the same manner as the locking mechanism first described cooperates with the doors associated therewith.

The conduit 102 which houses the cable 101 movably connecting the mechanisms on opposite sides of the vehicle is preferably rigidly secured at its opposite ends to the brackets 31 and 103. The cable is connected to the vertically movable member 40 by being interposed between the upper and lower vertically spaced portions 47 and 48 thereof and by being threaded through a notch 120 formed in portion 47 and it is similarly connected to the vertically movable member 109 of the other locking mechanism by being interposed between the upper and lower vertically spaced portions 110 and 111 thereof and by being threaded through a notch formed in portion 110.

In view of the connection between the vertically movable members 40 and 109 of the two locking mechanisms which are respectively disposed on opposite sides of the vehicle, it will be perceived that, after the four doors of the vehicle are closed, operation of the bolts 67 and 68, carried by only one of the doors, to induce rotation of member 49 in a clockwise direction as viewed in Figures 1 and 3 will cause an upward vertical movement of member 49 and a downward vertical movement of member 109. Upward movement of member 40 will cause the locking block 38 to move into its horizontal locking position, as indicated in Figure 6, and downward movement of member 109 will cause the locking block 107 to likewise move into its horizontal locking position. Thus actuation of the bolts 67 and 68 by the key operated means heretofore described will simultaneously lock all four of the doors of the vehicle against being opened from the outside of the vehicle.

To simultaneously unlock all of the doors of the vehicle, the bolts 67 and 68 are operated so as to rotate member 49 in a counter-clockwise direction from the position indicated in Figure 6 into the position indicated in Figures 1 and 3. Such rotation of member 49 will cause downward movement of vertically movable member 40 and upward movement of vertically movable member 109, whereby the two locking blocks 38 and 107 are rotated into their vertical inoperative positions.

As each of the stop members 92 of the one locking mechanism and each of the stop members 115 of the other locking mechanism is formed with a lug capable of respectively preventing movement of the vertically movable members 40 and 109 sufficiently far to enable movement of the locking blocks into locking position, it will be perceived that the bolts 67 and 68 are rendered inoperative to actuate the two locking mechanisms until every one of the four doors of the vehicle is disposed in closed position.

While each of the locking mechanisms have been illustrated in the drawings for simultaneously locking a pair of oppositely hinged doors, it will, of course, be understood that each mechanism may be employed to lock only a single door and thus the mechanisms may be employed to lock the doors of a two door car as well as the doors of a four door car.

In the modified form of the invention illustrated in Figures 26 to 29, inclusive, the locking mechanism instead of comprising means for preventing the operation of the latching devices of two adjacent doors from the outside of the vehicle, includes a plurality of locking bolts 121 and 122, respectively, which are mounted in a door jamb in a suitable housing 123. Interposed between the locking bolts 121 and 122 is a pinion 125 which is engageable with racks 126 on the locking bolts for projecting them in opposite directions into suitable sockets in the free edges of adjacent doors diagrammatically illustrated at 124 in Figure 29. Rotation of pinion 125 for actuating the bolts is preferably effected by a key operated shaft 127 having teeth 128 on its inner end in mesh with the teeth of the pinion.

Cooperable with each of the locking bolts is a stop member 129 for preventing operation of the locking mechanism until both of the associated doors are closed. Each of the stop members is suitably journaled within the housing and has oppositely projecting arms 130 and 131 respectively, arms 130 being adapted to project beyond the edge of the door jamb into the path of movement of the adjacent door and arm 131 being adapted to engage a boss 132 which may be advantageously formed integrally with the associated bolt. To normally maintain each stop member in a position preventing movement of its associated bolt and, therefore, the operation

of the entire locking mechanism, a coil spring 133 may be conveniently employed, one end of which engages the adjacent wall of the housing 123 and the other end of which engages a boss 134 formed on the stop member.

To simultaneously lock doors on opposite sides of a vehicle, the locking mechanism illustrated in Figures 26 to 28, inclusive, and indicated as a whole by the reference numeral 138, is provided with a vertically movable rack 135 which is in mesh with pinion 125 and is connected by a cable 136 housed within a conduit 137 to a corresponding rack of a locking mechanism 139 mounted on the door jamb at the opposite side of the vehicle. Locking mechanism 139 is identical with locking mechanism 138 except that, since it is operated each time the latter mechanism is operated, it is not necessary for it to be provided with a key controlled actuating shaft 127.

Like the stop members of the locking mechanisms illustrated in the preferred form of the invention, the stop members of the form of the invention illustrated in Figures 26 to 29, inclusive, function to prevent the mechanisms from operating until each of the doors on both sides of the vehicle are closed, for it is only then that the arms 131 of the stop members are moved out of the path of movement of the bosses 132 on the locking bolts.

The present application is a continuation in part of my co-pending application Serial No. 104,212, filed October 6, 1936.

What I claim is:

1. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of mechanism mounted in said jamb for simultaneously locking both of said doors against being opened from the outside of the vehicle, means for moving said mechanism into and out of locking position, and a pair of stop members mounted in said jamb respectively cooperable with said mechanism for preventing movement thereof to locked position while said doors are open, said stop members being respectively adapted to be moved by the doors as the latter are closed, into positions rendering them inoperative to prevent movement of said mechanism into locking position.

2. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of movable mechanism mounted in said jamb for simultaneously locking both of said doors against being opened from the outside of the vehicle, key actuated means for moving said mechanism into and out of locking position, and a pair of pivoted stop members mounted in said jamb respectively cooperable with said doors, each of said members being adapted to be disposed in a position preventing movement of said mechanism into locking position when its associated door is open and each being adapted to be moved by its door as the latter is closed into a position rendering it inoperative to prevent movement of said mechanism into locking position.

3. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of movable mechanism mounted in said jamb for simultaneously locking both of said doors against being opened from the outside of the vehicle, means for moving said mechanism into and out of locking position, and means mounted in the jamb preventing movement of said mechanism to locking position while either of said doors are open, said last named means including a pair of pivoted members respectively cooperable with said doors, and spring means for maintaining said pivoted members in operative positions, each of said members being movable by the door cooperable therewith as the latter is closed into a position rendering it inoperative to prevent movement of said mechanism into locking position.

4. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of a device mounted on each door for latching it in closed position, mechanism including a rotatable locking block mounted in said jamb for simultaneously preventing the latching devices of both doors from being operated from the outside of the vehicle when the doors are closed, and key operated means mounted on one of said doors for actuating said mechanism.

5. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of a device mounted on each door for latching it in closed position, mechanism mounted in said jamb for simultaneously locking the latching devices of both doors against operation from the outside of the vehicle when the doors are closed, a plurality of means mounted in said jamb and respectively cooperable with the doors for preventing actuation of said mechanism to locking position until both of said doors are closed, and means carried by one of said doors for actuating said mechanism when the doors are closed.

6. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of a latch bolt mounted on each door, a rotatable member mounted on each door for retracting the latch bolt into inoperative position, means on each door adapted to be projected beyond the free edge thereof upon actuation of said rotatable member to retract the latch bolt, and movable means mounted on said jamb cooperable with the said means of both doors for limiting movement thereof beyond the free edges of the doors to thereby prevent the rotatable members from retracting their respective latch bolts.

7. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of a horizontally sliding latch bolt mounted on each door, a rotatable member on each door for retracting said bolt into inoperative position, a horizontally movable element mounted on each door adapted to be projected beyond the free edge thereof by said rotatable member when the latter is actuated to retract the latch bolt, and a member mounted on said jamb for simultaneously cooperating with the said movable elements of both doors to prevent said rotatable members from retracting the latch bolts respectively associated therewith.

8. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of a

latch mounted on each door, a rotatable member mounted on each door for retracting the latch into inoperative position, a movable element mounted on each door adapted to be projected beyond the free edge thereof by said rotatable member when the latter is actuated to retract the latch, mechanism for simultaneously locking the latch bolts of both doors against retraction by their respective rotatable members, said mechanism including a movable member mounted on said jamb adapted to cooperate with the said movable element of each door for limiting movement thereof, and means mounted on one of said doors for actuating said movable member.

9. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of a device on each door for latching it in closed position, each latching device having a member adapted to be projected beyond the free edge of the associated door when the device is operated from the outside of the vehicle to open the door, mechanism mounted on said jamb for simultaneously locking the latching devices of both doors against operation from the outside of the vehicle when the doors are closed, said mechanism including movable means for cooperating with the said member of each latching device to limit movement thereof beyond the free edge of its associated door and a rotatable member for actuating said movable means, and means mounted on one of said doors for rotating said rotatable member.

10. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of a device on each door for latching it in closed position, each latching device having a member adapted to be projected beyond the free edge of the associated door when the device is operated from the outside of the vehicle to open the door, mechanism mounted on said jamb for simultaneously locking the latching devices of both doors against operation from the outside of the vehicle when the doors are closed, said mechanism including a movable member cooperable with the said member of each latching device for limiting movement thereof beyond the free edge of the associated door, means movable vertically in said jamb for actuating said movable member and rotatable means in the jamb for actuating the vertically movable means, and a pair of oppositely movable members carried by one of said doors for selectively rotating said rotatable member in opposite directions.

11. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of a device on each door for latching it in closed position, each latching device having a member adapted to be projected beyond the free edge of the associated door when the device is operated from the outside of the vehicle to open the door, mechanism mounted on said jamb for simultaneously locking the latching devices of both doors against operation from the outside of the vehicle when the doors are closed, said mechanism including a rotatable member for cooperating with the said members of each latching device to limit movement thereof beyond the free edge of the associated door and vertically movable means for rotating said member, and key operated means mounted on one of said doors for inducing movement of said vertically movable means.

12. The improvement in apparatus for simultaneously locking a pair of hinged vehicle doors whose free edges are adapted to abut an interposed jamb, said improvement consisting of a device on each door for latching it in closed position, each latching device having a member adapted to be projected beyond the free edge of the associated door when the device is operated from the outside of the vehicle to open the door, and mechanism mounted on said jamb for simultaneously locking the latching devices of both doors against operation from the outside of the vehicle when the doors are closed, said mechanism including a movable member cooperable with the said members of each latching device to limit movement thereof beyond the free edge of the associated door, means movable vertically in said jamb for actuating said movable member, and a plurality of stop members respectively cooperable with said doors for preventing movement of said vertically movable means until both of said doors are closed.

13. A system for locking a plurality of doors comprising, in combination, a locking mechanism for each door, means operable from a single station for operating each of said locking mechanisms to lock each door in closed position, and means for disabling the operation of all said locking mechanisms to prevent said doors from being locking in closed position if one or more doors are not in a position to be locked by said locking mechanisms, said disabling means comprising a movable element adapted to project into the path of each door when in open position, and camming devices cooperating with said movable elements to displace the same when the doors are moved to closed position.

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