July 12, 1938. E. D. DALL 2,123,525

LOCKING MECHANISM

Original Filed Feb. 4, 1931 3 Sheets-Sheet 1

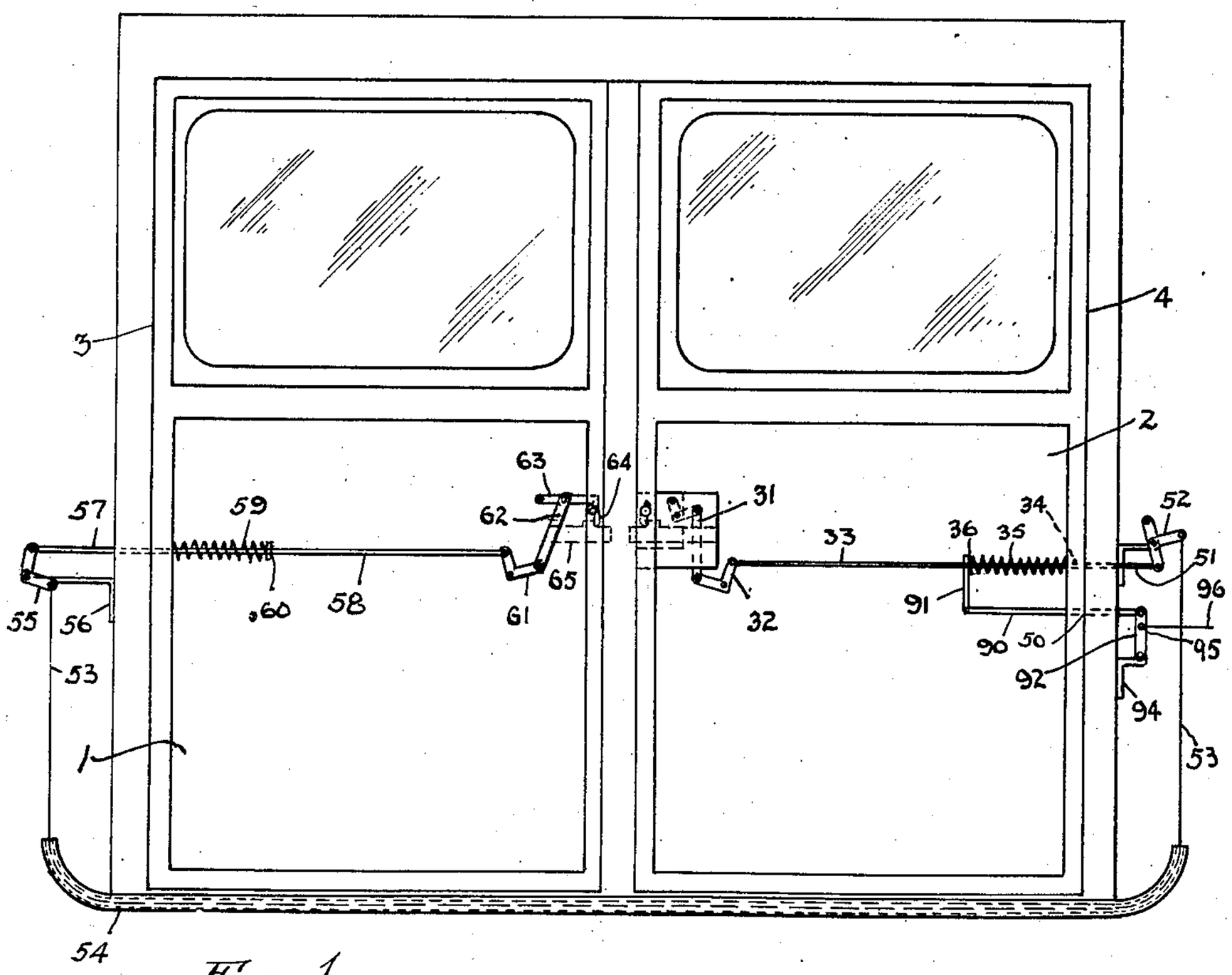

FIG. 1

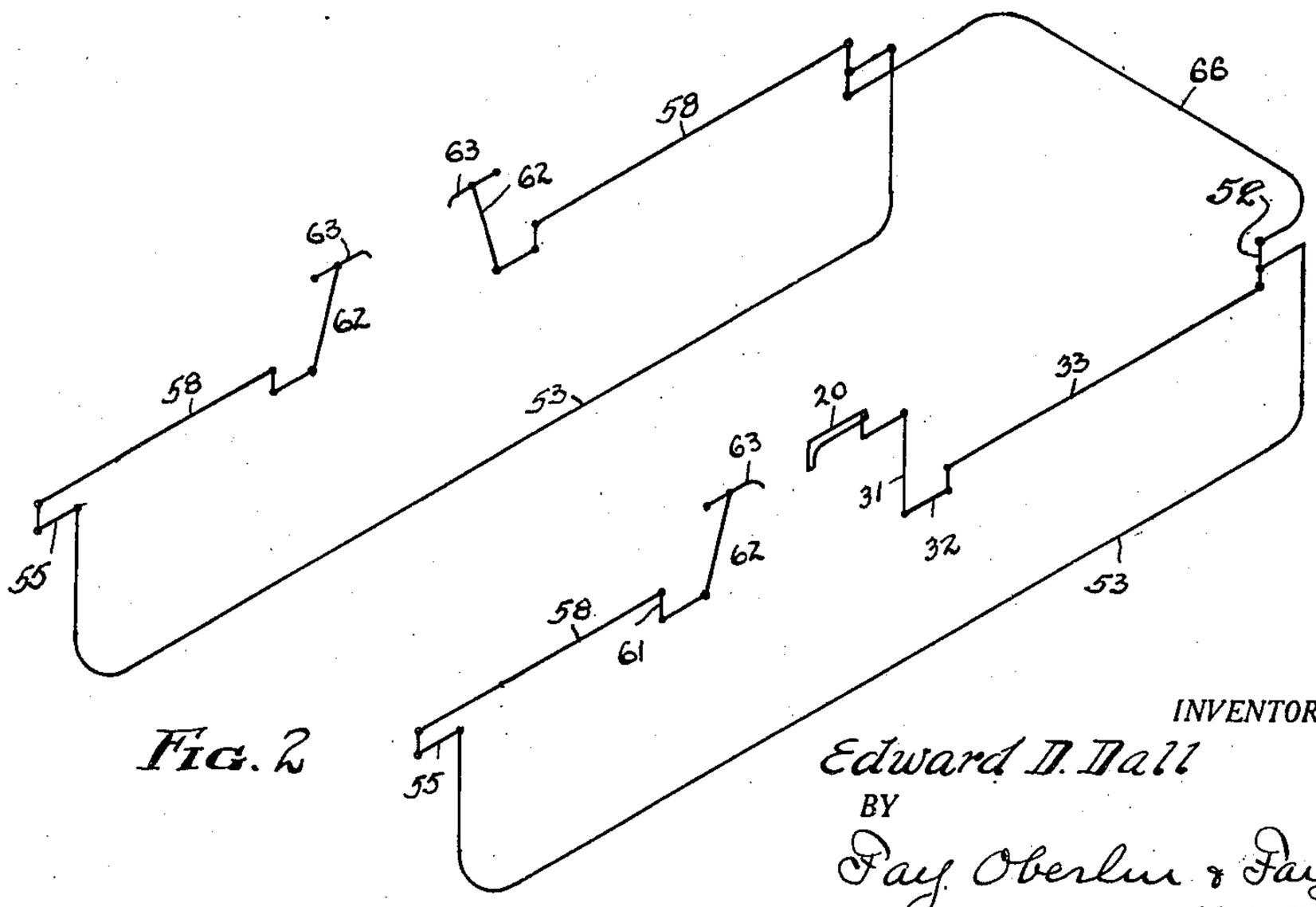

FIG. 2

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LOCKING MECHANISM

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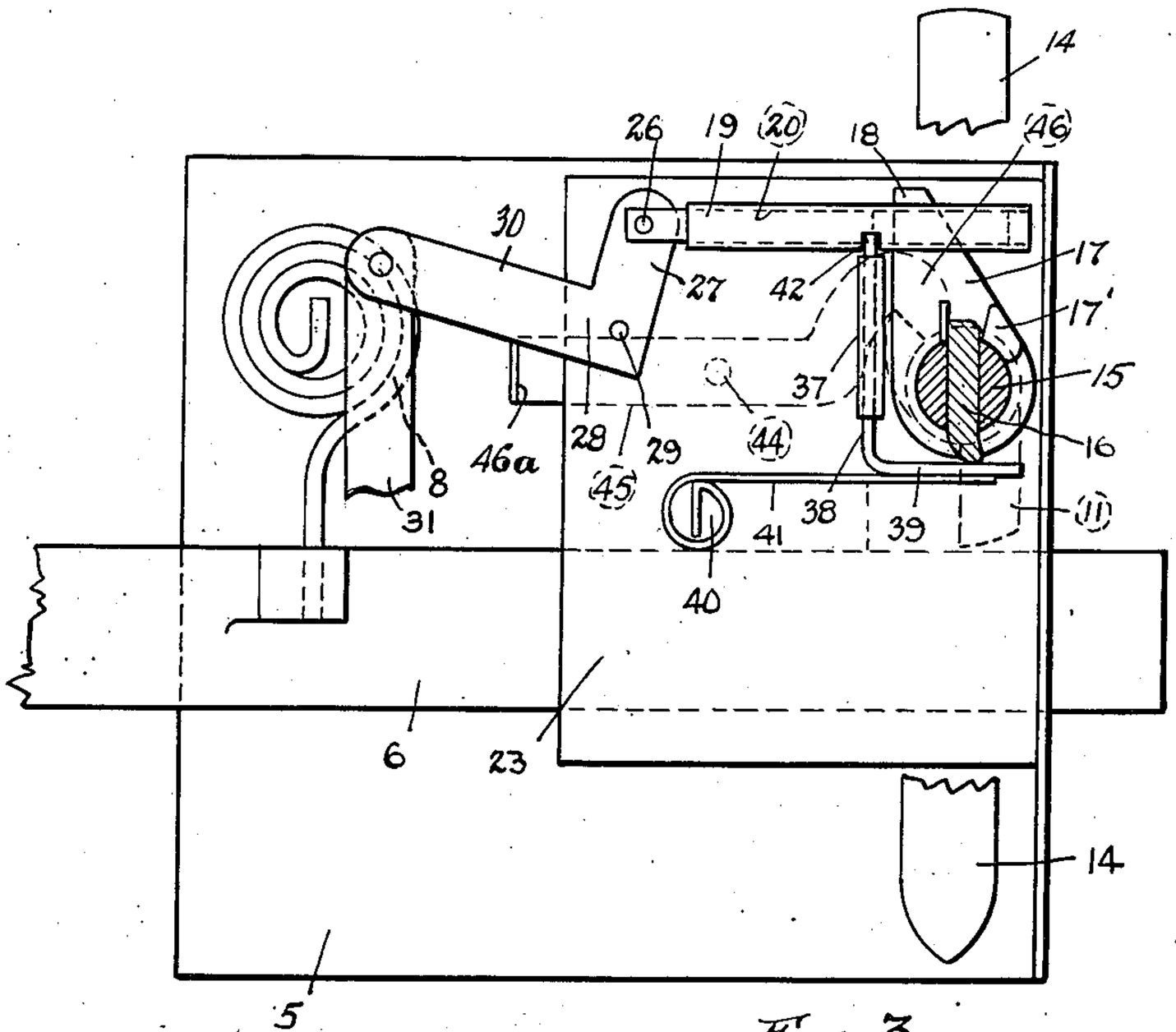

FIG. 3

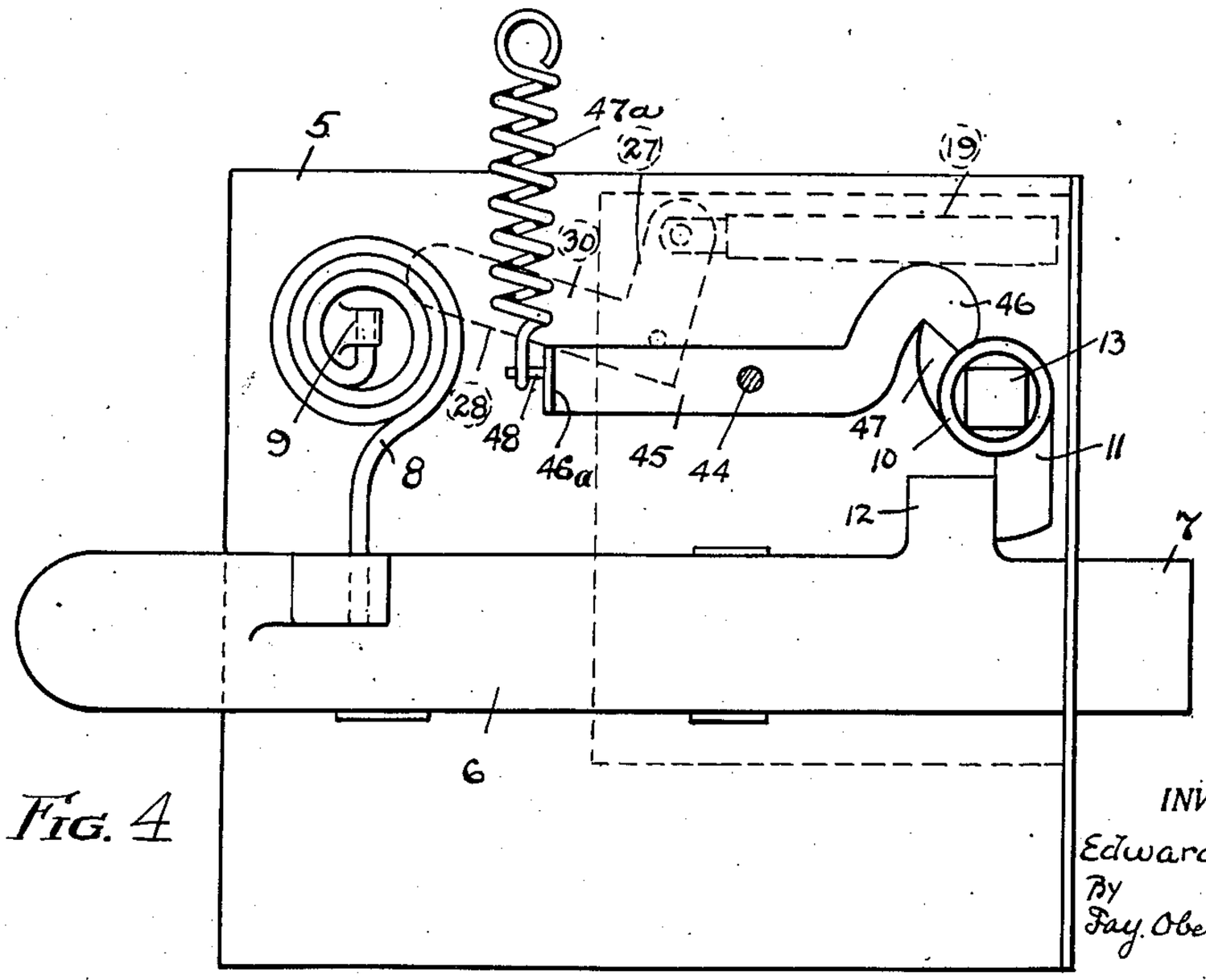

FIG. 4

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LOCKING MECHANISM

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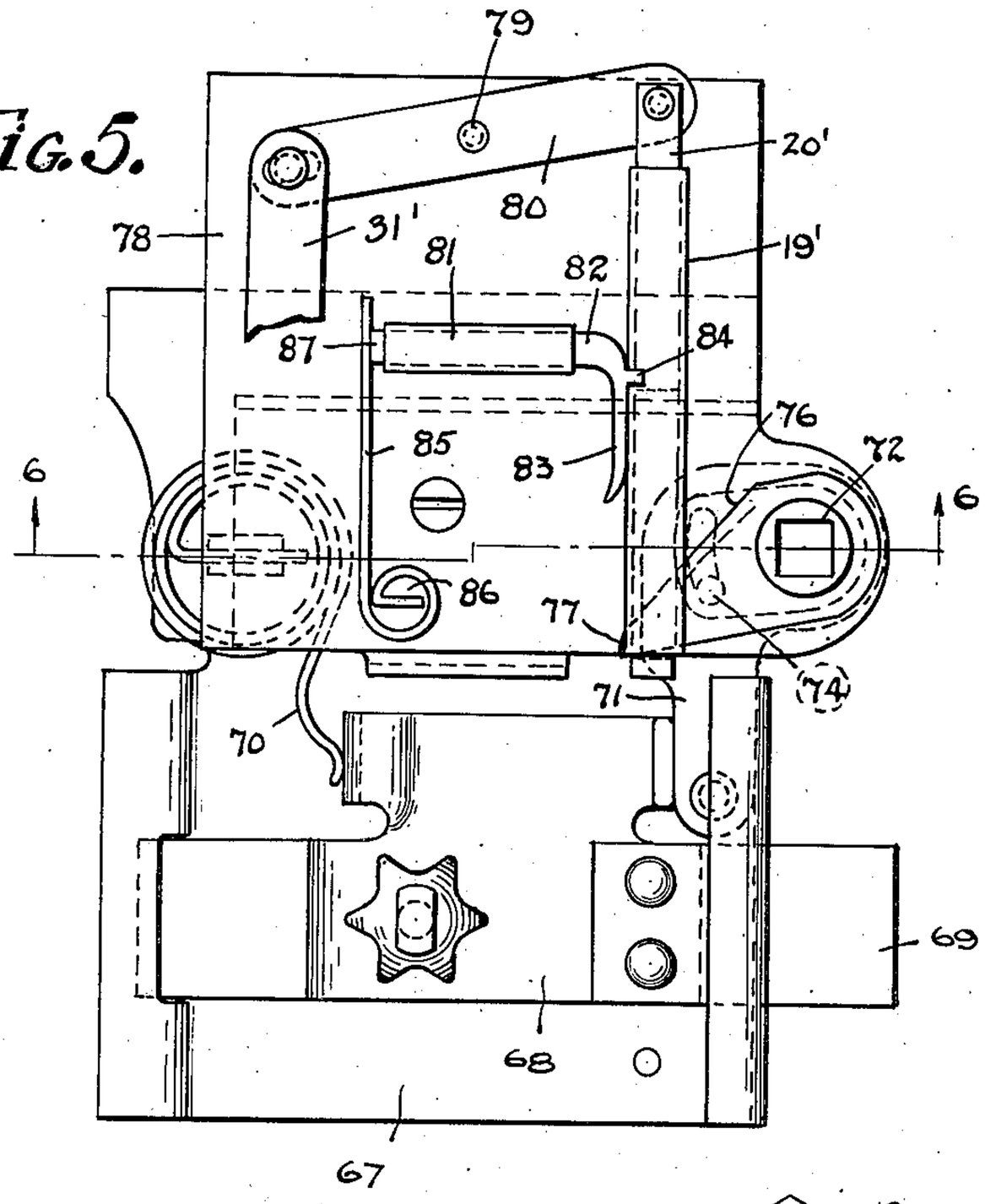
Fig. 5.



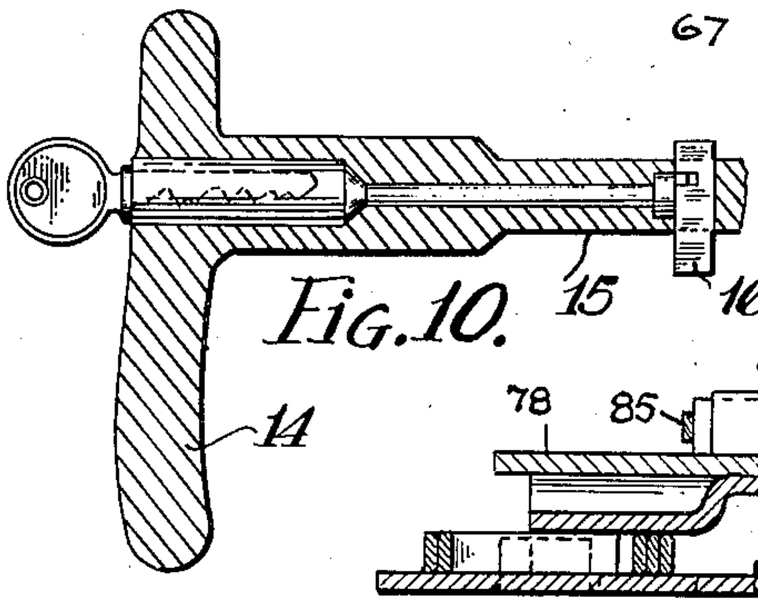


Fig. 8

Fig. 10.

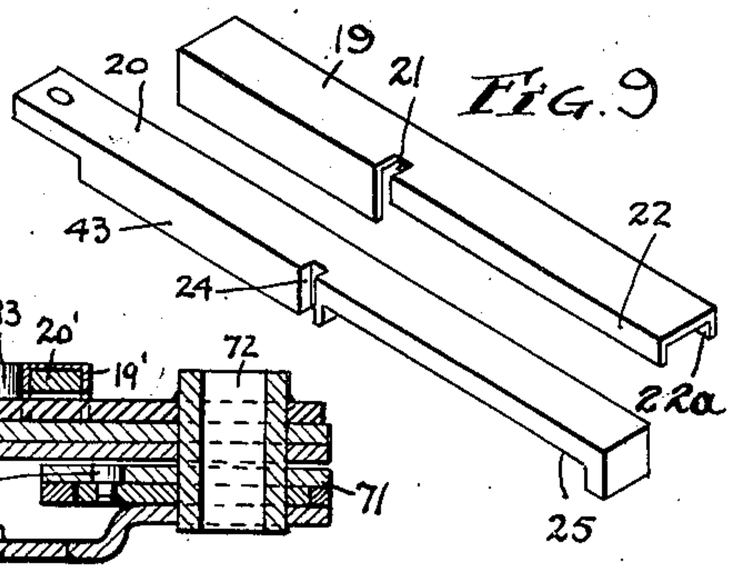


Fig. 9

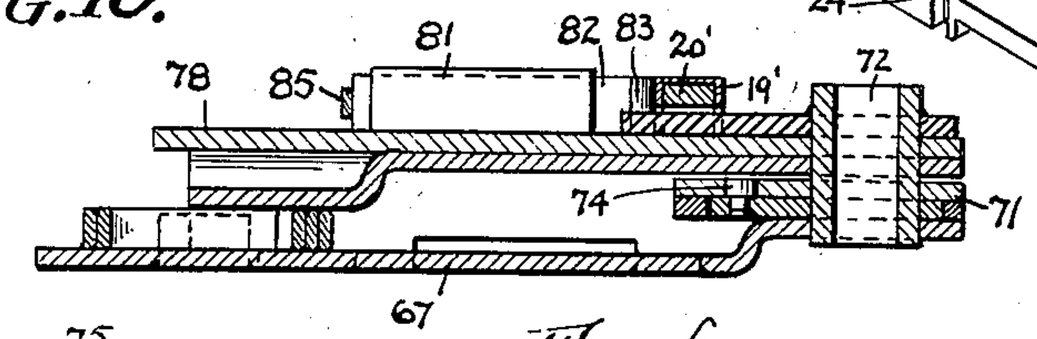


Fig. 6

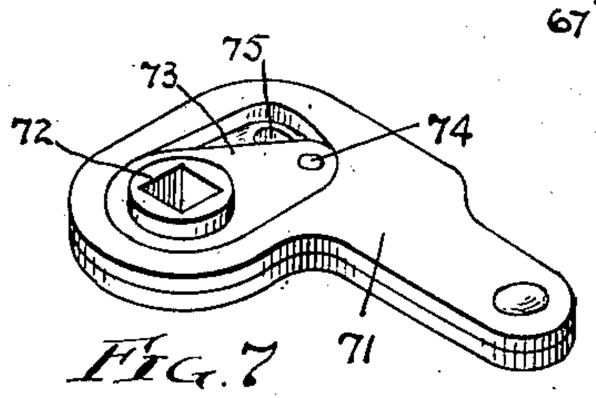


Fig. 7

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UNITED STATES PATENT OFFICE

2,123,525

LOCKING MECHANISM

Edward D. Dall, Cleveland, Ohio, assignor to Walter F. Wright, Shaker Heights, Ohio

Application February 4, 1931, Serial No. 513,297
Renewed December 13, 1932

26 Claims. (Cl. 70—26.4)

This invention relates to locking mechanism and has particular reference to a mechanism for simultaneously locking and/or unlocking a plurality of doors, and the like, by the operation of a single locking means. More specifically my invention relates to an apparatus for simultaneously mechanically locking and/or unlocking all of the doors of an automobile, or like vehicle, by the simple manipulation of a single means associated with only one of such doors. It is among the objects of my invention to provide an apparatus which shall be capable of accomplishing all of the above named desirable results. Other objects of my invention will appear as the description proceeds. To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings:

Fig. 1 is a side elevational view of two laterally adjacent doors having associated therewith the apparatus comprising my invention; Fig. 2 is a schematic diagram showing how the apparatus comprising my invention may be employed in association with a vehicle body, such as an automobile body, for simultaneously locking and unlocking all of the doors thereof; Fig. 3 is a fragmentary elevational view, partially in section of one form of the apparatus illustrated in Fig. 1; Fig. 4 is an elevational view of a portion of the apparatus illustrated in Fig. 3; Fig. 5 is a fragmentary side elevational view of an alternative form of lock construction; Fig. 6 is a transverse sectional view of the apparatus illustrated in Fig. 5, taken on a plane substantially indicated by the line 6—6; Fig. 7 is a perspective view of a portion of the apparatus illustrated in Fig. 5; Figs. 8 and 9 are perspective views of complementary elements of the apparatus illustrated in the previous figures; and Fig. 10 is a perspective view of a common form of handle which may be utilized in connection with certain forms of locks as herein illustrated.

Referring more specifically to the drawings and more especially to Fig. 1, the apparatus comprising my invention is here shown associated with doors such as 1 and 2 which may be adjacent doors on the same side of a vehicle body, such as an automobile body, such doors being provided with hinges not shown, which enables such doors to be swung about vertical axes which substantially coincide with the lines 3 and 4. The apparatus comprising my invention presently to be explained is designed to be incorporated in one of the doors such as 2 which will preferably be the front right hand door of the vehicle body, so that, as such door is either locked or unlocked, the mechanism comprising my invention will effect a like locking or unlocking of all of the other doors of the vehicle. In Fig. 2 is illustrated diagrammatically the manner in which the several doors may be interconnected, i. e., the locking mechanism thereof interconnected, so as to enable the apparatus presently to be described to accomplish the simultaneous actuation of all of the locks in the vehicle body.

The lock which is incorporated in the master door, or the door which is locked and through which all of the other doors are locked, is most clearly illustrated in Figs. 3 and 4. Having reference therefore to these figures, it will be noted that the form of apparatus herein illustrated consists of the usual supporting plate 5 on which the locking apparatus is mounted in the manner to be described. The lock has the usual latch bolt member 6 which has a projecting portion 7 adapted to enter an aperture provided therefor in the door jamb so that the bolt when in such aperture will hold the door in closed position. The bolt 6 is maintained in the position illustrated in Figs. 3 and 4, i. e. with the portion 7 thereof projecting laterally from the lock under the influence of a coil spring such as 8, which may be mounted and supported by a suitable bracket, such as 9, carried by the plate 5.

Actuation of the bolt 6 so that the terminal portion 7 thereof may either be permitted to enter the aperture provided therefor in the jamb of the door or to retract the same therefrom is effected by a rotatably mounted roll-back element 10 which is provided with a projection 11 engaging a projection 12 on the bolt 6. The element 10 has a rectangular aperture 13 formed therein to receive a similarly formed shaft of the actuating handle 14 for the lock. The form of lock illustrated in these figures is the type in which the bolt 6 actuated by the handle 14 is employed for the dual purpose of maintaining the door in the closed position even though unlocked, and also to maintain the door closed when locked, the locking taking place by means which, upon the turning of the key, and subsequent rotation of the handle in a particular manner arrests the

rotation of the roll-back in one direction which consequently prevents a retraction of the bolt 6.

The locking and actuating handle for the door has a substantially cylindrical portion 15 in which is operatively mounted a transversely movable dog 16, the movement of such dog being effected by a rotation of the key in the handle. This form of handle construction is well known to those familiar with the art, and since the same forms no part of my invention will, therefore, not be more fully illustrated or described. Suffice it to say that the rotation of the key in the handle of the door will move the dog 16 relatively transversely of the tubular member 15 for the purpose hereinafter more fully explained.

The cylindrical member 15, i. e., the shank of the handle 14, has a laterally projecting member 17 associated therewith which has a terminal 18 underlying a guide member 19 and a rod 20 which is movably supported in such guide member. It should be noted that the member 17 is a substantially flat plate having a shape such as is most clearly illustrated in Fig. 3, and provided with projections such as 17' on one face thereof. The member 17 is free to rotate on the cylindrical extension of the shaft or handle 15 until the bar or member 16 is moved transversely of the shaft 15 into engagement with the projections such as 17' on the member 17. When the key, illustrated in Fig. 10, is rotated in the handle to an unlocking position the bar 16 will be moved downwardly until its upper end lies within the periphery of the shaft 15. The form of construction of the guide 19 and the movable element 20 associated therewith is more clearly illustrated in Figs. 8 and 9. The guide 19 consists of a channel-shaped shell provided with a slot 21 and likewise has its flanges 22 and 22a cut away for a portion of its length, so that when the guide is placed against the auxiliary plate 23, a space will be left intermediately of such guide and said plate to permit the extension therebetween of the terminal 18 of the element 17. The movable member 20 is preferably solid and substantially rectangular in form and is likewise provided with a transversely extending slot 24 which, upon proper relative positioning of the guide 19 and the member 20 will register with the slot 21 formed in such guide member. The movable element 20 is also provided with a recessed portion 25 on one face which permits the passage between the body of such member 20 and the face of the plate 23 of the terminal 18 of the member 17. The movable element 20 is terminally secured by means of a pin 26 to the arm 27 of a bell crank 28 which is pivotally supported at 29 and which has an oppositely extending arm 30. The arm 30, as most clearly illustrated in Figs. 3 and 1, has a link 31 secured thereto which has a bell crank 32 associated therewith, to which is movably secured a rod 33 for the purpose hereinafter more fully explained. The rod 33 passes through an aperture 34 provided therefor in the frame of the door, and has associated therewith a compression spring 35 which is positioned intermediately of the frame of such door through which the rod passes, and a collar 36 secured to the rod 33. The action of the compression spring 35 is to maintain a counter-clockwise bias (Fig. 3) to the bell crank 28 for the purpose hereinafter more fully explained.

The auxiliary plate 23 carries a second guide member 37 which slidably supports a keeper 38 which is provided with a laterally extending terminal 39. The auxiliary plate 23 has an abutment 40 associated therewith which secures and supports a spring 41, which spring contacts with the laterally extending projection 39 of the keeper 38, and maintains the terminal 42 of the keeper 38 in intimate contact with the face 43 of the movable member 20 by projecting through the slot 21 in the guide 19 until such movable member is brought into proper position, whereupon the terminal portion 42 of the keeper 38 will enter the transversely extending slot 24 of the movable member 20. The inner face of the auxiliary plate 23 carries a pin 44 on which is pivotally mounted a dog member 45. The dog member 45, at one end, is provided with a hook 46 which is adapted to engage a projection 47 formed integrally with and extending radially from the rotatably supported rollback member 10. The other end of the dog member 45 is provided with a laterally projecting portion 46a adapted to be maintained in contact with the leg 30 of the bell-crank 28, under the influence of a tension spring 47a which, at its one end, is secured to a pin 48 preferably secured to the projection 46a, and at its other end may be secured by any suitable means to its support provided either in the body of the lock, or on the door with which such lock is associated.

The operation of the apparatus illustrated in Figs. 3 and 4 may be briefly described as follows. The arrangement of the parts, as illustrated in Fig. 3, shows such parts occupying the position which they will occupy when the door is locked, i. e. the hook 46 of the dog member 45 is in engagement with the projection 47, so that the handle 14 and its associated shaft 15 may not be rotated in a clockwise direction to effect a withdrawal of the terminal 7 of the bolt 6 from the aperture receiving the same in the door jamb. In order to unlock the apparatus illustrated in these figures, the key will be inserted in the handle of the door in the usual manner and, upon a rotation of such key, the member 16 will be moved transversely of the shaft 15 in a downward direction, thereby depressing the keeper 38, withdrawing the terminal 42 thereof from the transversely extending slot 24 in the movable member 20, thereby permitting the compression spring 35 through its associated links to move the bell crank member 28 in a counter-clockwise direction as the apparatus is viewed in Fig. 3. Counter-clockwise movement of the bell crank 28 will cause the arm 30 thereof to depress the projection 46a of the dog member 45 and thereby likewise effect a counter-clockwise rotation of its dog member, which will free the hook 46 and its associated projection 47, thereby permitting a rotation of the handle 14 and its associated shaft 15, and consequently a withdrawal of the latch bolt upon rotation of such handle.

After the door has been unlocked in the above described manner, the handle 14 and its associated apparatus may be operated for any number of times to open and close the door of the car without any interference of such operation by the locking mechanism. However, when the car is to be locked, the key in the door handle will be turned so that the member 16 is moved transversely upwardly of the shaft 15, thereby enabling the spring 41 to move the terminal 42 of the keeper 38 up into contact with the face of the member 20 to the right of the slot 24. Assuming now that the doors are to be locked, i. e., the parts moved into the position illustrated in Fig. 3, the

key most clearly illustrated in Fig. 10 will first be rotated to move the member 16, i. e., the upper end thereof, out of the shaft 15 so that it may engage the projection 17' in order that when the shaft 15 is rotated in a clockwise direction the plate 17 will be rotated along therewith. The handle of the door will then be rotated in a clockwise direction as viewed in Fig. 3, which rotation will effect a rotation of the member 17 and its associated terminal 18 by means of the member 16 abutting against a projection 17' carried by the member 17. The rotation of the handle 14 in a clockwise direction as described, will therefore move the terminal 18 to the right which will carry the movable member 20 along therewith until the keeper 38, more specifically the terminal 42 thereof, will project into the slot 24. The clockwise rotation of the handle 14 in the manner described has been permitted by the hook 46 by virtue of such hook being out of engagement with the projection 47 due to the depression of the left end of the latch member 45 by the arm 30 of the bell crank 28. However after the movable member 20 has moved to the right as most clearly viewed in Fig. 3, until the keeper 38 has dropped into the slot 24, then the movable member 20 will be retained in the position illustrated in Fig. 3, and the arm 30 will be maintained in the elevated position, so that the hook 46 will ride upon the outer periphery of the rotatable member 10. As the rotatable member 10 is moved in a counter-clockwise direction by a counter-clockwise rotation of the handle 14 to bring such handle to the vertical position, then the hook 46 will ride over the projection 47 and engage the complementary face thereon and prevent a clockwise rotation of the handle 14 or its associated mechanism. From the above description it is believed that the operation of this form of construction for the master lock will be well understood to not only lock the door with which it is associated, but also to effect the proper movement of the link 31 associated therewith to cause locking of the other doors of the vehicle.

The movement of the link 31 which is in accordance with the movement of the arm 30 of the bell crank 28 will effect longitudinal movement of the rod 33. The rod 33 terminates preferably at approximately the line 50 and is in abutting relationship with a rod 51 movably supported in an aperture provided therefor in the jamb of the door. The rod 51 is secured to a bell crank 52 which has a flexible wire 53 associated therewith which wire, or like flexible element 53, passes through a conduit 54 underlying the sills of the doors. The opposite end of the flexible member 53 is secured to a bell crank 55 which is carried by a bracket 56 supported by the jamb for the door 1. The bell crank 55 has a short rod 57 associated therewith which is movably supported in an aperture provided therefor in the jamb for the door 1, and which terminates preferably on the line indicated at 3. The short rod 57 is similar to the rod 51 described in connection with the door jamb for the door 2, and the door 1 likewise has a rod 58 supported therein and arranged similarly to the rod 33 previously described. The rod 58 has a tension spring 59 and a collar 60 associated therewith. The inner end of the rod 58 is pivotally connected to a bell crank 61 and a link 62 connects such bell crank with a pivotally supported dog 63. The dog 63 may, upon clockwise rotation, resulting from a similar rotation of bell crank 61, move into engagement with the roll-back 64 associated with the latch bolt 65 on door 1, thus dogging such roll-back and preventing retraction of the latch bolt 65 from the outside of the body. The opposite side of the vehicle from that which has the doors just described, may have its doors also provided with elements such as the rods and wires hereinbefore described, such arrangement being most clearly illustrated in Fig. 2.

Inasmuch as the elements on the left side of the car are substantially identical with the elements just described in connection with the right side of the car, such elements will be given corresponding reference characters. Suffice it to say that a flexible element 66 is provided which will connect in a suitable manner the bell cranks 52 and 52' on opposite sides of the body, so that, upon movement of the element 33 forward out of door 2 in the manner described, all of the elements associated therewith will be moved synchronously for the purposes described. That is to say, rods 58 are moved inwardly on the two left side doors, causing elements 63 to dog their associated rollbacks and lock the doors against actuation by their outside handles.

An alternative form of construction for the master lock is illustrated in Figs. 5, 6 and 7. In this form of construction the plate 67 movably supports a somewhat different form of bolt 68 which is provided with the usual projection 69 adapted to enter the socket provided therefor in the door jamb adjacent such lock. The bolt 68 is urged to the right under the influence of a coil spring 70. The bolt 68 is actuated by an element 71 which is rotatably supported by the plate 67 and the construction of which is most clearly illustrated in Fig. 7. The element 71 carries the handle-engaging member 72 which is provided with a radial projection 73, which carries a pin 74 movable in a slot 75 provided therefor in the member 71. It will be noted that this form of construction permits a certain amount of relative movement between the handle-engaging member 72 and the latch bolt actuating member 71 for the purpose hereinafter more fully explained. The handle-engaging member 72 has a radial projection 76 associated therewith which is most clearly illustrated in Fig. 5 and which is similar in its construction and function to the member 17 of the previously described form of construction. The member 76 has a terminal 77 which underlies a guide 19' and a movable member 20' which are similar in construction and operation to the members 19 and 20, most clearly illustrated in Figs. 8 and 9. The auxiliary plate 78 carries a pin 79 on which is pivotally mounted a link 80 movably secured at one end to the movable member 20' and at its other end to a link 31' which is similar to and compares with the link 31 of the previously described construction.

Auxiliary plate 78 of the lock likewise carries a guide 81 which has associated therewith and which slidably supports a latch member 82, which is provided with projections 83 and 84. The projection 84 enters the slot in the guide member 19' which compares to the slot 21 of the construction illustrated in Fig. 9. A spring 85 is carried by an abutment 86 supported by the auxiliary plate 78 and such spring bears against the terminal portion 87 of the latch member 82. The operation of this last-named form of master lock construction may be briefly described as follows. The lock actuating handle for this form of construction is of the type which is locked against

rotation by a dog or follower, which locks such handle against relative movement with respect to the door or lock upon rotation of the key within the handle. The arrangement of the elements illustrated in Fig. 5 is that relationship which they bear to each other when the apparatus is in the locked position. In order to unlock the door with which the master lock is associated the handle thereof is unlocked in the conventional manner and, further, to unlock the other doors of the vehicle body, the handle and accordingly the element 72 associated with a terminal thereof, is moved in a clockwise direction as viewed in Fig. 5, this clockwise rotation being made possible by the pin 74 moving in the slot 75, so that clockwise rotation of the element 73 may be had without effecting a rotation of the member 71. Clockwise rotation of the member 72 will similarly rotate the terminal portion 77 until the same strikes the terminal of the projection 83 of the latch member 82, so that such latch member is moved to the left, thereby withdrawing the projection 84 from the slot such as 24 in the movable member 20', thereby permitting the spring such as 35 in the previously described form of construction to effect a counter-clockwise rotation of the link 80, thereby unlocking the remote doors on the vehicle. Further clockwise rotation of the handle and its associated means 72 will cause the pin 74 to move against the end of the groove 75, so that the element 71 will be carried along with the element 72 in its clockwise rotation, thereby moving the bolt 68 to the left, and permitting an opening of the door with which the master lock is associated.

In order to lock all of the doors of the vehicle which has associated therewith the master lock illustrated in Fig. 5, all that is necessary is to rotate the handle in a counter-clockwise or non-latch-bolt-retracting direction as viewed in Fig. 5 for a distance sufficient to permit the terminal 77 on the member 76 to move the member 20' downwardly sufficiently, so that the projection 84 may enter and engage the groove similar to groove 24 on the movable member 20. This projection 84 will, therefore, maintain the member 20' in the depressed position, so that the handle may be brought to its normal position and locked, whereupon not only the door with which such master lock is associated, but all the other doors on the vehicle will be securely locked.

It will be noted from the above described forms of construction that by employing a single master lock in one of a plurality of doors associated with a vehicle body or like structure, an actuation of such lock in the manner described will enable the operator to lock and/or unlock all of the doors on the car. The advantages incidental to the employment of the apparatus comprising my invention are believed to be sufficiently evident to those familiar with the art that a further enumeration thereof is unnecessary. It will be noted that the above described form of constructions may be employed in connection with any installation requiring a plurality of doors, or locks, to be actuated upon the actuation of a single lock associated with one of such doors. No illustration of the locks associated with the doors other than the master door has been given inasmuch as such locks may be of any form having locking means which, upon movement of a lever or dog such as 63 illustrated in Fig. 1, will lock such door in the well known manner.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the means herein disclosed, provided those stated by any of the following claims or their equivalent be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. In combination with a vehicle door, means for holding said door closed, means for releasing said holding means, and spring repelled means extending through a peripheral edge of said door adapted upon actuation to render said releasing means ineffective to release said holding means.

2. The combination with an automobile vehicle body having a door hinged thereto, of locking mechanism mounted on said door, and means for actuating a part of said mechanism comprising a member movably supported in a relatively rigid portion of the body adjacent the hinged edge of the door, a separate cooperating member movably supported in the adjacent hinged edge of the door, and means for actuating said first named member.

3. In combination, a vehicle body having a door, latch means adapted when said door is closed to hold it closed, release means for said latch means, means rendering said release means ineffective to release said latch means including a part extending to one of the edges of said door and a part in said body adapted to actuate said first named part, and operating means for said second named part.

4. In combination, a vehicle body having a door, latch means adapted when said door is closed to hold it closed, release means for said latch means, means rendering said release means ineffective to release said latch means including a part extending to one of the edges of said door and a part in said body adapted to actuate said first named part, and operating means for said second named part including a train of operatively connected movable parts extending to a point on said body removed from said door.

5. In combination with a vehicle body having a door, said door having means for holding it closed and means for releasing said holding means, locking means on said door adapted upon actuation to render said releasing means ineffective to release said holding means and a train of operably associated movable parts operatively associated with said locking means extending to a point remote from said door and there provided with an actuator.

6. In a vehicle body having a door, means for holding said door closed and means for releasing said holding means, said holding means being operable independently of said releasing means, and means including a train of operably associated movable parts controllable from a remote location for rendering said releasing means ineffective to release said holding means.

7. In combination, a door openable from both sides, another door, a controller on said other door, and means for locking the first said door including a train of operably associated movable parts operably associated with said controller and said locking means to lock the first said door from opening operation from one side without affecting the opening operation from the other side.

8. The combination with an automobile vehicle body having a plurality of doors, of a lever movably mounted on said body, means including energy storing means positioned on at least one of said doors adapted upon actuation to lock each

of said doors against unauthorized ingress, and means operable from said lever for actuating said first named means to thus lock said doors and to release said energy storing means so that the same may unlock the door upon which the same is positioned.

9. The combination with an automobile vehicle body having a plurality of doors, said doors provided with latch means by which the same are normally secured in closed position, and means for actuating said latch means, a latch actuating handle movably mounted on one of said doors, means including energy storing means positioned on at least one of said doors responsive to movement of said handle and effective upon such movement to render said latch actuating means ineffective to retract the latch associated therewith, and key controlled means associated with said handle, said energy storing means effective upon movement of said key controlled means to restore to effectiveness said latch actuating means.

10. The combination with an automobile vehicle body having a plurality of doors of an actuator movably mounted for locking said doors, means adapted upon actuation to lock at least one of said doors against unauthorized ingress, said means including energy storing means positioned on a door and energized by locking actuation of said means, said storing means being arranged on release to unlock said door, and means operable from said actuator for actuating said first named means to lock said door and for releasing said energy storing means to unlock said door.

11. The combination with a vehicle body having a plurality of doors, means for holding said doors in closed position, means for releasing said holding means, said releasing means being operable independently of said holding means, means for locking a door, and means on another door responsive to movement of its releasing means independently of its holding means releasing movement to operate said locking means.

12. The combination with a vehicle body having a plurality of doors, at least one of said doors having a latch bolt, retracting means for said latch bolt, said retracting means having an operation independent of said bolt retracting operation, means for locking another door, and means for operating the said locking means by non-latch-bolt actuating operation of said latch bolt retracting means.

13. The combination with a vehicle body having a plurality of doors, means for holding said doors in closed position, means for releasing said holding means, said holding means being operable independently of said releasing means, means for locking a door, and means for operating said locking means by operation of said releasing means on another door without movement of said holding means.

14. The combination with an automobile body having a plurality of doors, a latch bolt associated with each of said doors, roll-backs associated with said latch bolts, dogging means for said roll-backs, a lever movably mounted on said body, means including a train of mechanical connections from said lever to said dogging means on each of said doors effective upon movement of said lever to dog the roll-backs on said last named doors.

15. The combination with an automobile vehicle body having doors arranged on opposite sides thereof, said doors each provided with a latch bolt, a roll-back associated with each such latch bolt, a movable handle on one of said doors for actuating its associated roll-back and latch bolt, and means functionally responsive to movement of said handle for dogging the roll-backs on the remainder of said doors.

16. The combination with an automobile vehicle body having doors arranged on opposite sides thereof, said doors each provided with a latch bolt and a roll-back associated with each such latch bolt, a movable handle on one of said doors for actuating its associated roll-back and latch bolt, and means functionally responsive to movement of said handle for dogging and undogging the roll-backs on the remainder of said doors.

17. In combination with a vehicle body having a plurality of doors, means for holding said doors closed, means for locking said doors, a two part roll-back on one of said doors each part operable independently of the other, one part operable to release the door holding means of said one door and the other part operable to lock another door, and operative connections from said last named part to the locking means of said other door.

18. In combination with a vehicle body having a plurality of doors, each door having means for holding it closed and release means for said holding means, means for rendering said release means for one of said doors ineffective to release its associated holding means and including a part extending to one of the edges of said door and a part in said body adapted to actuate said first named part, and operating means for said second named part including a train of operatively connected movable parts extending to a point on another of said doors.

19. The combination with an automobile vehicle body having two doors each hingedly mounted by a vertical edge, of mechanism for securing each door, the mechanism on one door comprising an operating member therefor and a movable member operatively connected with said operating member and extending therefrom to a point adjacent a vertical edge of said one door, a movable member operatively connected with the securing mechanism of the other door and extending to a point adjacent a vertical edge of said other door, and motion transmitting mechanism operatively connected with said movable members, whereby movement of said operating member of said one door causes movement of a part of the securing mechanism of said other door.

20. In a vehicle body having a plurality of hinged doors, locking means for one door including a movable part extending to a point adjacent the hinged edge thereof and a second part in the body portion adjacent the hinged edge of said one door and adapted to cooperate with said first named part, and actuating means for said second part including a member on another door and means interconnecting said member and said second part.

21. The combination with an automobile vehicle body having two doors hinged thereto, of lock mechanism mounted on each of said doors, and means for actuating a part of the lock mechanism on one door comprising a member movably supported in a relatively rigid portion of the body adjacent the hinged edge of said one door, a cooperating member movably supported in the adjacent hinged edge of said one door, and means operatively connected with the lock mechanism of the other door for actuating said first-named member.

22. In combination with an automobile body,

a master-door, bolt means for said master-door, bolt retracting means on said master-door, and means for causing dogging of said bolt retracting means including a movable member in a vertical edge of said door, a remote door, a post at a vertical edge of said remote door, bolt means for said remote door, bolt retracting means on said remote door, and means for causing dogging of said remote door bolt retracting means including a movable part in the vertical edge thereof adjacent said post, and mechanical means including devices within said post operatively associated with the aforesaid master-door member and the aforesaid part whereby the bolt dogging motion of said member operates said part to dog the bolt retracting means on said remote door.

23. The combination with an automobile vehicle body having doors on opposite sides thereof, said doors each provided with a latch bolt and means for actuating said latch bolts, a latch bolt actuating handle associated with said means on one of said doors, and means responsive to movement of said handle for locking the other door against unauthorized ingress.

24. In a vehicle body having doors on opposite sides, the combination of locking means on a door on one side of said body including a train of movable parts extending across the body, and means on a door on the opposite side of said body cooperating with said movable parts to operate said locking means.

25. The combination with an automobile vehicle body having doors arranged on opposite sides thereof, said doors each provided with latch bolt means by which the doors are normally secured in closed position and means for actuating said latch bolts, a latch bolt actuating handle associated with said last named means on one of said doors, means responsive to movement of said handle for rendering the bolt actuating means on another door ineffective to retract the bolt associated therewith, said means including key controlled means adapted to lock the door with which said handle is associated.

26. In a vehicle body having a plurality of doors with at least one of said doors disposed at each side of said body, latch bolt means associated with each of said doors, inside and outside latch bolt control handles for each of said doors, simultaneously operated locking means associated with said doors, interconnecting means between said simultaneously operated locking means and one of said outside latch bolt control handles, said interconnecting means coacting so that all of said locking means may be controlled simultaneously by said last mentioned outside latch bolt control handle, and lock means associated with said handle to lock said handle from movement.

EDWARD D. DALL.