Feb. 21, 1956 E. M. TRAMMELL, JR 2,735,289

PLUNGER-GUARD ASSEMBLIES FOR AUTOMOBILE DOORS

Filed July 2, 1953

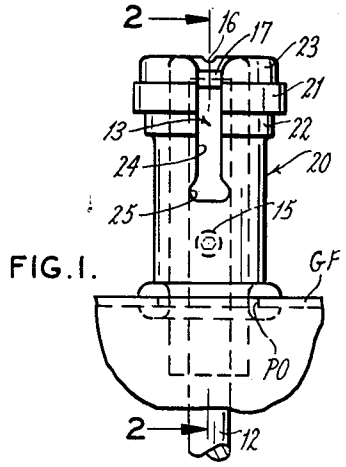



FIG. 1.

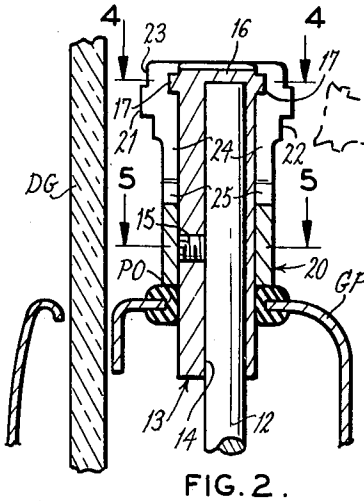



FIG. 2.

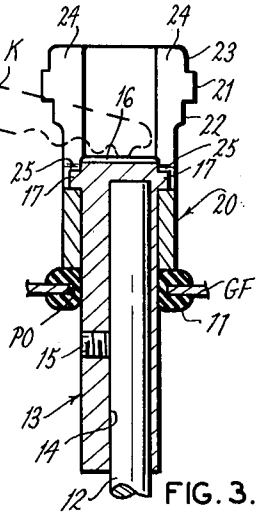



FIG. 3.

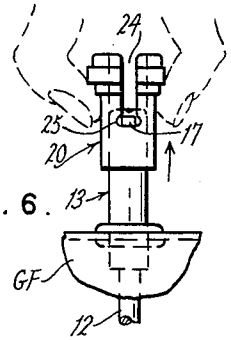



FIG. 6.

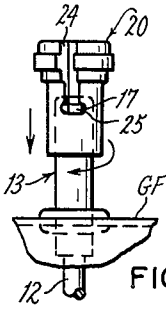



FIG. 7.

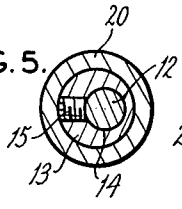



FIG. 5.

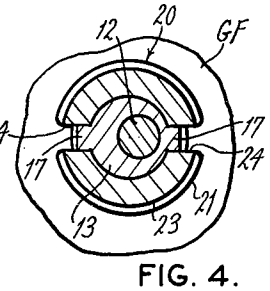



FIG. 4.

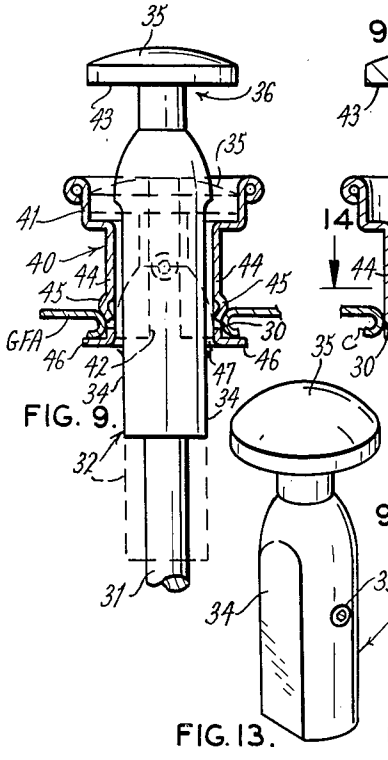



FIG. 9.

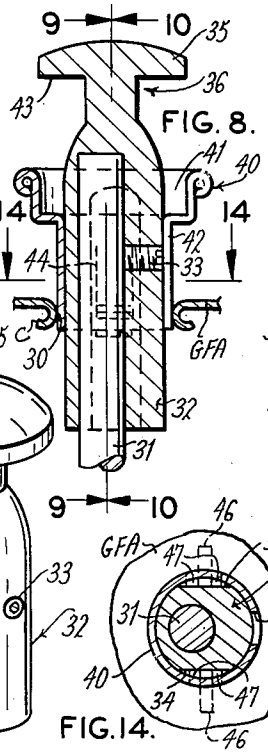



FIG. 8.

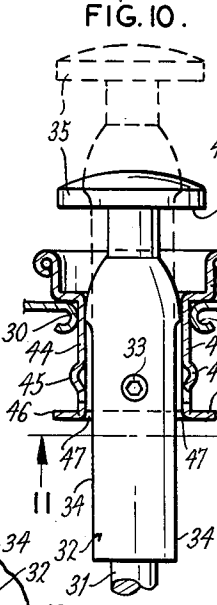



FIG. 10.

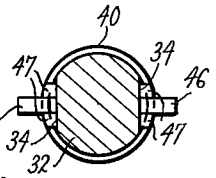



FIG. 11.

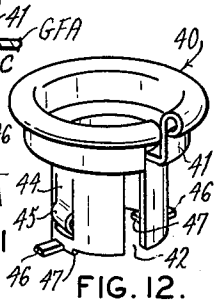



FIG. 12.




FIG. 13.




FIG. 14.

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2,735,289

# PLUNGER-GUARD ASSEMBLIES FOR AUTOMOBILE DOORS

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Application July 2, 1953, Serial No. 365,747

16 Claims. (Cl. 70—181)

This invention relates to improvements in plunger-guard assemblies for automobiles doors, and more particularly to shielding devices for the prevention of actuation of door latch conditioning plungers, when such actuation might result in roadway accidents by inadvertent door opening, or alternately, when the unintended actuation of such a plunger might result in locking the car keys within a closed body motor vehicle, leaving the operator without means for reaccess to the car. The present developments constitute certain improvements over the subject matter of patent application Serial No. 262,419, filed December 19, 1951, now Patent No. 2,694,-917, issued November 23, 1954, entitled Inside Door Locks for Automobiles, and certain improvements over another copending application, both by this applicant, identified as Serial No. 281,539, filed April 10, 1952, now Patent No. 2,708,845, issued May 24, 1955, and entitled Lock-Plunger Guarding Devices.

By way of general explanation of the present subject matter, it is noted that there exists at the present time no fully practical, low cost, simple device, apart from those described in my copending applications aforesaid, for the prevention of inadvertent actuation of the rear door latch-control plunger of automobiles. Accidents are frequently reported involving children and sometimes others, who unintentionally actuate the inside door latch, permitting opening of the car door and injury of the occupants through falling from a moving vehicle. One of the principal objectives of the present invention is to obviate such hazards.

Certain makes of motor vehicles are equipped with latch assemblies conditioned by a plunger so that, with the plunger in locking position, the door may still be closed and latched, many times, through inadvertence, with the ignition, or door key remaining in place, and thus unavailable for reopening the door. The present developments have as a further general object the avoidance of the time and inconvenience of such difficulties with improved means for their prevention.

More particularly expressed with reference to the currently improved plunger-guard assemblies, a further and valuable objective of the present improvements is realized in a simple structure comprising a guarded lock-conditioning plunger which may be formed of as few as two relatively movable parts, in a manner to serve as a positive reminder to the vehicle operator against inadvertent omission to remove the car or door key, the improved arrangement being objectively such that normally a key is required to depress the lock control plunger, the same being retractible upon reentering the car or at other times, by lifting the plunger shield with a simple, short, unidirectional motion.

Another object particularly reflected in one of the currently advanced embodiments is the provision of a disappearing, selectively extensible and retractible plunger guard particularly adapted for use with a rear door lock control plunger, and which is of a simple low cost construction enabling the device to be selectively placed into or out of operative position.



The foregoing and numerous other objects and advantages will more clearly appear from the following detailed description of certain preferred embodiments of the improvements, particularly when considered in connection with the accompanying drawing, in which:

Fig. 1 is a side elevational view, showing certain parts in section, of an improved shielded lock-control plunger particularly suited for application to the front doors of closed body motor vehicles, Fig. 1 being substantially enlarged over actual size, for clarity of illustration;

Fig. 2 is a vertical sectional view of the structure of Fig. 1, as taken along line **2—2** thereof;

Fig. 3 is a view of same structure, principally in section as taken along line **3—3** of Fig. 1;

Fig. 4 is a transverse sectional view along line **4—4** of Fig. 2;

Fig. 5 is a transverse section along line **5—5** of Fig. 2;

Fig. 6 is a side elevational view of the structure of the preceding figures, but shown in approximately actual size, and with the shielding element in raised position;

Fig. 7 is a view similar to Fig. 6, but illustrating an added facility for use under certain conditions, to enable depression of the plunger by actuation of the shield;

Fig. 8 is a vertical sectional view of a modified form of plunger assembly particularly adapted for rear door installation;

Fig. 9 is a view similar to Fig. 8, and taken substantially along line **9—9** of Fig. 8;

Fig. 10 is a view similar to Fig. 9 but showing the shield in a disappearing or retracted position, Fig. 10 being taken along line **10—10** of Fig. 8;

Fig. 11 is a transverse sectional view taken along line **11—11** of Fig. 10;

Fig. 12 is an isometric elevational view of the shield element utilized in the assembly of Figs. 8–10;

Fig. 13 is an isometric elevational view of a special plunger head member utilized in the modification of Figs. 8–12, and

Fig. 14 is a transverse sectional view as taken along line **14—14** of Fig. 8.

Referring now by characters of reference to the drawing, and first to an embodiment which is particularly adapted for use on certain front door latch-control plungers, it will be seen from Fig. 1 that the device is installed in and adjacent to an aperture PO such as normally provided for the plunger in the glass frame GF adjacent the usual door glass DG of a motor vehicle door. The plunger opening is provided with a peripherally grooved resilient annulus, such as a Nylon washer **11**; although the washer may be of any suitable, preferably resilient material. The plunger proper exemplified by a rod **12** acts in well known manner, in most makes of cars when depressed, to lock the door by preventing latch opening from either the outside or inside door handle, but when the plunger is raised the latch is normally conditioned for latch actuation by either handle.

In the structure of that species identified with Figs. 1–7 a special plunger head is provided, generally indicated at **13**, the head being provided with a longitudinal bore **14** which receives the upper end of the plunger rod **12**, being attached to the latter through a set screw **15** which is conveniently of so-called Allen type, and when tightened, will be in a flush or below-flush relation to the outside of the head **13**. The plunger head **13** is by preference provided with a transverse slot best appearing in Fig. 1, and indicated at **16**. The material of the head is laterally extended on one, or on both sides as shown, to form one or more lateral projections or ears **17** at the extremities of the slot **16**.

In addition to the special plunger head 13, the only other essential major element of this form of the device consists of a tubular guard in the form of an open end sleeve, preferably of metal and indicated generally at 20. The sleeve or guard 20 is shown as provided with a peripheral shoulder portion or ring formation shown at 21, the guard sleeve being provided with an enlarged head portion including the formation 21, and similar formations of stepped diameter indicated at 22 and 23 respectively below and above the lifting ring 21. As will appear, this arrangement facilitates lifting the sleeve from its normal position of rest as shown in full lines in Figs. 1, 2 and 3. In the arrangement shown, there are provided in diametrally opposite locations of the sleeve or guard element 20 a pair of longitudinal slots 24, the outer ends of which are open, and the width of each of the slots approximating the width of the projections or ears 17 of the plunger. Further, whether or not a separate slot (not shown) be provided for insertion of a key, in addition to the slots 24, the length of each of the latter should be at least equal to the range of reciprocal movement of the plunger 12 and head 13, which in many current makes of car approximates 5/8".

Optionally provided at the lower end of one or both of the slots 24, is a lateral slot extension 25 best appearing in Figs. 1, 6 and 7, and the purpose of which will later be described. It will now have appeared that the relation of the major elements, consisting of the plunger head 13 and the tubular guard or sleeve 20, is such that the one or more projections 17 operable along the corresponding slot or slots 24 of the sleeve, permit relative movement at times, hence results in a lost-motion connection between the plunger head and the sleeve, in a manner later more fully described.

The width of the slot or slots 24 is preferably less than would permit the introduction of a finger into and through the slot for direct digital actuation of the plunger head 13. This width is further such that the flat shank of an ordinary auto ignition key or other thin instrument, may be inserted through one or both of the slots 24 with the sides of the slots bearing a guiding relation to the key such as indicated at K (Fig. 3).

In many, perhaps most of the present day cars and trucks, the relation of the plunger 12 and its head 13 to the door lock is such that, as above noted, depression of the plunger locks the door, and lifting of the plunger enables the door latch to be normally actuated.

Now in order to assure that the operator of the car upon leaving same and desiring to lock it, is compelled by the reminding action of this plunger assembly, the arrangement compels him to withdraw his car keys from the ignition switch in order to condition the plunger head 13 for door locking purposes. This result occurs through the necessity for placing into the slot 16, some thin instrument (which of course is most conveniently the ignition or door key) disposed usually at an angle to the plunger head 13. The key is thus used to move the plunger head downwardly with respect to the guard sleeve, by a downward translatory movement of the key such as K. The linear extent of the unslotted portion of the guard of course determines the lower position of the special head 13, since under such conditions the projections 17 will engage the lower ends of the slots 24. After this operation, the door being off of the latch, same remains locked, since it is impossible with the plunger thus retracted, again to open the door without the key. Upon reentering the car with the key utilized in the front door lock, it is merely necessary, in order to restore the door to normal operation, to grasp the ring projection 21 and lift the guard sleeve 20. Due to the coaction of the slots and projections 24—17 this sleeve movement raises the plunger head 13 to the proper full extent. Release of the guard sleeve 20 enables same to fall by gravity to its normal position of rest against the non-metallic grommet 11. The fit between the plunger head 13 and sleeve 20 is such



that there need be no more than a smooth working clearance between the parts, so that there will occur no objectionable looseness between these elements.

A distinctly optional addition to the guard sleeve is exemplified by the lower slot extensions 25 of the one or more slots 24. This provision is made to meet the desire of certain drivers to lock car doors while driving the car, so as to prevent unauthorized entrance at stoplights or other enforced stops. The lateral slot extensions 25 are utilized when the plunger is raised, by lifting the sleeve to the extent of abutment between projections 17 and the bottoms of slots 24, then slightly twisting the sleeve as shown by the arrow of Fig. 7, in a manner temporarily to lock the sleeve to the plunger head by causing the lug or lugs 17 to enter the portions 25. When this is done, the sleeve may be utilized to depress the plunger by hand without requiring the use of the key as may be easily done by the driver without removing the ignition key for this purpose.

Describing now the embodiment particularly adapted for rear door plunger guarding purposes as exemplified by Figs. 8–14 inclusive, the glass frame shown at GFA is provided with the conventional plunger aperture 30 which will appear in Figs. 8, 9 and 10 as provided with the conventional "curl" C surrounding the opening 30. In this modification the plunger rod is indicated at 31, and is arranged for reciprocal movement between limits, to condition the lock mechanism of the door in a manner identical with that described above in connection with the first described species. The arrangement of Figs. 8 et seq., is primarily designed for use with rear automobile doors, as for the protection against unauthorized actuation of the lock control plunger by junior occupants or others.

The plunger rod 31 is surmounted by a special plunger head generally indicated at 32, attached to rod 31 as by a set screw 33 which may be of Allen type as is preferred. The structure of the head is perhaps best seen by Fig. 13 as including a substantially cylindrical body provided with one or more, preferably a pair of opposite "flats" 34, the purpose of which will later better appear. A mushroom head or cap 35 overlies a peripherally undercut portion or annular recess 36 which, as will later appear, provides along one wall of the peripheral slot 36, an abutment for lifting key or other instrument.

The guard sleeve, generally indicated at 40, is shown as including but with restriction, an upper, enlarged cup-like portion 41 which will at times receive and substantially enclose the portion 35 specifically when the plunger head 32 is in its down or retracted position. The guard sleeve 40 is provided with a longitudinal key-receiving slot 42 through which as will appear, an ignition key such as K may be introduced and brought upwardly against the key abutment 43 provided by the outer wall of the peripheral slot 36, for lifting the plunger. The slot 42 is preferably of such restricted width as to preclude the introduction of the finger through and into this slot to actuate the plunger, and yet is of such width that the key or other thin instrument may be thus inserted through the slot with its end portion brought upwardly against the abutment 43 to lift the plunger.

In Figs. 9 and 10 the plunger is shown in one position in full lines, and in another in dotted lines, from which it will appear that with the tubular guard sleeve 40 in position for normal usage, and with the plunger in its outermost or extended position, same may be readily manually depressed for locking the door. However, assuming the guard sleeve 40 to be positioned as shown by Figs. 8 and 9, the key K or like thin instrument must be inserted through the slot 42 then bodily moved across its axis to lift the plunger in order to restore normal latch operation. Thus it is seen that with the guard erected, children in the rear compartment of the vehicle are unable to open the door by lifting the plunger.

The features thus far described are quite similar to those prevailing in some of the forms of the rear door

guarding arrangements of my copending applications above referred to. The present arrangement, however, permits, when desired as when the car is utilized only by adults, retraction of the plunger guard sleeve 40 enabling full normal actuation without the use of a key or like instrument in either direction of plunger head movement. To this end the sleeve 40 is provided, preferably at diametrically opposite locations, with a pair of spring fingers 44 best appearing in Figs. 9, 10 and 12. These may be conveniently formed as partially cut-out portions of the wall of member 40. Each of the tongues 44 is characterized by some resilience, and each is provided at its lower end with a C shaped terminal 45. These curved portions will, as shown by Fig. 9, normally extend partly into the plunger opening 30 of the glass groove, and upon depressing the guard sleeve 40 against a minor resistance, the camming effect between the lower portions of formations 45 and the curl C or other margin of the plunger opening, will cause retraction of the spring tongues and permit downward movement of the guard sleeve as best shown by Fig. 10. This inward or retracting movement is limited by some form of lateral projection near the upper portion of the guard sleeve 40, specifically in the example shown by the larger diameter of the cup-like projection 41. The portion 41 similarly enables grasping of this cup portion again to withdraw the guard sleeve to operative position when so desired. Incident to the latter operation, the outward or extending movement of the guard sleeve is limited by an outwardly extended tongue 46, there being by preference one such limiting flange or tongue at each opposite side of the member 40. The tongues 46 may be struck out of the metal of the body 40.

One or a pair of similar tongues are struck inwardly of the body at the time of formation, at each side of the guard sleeve 40 as indicated at 47 and best seen in Fig. 14. These tongues extend inwardly of the sleeve to engage and work against the flattened sides 34 of the plunger, through which as will now be evident, the sleeve and plunger are assembled in lost motion reciprocal relation, although any relative rotation thereof is prevented by the flats on the plunger and the inwardly extended tongues. The plunger rod 31 being non-rotatable, the plunger head is similarly held against rotation due to engagement of the set screw with the member 31. Since likewise the guard or shield is non-rotatively assembled, the key slot 42 of the shield is presented in the same relative position to the door and door glass at all times.

It will have appeared from the foregoing description that the embodiments described will serve fully to realize each of the several objectives above expressed and others implied. Since the description of parts and their function has related particularly to selected embodiments only, the detail of description should be understood in an instructive rather than in any limiting sense, numerous variants being possible within the fair scope of the claims hereunto appended.

I claim as my invention:

1. In an inside-locking plunger assembly for automobile door locks, a reciprocally movable locking plunger projecting from a door and a hollow elongate enclosure for the plunger normally supported by a fixed element of the door adjacent the plunger but freely movable within predetermined limits along the path of the plunger, the enclosure being provided with a narrow slot limited and proportioned to receive a key presented in a direction across the plunger, the slot being of a width such as laterally to guide the key shank through a translatory movement of the key to an extent fully to actuate the plunger in one direction.

2. In combination with a reciprocal door locking plunger head, an enclosure normally extending about the head and substantially parallel thereto, the outer portion of the enclosure being provided with a slot so located and of a width such as to permit insertion of the shank of a key or other thin instrument through the slot at an angle to the plunger head, the slot being extended along the enclosure a distance at least equal to the path of the travel of the plunger head, and coacting guide portions on the plunger head and enclosure, serving to prevent relative rotation thereof, the enclosure being formed to permit a limited reciprocal movement thereof free of actuation of the plunger head, and adapted for linear movement along the path of the plunger head to actuate same in one direction of its movement.

3. An enclosure adapted as a shield for a reciprocal door-locking plunger head in the general field of usage described, said enclosure including a tubular element normally extending about the plunger head substantially parallel thereto, said element being provided with a slotted aperture of a width such as to permit insertion of the shank of a key laterally into, thence through the aperture with the sides of the slotted aperture in guiding relation to the key shank, said tubular element being normally supported by a fixed element of the door adjacent the plunger head, but freely movable from such position, and a lost motion connection between the plunger head and the tubular element, arranged to permit actuation of the plunger head, by movement of the tubular element in a direction away from said fixed door element.

4. In an inside door locking assembly for use on automobile doors, a locking plunger head adapted to be functionally associated with the door lock for selectively conditioning same to prevent opening of the door from the outside of the car, a tubular guard about the head and serving substantially to enclose the otherwise exposed portions of the head, the guard including a longitudinally slotted portion of a length at least equal to the range of reciprocal movement of the plunger head, and the slot being of a width not materially exceeding the thickness of the shank of a key, and thus adapted to receive the end of a key shank insertable through the slot for depression of the plunger head, the guard being floatingly retained around the plunger head, there being a lost-motion connection between the guard and plunger head enabling the actuation of the plunger head in one direction by displacement of the guard along the axis of the plunger head.

5. In an inside door locking assembly for use on automobile doors, a locking plunger head adapted to be functionally associated with the door lock for conditioning same to prevent opening of the door from outside of the car, one or more lateral projections on the head, a tubular guard about the plunger head and serving substantially to enclose the otherwise exposable portions of the plunger head, the tubular guard being provided with one or more longitudinal slots proportioned to receive and guidedly to engage the corresponding number of projections on the plunger head, the projections and slot arrangement constituting a lost-motion connection between the plunger head and guard enabling a movement of the plunger head, by digital movement of the guard along the plunger head.

6. An inside door locking plunger assembly for use in combination with an automobile door provided with a frame structure, a liftable and depressible lock-conditioning plunger projecting through the frame structure in an accessible position, a housing about the plunger, the housing being provided with a slot extended along the plunger and through which a car key of flat shank type may be inserted for actuating the plunger, the plunger and housing being provided with separable, abutting portions enabling the plunger to be manually moved in one direction by movement of the housing.

7. An inside car door locking plunger assembly including an inside locking plunger head, and an upstanding hollow partial enclosure therefor provided with a top opening and a longitudinal key-receiving and guiding slot, the plunger head having a projection operable in and along said slot whereby the plunger may be actuated in one direction along and inwardly of the enclosure for locking the door, the projection and an end of the slot acting, in one position of the plunger to constitute a coupling between

the plunger head and the enclosure enabling actuation of the plunger in an opposite direction by movement of the enclosure in such direction, whereby to condition the plunger assembly to enable normal door lock function.

8. In a door latch conditioning plunger assembly for motor vehicle doors on which is provided a reciprocal plunger shank for conditioning the door latch, which plunger extends through an opening in a glass-frame, a head on said plunger provided with a longitudinal bore, a set screw threaded laterally into the plunger head so as to extend into the bore for detachable engagement with the plunger shank, a pair of diametrically opposite lateral projections on the plunger head near an upper portion thereof, a sleeve constituting a guard for the plunger head, and provided with narrow side slots adapted slidably to receive the respective lateral projections on the plunger head, whereby to provide a lost-motion connection between the plunger head and the guard, the slots provided in said sleeve being of a width so restricted as to receive and guidingly to engage the sides of a narrow instrument such as a flat shank ignition key inserted downwardly into and movable along one or more of the slots for actuation of the plunger, the slots being of a width such as to preclude insertion of the finger therethrough for direct digital actuation of the plunger head, said slots extended downwardly of the top of the guard a distance substantially equal to the range of reciprocal movement of the plunger, and at the lower limit of said slots, providing an abutment for said projections on the plunger head, such that the plunger head may be moved to a retracted door-locking position through the use of a key moved in translatory manner downwardly along the slotted region of the guard sleeve and such that the plunger may be withdrawn to restore normal latch operation by a withdrawing movement of the sleeve, and a non-metallic grommet located about the plunger head where same extends through the glass frame, and normally providing a rest for the sleeve between periods of its use, each of said slots being provided with a lateral extension in its lower end portion, such that, upon lifting the guard, followed by a slight partial rotative movement of the guard with respect to the plunger head to bring one of the plunger projections into said lateral slot extension, depression of the plunger may be effected by downward actuation of the guard.

9. The combination with a door latch conditioning plunger for closed body motor vehicle doors, of a plunger head and a slotted tubular guard about said head, the slot and the guard being so proportioned as to compel actuation of the plunger in one direction by use of a thin instrument such as a key, the head being provided with a recessed portion constituting an abutment for such instrument, and projecting portions on the guard enabling the guard selectively to be extended to an operative position so as to prevent digital actuation of said plunger head, and retracted to a non-functional position to permit digital actuation of said head.

10. In a device for precluding direct manual actuation of an automotive door latch conditioning plunger when in a door-locking position adjacent an apertured door frame, a plunger head, a housing normally supported on a door frame in a position such that the plunger head may be moved into the housing, the plunger head being formed to permit actuation in one direction by a thin plunger-actuating instrument such as a key, the housing being provided with an aperture through which such an instrument may be inserted for plunger actuation, the said aperture being of a reduced size such as to preclude finger access therethrough to the plunger head, spaced projections respectively near the upper and lower portions of the housing, the housing being reciprocally movable through an aperture in the door glass frame, between limits established by said projections.

11. In a device for precluding direct manual actuation of a door latch plunger of the type described, when the plunger is in a door-locking position, a plunger head, a housing for the head adapted for mounting in the region of the plunger aperture of a door frame, the head being so located that same may be moved into the housing, the head being provided with a recess providing an abutment for a plunger actuating instrument such as a key, the housing being provided with an aperture to permit introduction therethrough of the actuating instrument, the aperture being of a width so reduced as to preclude finger access therethrough to the plunger head, the housing having an open portion such that the plunger head may be moved out of the housing through said open portion to a position to permit fully normal latch actuation of the door, and means on the upper and lower portions of the housing, adapted selectively to abut the material of a fixed frame in the region of the plunger, to provide a limited range of retracting and extending movement of the housing, such that the housing may be retracted to an ineffective position at least partly concealed, during out-of-use periods.

12. In a door latch conditioning plunger assembly for the general field of usage described, a hollow, open-end tubular plunger guard, means on the guard for mounting same on a frame and in an aperture through a frame, the guard being provided with frame-abutting portions providing for a limited retracting and extending movement of the guard between operative and inoperative positions, a plunger head adapted to be moved into and out of the guard when the latter is in operative position, the plunger head being formed to provide thereon an abutment for a thin lifting instrument such as a key, the guard being provided with a slot providing instrument access to said abutment, the slot being of a length at least substantially equal to the range of plunger movement and being of a narrow width such as to preclude actuation of the plunger by finger access thereto through the slot.

13. The combination and arrangement of elements and features as recited by claim 12, but further characterized in that the abutment for the lifting instrument, as provided on the plunger head, is in the form of a slot with an end wall engageable by the instrument, and further characterized by means for preventing rotation of the guard relative to the plunger head.

14. A door latch conditioning plunger assembly for closed body motor vehicle doors for use in connection with an apertured glass frame through which projects a vertical plunger, a plunger head, the head being provided with one or more flattened side portions and being undercut below its outermost end to provide a lifting abutment for a thin instrument such as an ignition key, a retractible tubular guard normally embracing the plunger head when the head is in one position, the tubular guard being provided with a top-open, uppermost portion, and provided with a longitudinal slot of a width such as to receive the end of a flat-shank ignition key or the like, yet of a width such as to preclude digital access through the slot for actuation of the plunger, the tubular guard being provided with a plurality of spring fingers, provided with lowermost inturned ends normally extending into the plunger aperture of the glass frame when the tubular guard is in operative position, and adapted for self-retracting displacement inwardly of the tubular guard, when the guard is depressed to a retracted position, the tubular guard being provided with a laterally projecting upper portion constituting a stop when the guard is depressed, by abutment of such upper portion with the glass frame adjacent the plunger aperture, the opposite or innermost end of the guard being provided on its opposite sides with a plurality of projections, certain of said projections extended inwardly of the guard in engagement with the flattened portions of the plunger head whereby to prevent relative rotation of the guard and the head, and others of said tongues extended outwardly to serve as abutments normally engaging the inner surface of the glass frame marginally of the plunger aperture, and serving to limit the outward movement of the guard to operative position.

15. A door latch conditioning plunger assembly for closed body motor vehicle doors for use in connection with an apertured glass frame through which projects a vertical plunger, a plunger head, provided with an axial bore, a set screw threaded into the side of the plunger head to engage the shank element of the plunger extended into the bore, the head being provided with one or more flattened side portions and being peripherally undercut below its outermost end to provide a lifting abutment for a thin instrument such as an ignition key, a retractible tubular guard normally embracing the plunger head when the head is in one position, and of a length at least substantially equal to the range of reciprocal movement of the plunger, the tubular guard being provided with an enlarged, top-open, uppermost portion, and provided with a longitudinal slot of a width such as guidingly to receive the end of a flat-shank ignition key or the like, yet of a width such as to preclude digital access through the slot for actuation of the plunger, the tubular guard being provided with a plurality of longitudinal spring fingers, provided with substantially C shaped lowermost inturned ends normally extending into the plunger aperture of the glass frame when the tubular guard is in operative position, and adapted for self-retracting displacement inwardly of the tubular guard, when the guard is depressed to a retracted position, the tubular guard being provided with a laterally projecting upper portion constituting a stop when the guard is depressed, by abutment of such upper portion



with the glass frame adjacent the plunger aperture, the opposite or innermost end of the guard being provided on its opposite sides with a plurality of projections, certain of said projections extended inwardly of the guard in engagement with the flattened portions of the plunger head whereby to prevent relative rotation of the guard and the head, and others of said tongues extended outwardly to serve as abutments normally engaging the inner surface of the glass frame marginally of the plunger aperture, and serving to limit the outward movement of the guard to operative position.

16. A door latch-conditioning plunger assembly comprising a plunger head, a guard substantially enclosing said plunger head, said guard being provided with a slot of a size to preclude digital actuation therethrough of the plunger head, yet adequate to permit plunger head actuation in one direction by translatory movement of a thin instrument applied through the slot, and means permitting a limited movement of the guard along and with respect to said plunger head, the guard being normally supported by a fixed element of the door adjacent the plunger head but freely movable within predetermined limits along the plunger head.

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