July 21, 1964 E. L. SCHLAGE 3,141,319

CABINET LOCK

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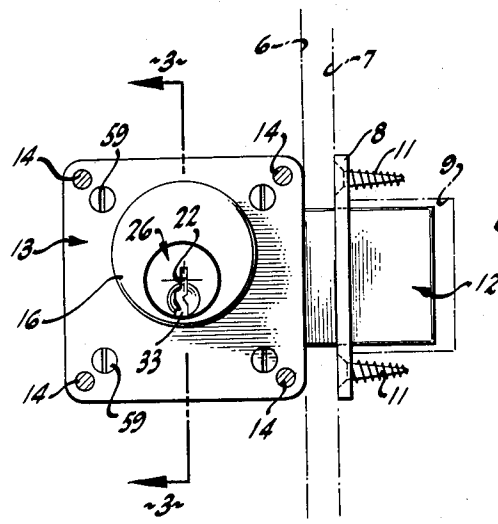


FIG-1

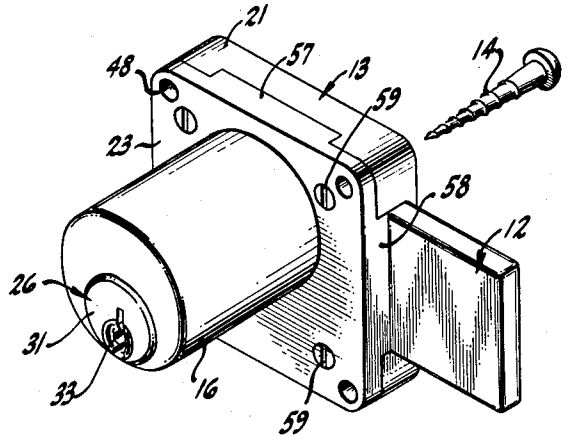


FIG-2

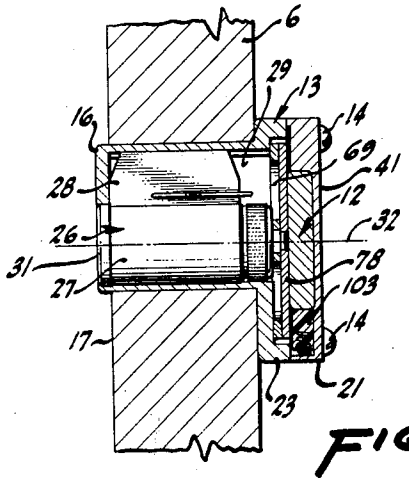


FIG-3

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July 21, 1964 E. L. SCHLAGE 3,141,319

CABINET LOCK

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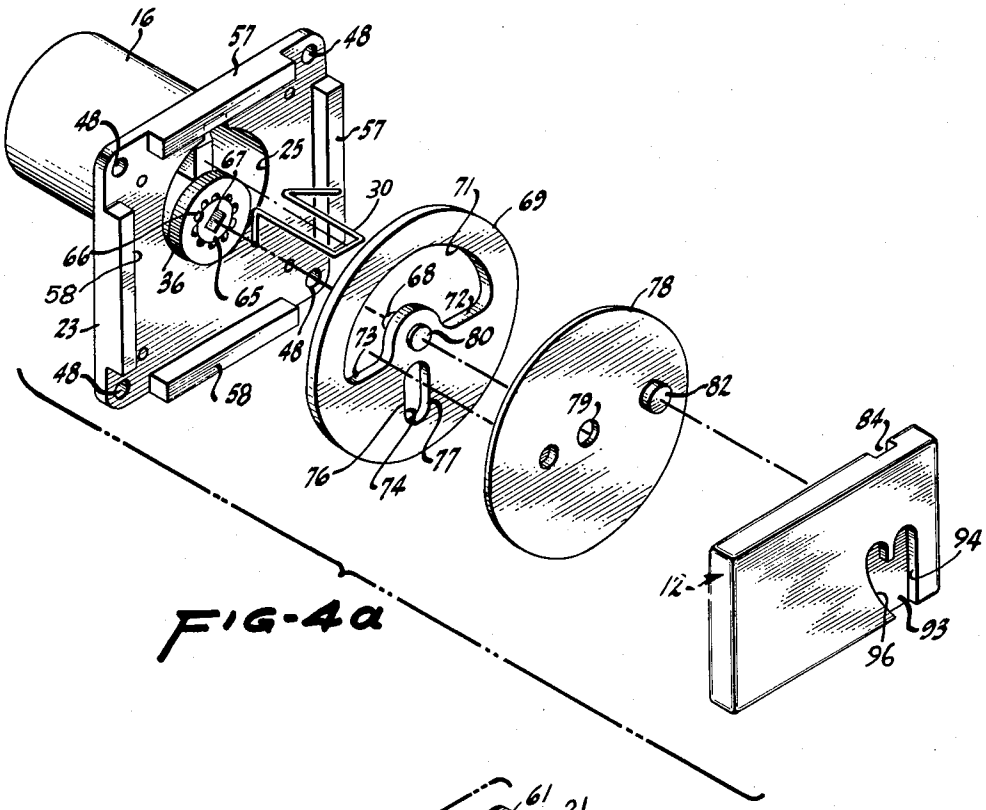


FIG-4a

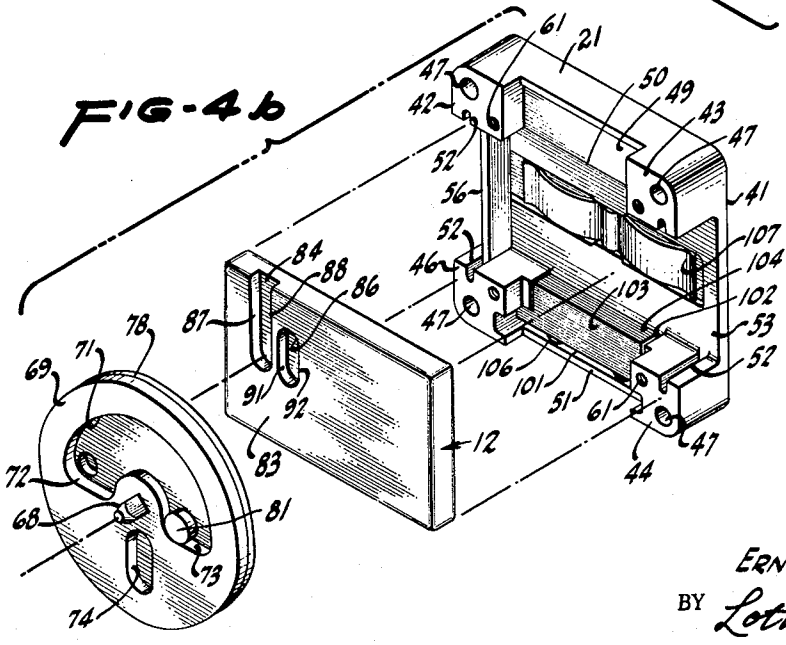


FIG-4b

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July 21, 1964 E. L. SCHLAGE 3,141,319

CABINET LOCK

Filed Dec. 5, 1961 5 Sheets-Sheet 3

FIG-5

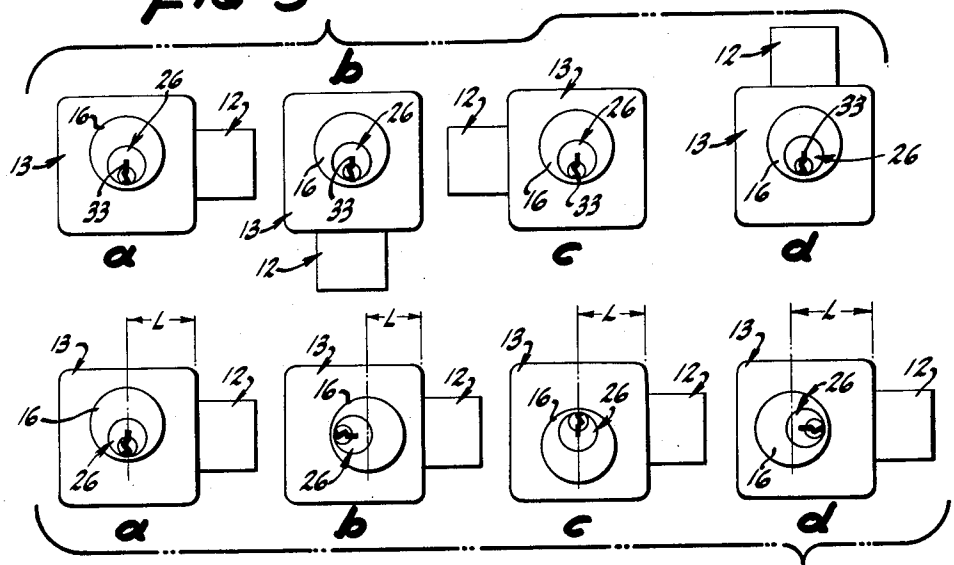


FIG-6

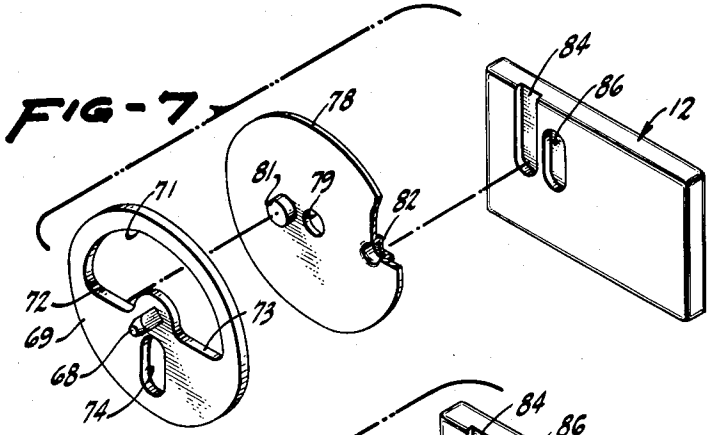


FIG-7

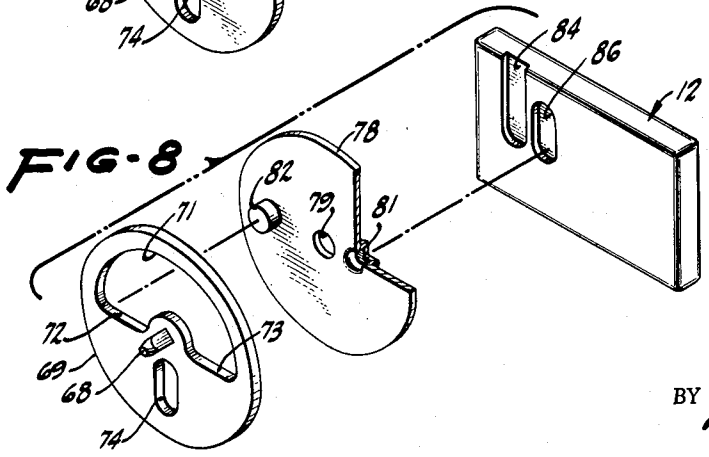


FIG-8

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July 21, 1964 E. L. SCHLAGE 3,141,319

CABINET LOCK

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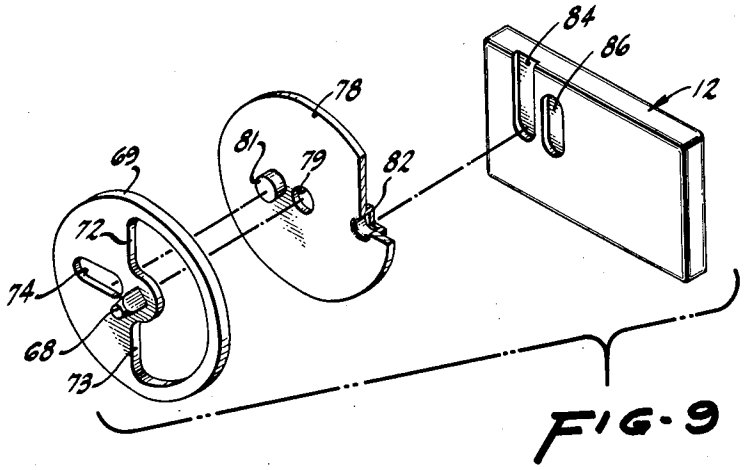


FIG-9

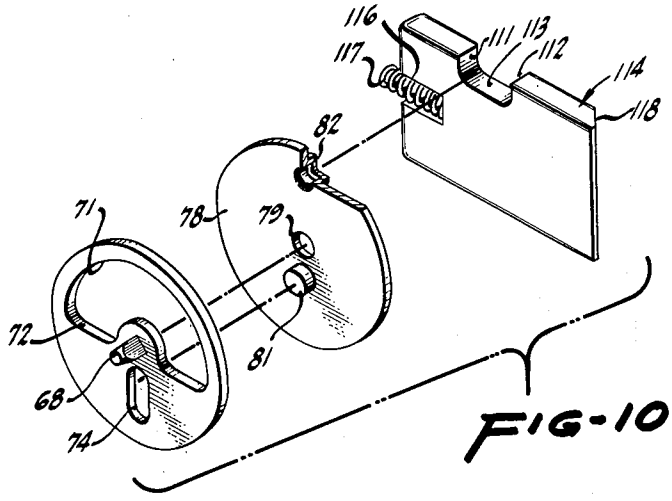


FIG-10

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CABINET LOCK

Filed Dec. 5, 1961 5 Sheets-Sheet 5

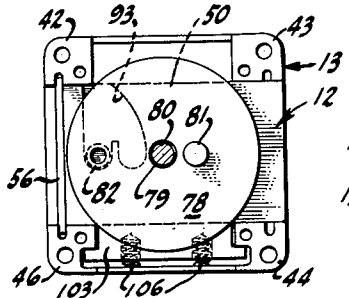


FIG-11

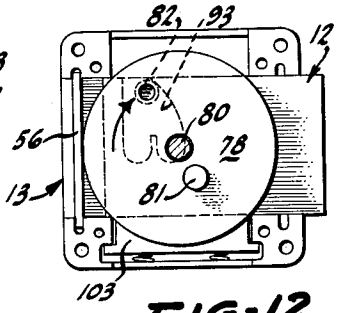


FIG-12

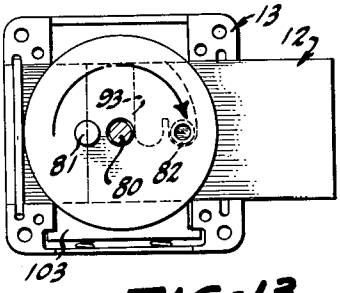


FIG-13

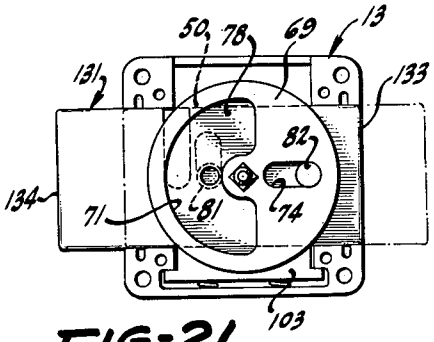


FIG-21

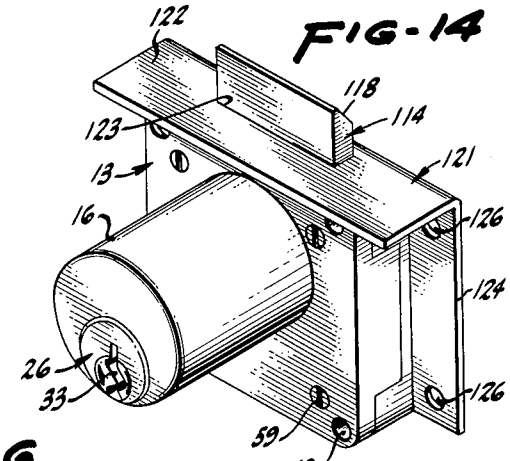


FIG-14

FIG-15

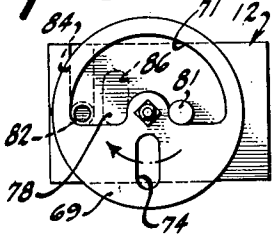
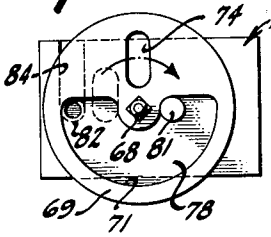


FIG-16



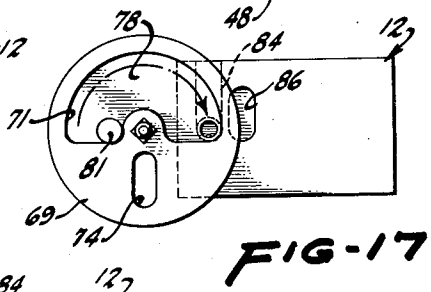
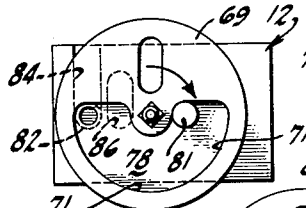


FIG-17



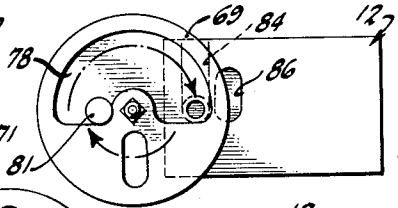


FIG-19

FIG-18

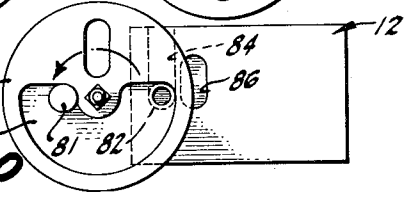


FIG-20

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United States Patent Office 3,141,319 Patented July 21, 1964

3,141,319

CABINET LOCK

Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation

Filed Dec. 5, 1961, Ser. No. 157,071
12 Claims. (Cl. 70—81)

My invention relates to means primarily including a sliding both for key operation and designed to hold together relatively movable members having a major motion component at right angles to the direction of movement of the securing bolt. While locks of this general nature are referred to as cabinet locks, they have numerous uses in various different types of installations usually similar to cabinets but by no means limited thereto.

Because of the wide variety of possible installations and environments of cabinet locks and because of the necessity for manufacturing them in relatively large and standardized quantities to assure high quality and reduced costs, it is desirable to have a lock the constructional arrangement of which is versatile so that the lock readily can be adapted in its standard production form to fit and function properly in any of numerous practical environments.

It is therefore an object of my invention to provide a cabinet lock which has a construction adaptable to installation in numerous variant environments.

Another object of the invention is to provide a cabinet lock which is key actuated and can be arranged for various different types of function with a standard key.

Another object of the invention is to provide a cabinet lock in which the bolt can be shot in a number of different directions while retaining a standard orientation of the key mechanism.

Another object of the invention is to provide a cabinet lock in which the length of the stroke or throw of the bolt can be set at any of several different selected values to accommodate different environments.

Another object of the invention is to provide a cabinet lock which affords various amounts of backset of the key receiving portion with regard to the edge of the panel in which the lock is installed.

Another object of the invention is to provide a cabinet lock arranged so that it can be actuated by different amounts of key rotation.

A still further object of the invention is to provide a cabinet lock which can readily be manufactured of a high quality and in substantial numbers with relatively simple tooling and with reasonable cost.

A still further object of the invention is to provide a cabinet lock of generally improved characteristics not only for appropriately improved manufacture, but for long and effective utility.

Other objects together with the foregoing are attained in the embodiments of the invention described in the accompanying description and illustrated in the accompanying drawings in which:

FIGURE 1 is a front elevation of a complete cabinet lock shown in one manner of installation, a representative environment being disclosed by broken lines;

FIGURE 2 is an isometric perspective view showing the lock of FIGURE 1 without the strike plate;

FIGURE 3 is a cross section, the plane of which is indicated by the line 3—3 of FIGURE 1, the lock being shown installed;

FIGURE 4*a* is a composite view showing in isometric perspective and in exploded position various individual elements of the lock spaced in their relative positions for assembly, the view looking toward the inner end of the cylinder mechanism;

FIGURE 4*b* is a view similar to and complementing FIGURE 4*a* showing some of the same elements of the lock in assembled position and other elements spaced in their relative positions for assembly, the view looking away from the inner end of the cylinder mechanism;

FIGURE 5 is a composite view showing various bolt orientations with a standard key cylinder position in which:

FIGURE 5*a* shows a right-hand bolt excursion;

FIGURE 5*b* shows a downward bolt excursion;

FIGURE 5*c* shows a left-hand bolt excursion;

FIGURE 5*d* shows an upward bolt excursion;

FIGURE 6 is a composite view showing a number of backset variations with a standard right-hand bolt excursion in which:

FIGURE 6*a* indicates the backset with the key cylinder in standard position;

FIGURE 6*b* shows the backset with the key cylinder rotated ninety degrees clockwise from standard position;

FIGURE 6*c* shows the backset with the key cylinder rotated one hundred eighty degrees from standard position;

FIGURE 6*d* shows the backset with the key cylinder rotated two hundred seventy degrees clockwise from standard position;

FIGURE 7 is an exploded view in isometric perspective showing one assembly relationship of the driving disc, driven disc and bolt;

FIGURE 8 is a view similar to FIGURE 7 showing another assembly relationship of the driving disc, driven disc and bolt;

FIGURE 9 is a view similar to FIGURES 7 and 8 showing the driving disc, driven disc and bolt in an assembly position in which the driving disc is related to the driven disc without lost motion;

FIGURE 10 is a view similar to FIGURE 9 and shows the driving disc and driven disc in interrelationship with no lost motion but with the driven disc arranged to operate a modified form of bolt;

FIGURE 11 is a diagrammatic elevation showing the relationship of a driven disc and a bolt when the reverse face of the bolt (as shown in FIGURE 4*a*) is inverted forwardly;

FIGURE 12 is a view similar to FIGURE 11 showing the driven disc in an intermediate position of rotation;

FIGURE 13 is a view similar to FIGURES 11 and 12 showing the driven disc in an advanced position of rotation;

FIGURE 14 is an isometric perspective view showing a portion of the cabinet lock adapted for a particular installation;

FIGURE 15 shows diagrammatically a first stage in the relationship of the driving disc, driven disc and bolt for actuation by three hundred sixty degree rotation of the key cylinder;

FIGURE 16 is a view like FIGURE 15 and shows the position of the same parts after one hundred eighty degrees of rotation of the key cylinder;

FIGURE 17 is a view similar to FIGURE 16 and shows the position of the parts at the completion of three hundred sixty degrees of rotation of the key cylinder;

FIGURE 18 is a diagrammatic elevation showing the position of the driving disc, driven disc and bolt arranged for bolt actuation immediately upon turning of the key cylinder;

FIGURE 19 is a view similar to FIGURE 18 showing the location of the parts after the key cylinder has been rotated one hundred eighty degrees;

FIGURE 20 is a view similar to FIGURES 18 and 19 and shows the parts in their positions when the key cylinder has been restored to its initial position by a counterclockwise half turn; and

FIGURE 21 illustrates in diagrammatic elevation a modified form of construction in which the bolt, initially

projecting from one side of the housing, is thrown to project from the opposite side of the housing.

While the cabinet lock of the invention can be installed in numerous different environments, it generally and for example herein is disclosed as it is installed in a panel 6 (FIGURE 1) movable with respect to a stationary frame 7 with a swinging or sliding motion having a component at right angles to the general plane of the panel 6 and of the frame 7. A strike plate 8 is installed over a suitable recess 9 in the frame and is secured in position by fastenings 11. The recess is sufficiently deep to accommodate the full throw of a bolt 12 projectable from and retractable into a housing 13 installed in the panel 6 and fastened thereto by through screws 14. The panel 6 is cut away to accommodate a projection 16 on the housing 13 so that only a part of the cabinet lock mechanism is visible from the exterior or obverse face 17 of the panel when the panel is aligned with the frame.

The housing 13 preferably is made in two main portions for ready manufacture. A base housing 21 is conveniently symmetrical about a center 22 and has a regular polygonal outline usually square. Adapted to register exactly with the base housing 21 when their centers of symmetry are coincident is a cover housing 23 of a similar regular polygonal outline, in this instance square. Extending from the cover housing 23 is the extension 16. This has a circular cylindrical envelope arranged eccentrically of the center 22.

The extension is designed to receive a rotary actuator. This can be a lever or warded lock or simply a turnkey. Usually it is a key actuated pin tumbler cylinder 26 of a standard or customary kind. The cylinder mechanism has a casing 27 one portion of which is substantially circular cylindrical in outline and another portion of which is a radial projection 28 therefrom. The cylinder mechanism is received in and accommodated by a bore 25 in the extension 16 to receive the circular portion of the casing 27 and by a slot 29 therein to receive the radial projection 28. To assist in holding the cylinder mechanism in proper axial position, a spring wire clip 30 with outwardly inclined ends is pressed into the bore 25 until the center loop of the clip abuts the end of the projection 28. Outward movement of the cylinder mechanism causes the sharp clip ends to bit into the material of the extension, so that manual force is required to extract the cylinder mechanism.

Included in the cylinder mechanism 26 is a rotatable cylinder 31 positioned with its rotational axis 32 coincident with the center 22 of the cover housing. On its obverse end the cylinder mechanism receives a key (not shown) insertable in a key slot 33 when the cylinder is in its normal position as illustrated in FIGURES 1 and 2. In this normal position the key can also be withdrawn from the slot. In the usual instance the key cannot be inserted nor withdrawn when the cylinder is in other than the normal position with respect to the cylinder mechanism. By means of the key the cylinder 31 is rotatable about the axis 32 usually clockwise from one extreme position to the other and then counterclockwise from the other position back to the initial position. A torque ring 36 rotatable at the inward end of the cylinder mechanism 26 turns with the cylinder.

Conveniently the base housing 21 (FIGURE 4*b*) is contoured of one piece of material having a planar reverse face 41 and also a planar obverse face as defined by upstanding pads 42, 43, 44 and 46 disposed at the corners of the square and pierced by openings 47 to accommodate the through fastenings 14 which also pierce registering openings 48 (FIGURE 4*a*) in the cover housing.

Between the adjacent margins of the pads 42 and 43 is a relatively shallow channel 49 leaving a ledge 50. A comparable shallow channel 51 is defined between the pads 44 and 46. Between the pads 43 and 44 and extending all the way across the base housing is a relatively deep

recess constituting a bolt guideway 53, the width of which is comparable to the width of the channels 49 and 51. The depth of the guideway leaves a solid rear wall.

Arranged to be slidably accommodated within the guideway 53 is the bolt 12. The guideway 53 is partially closed and the bolt is partially confined by the cover housing 23 when it is assembled with the base housing 21. The cover housing is provided with four identical lugs or projecting portions such as 57 and 58 interfitting into the channels 49 and 51 and lying against the plate 56 and partially into the guideway 53. The cover housing and base housing are interlocked when they are assembled and fastened together by securing screws 59 passing through the cover housing and screwed into threaded holes 61 in the base housing.

Pursuant to the invention, when the screws 59 are removed and the cover housing and base housing are slightly separated, the housing portions are rotatable relative to each other into any one of four different polarly oriented positions. This is for the purpose, as shown in FIGURE 5, of retaining a standard position of the key slot 33 but allowing the bolt 12 to project in any of the ways shown. This is accomplished merely by reassembling the base housing and cover housing in any one of the selected relative locations, following which the fastenings 59 are re-engaged.

Also, because of the rotatable interrelationship of the base housing and cover housing, varying amounts of backset can be provided by holding the base housing 21 relatively stationary and after the fastenings 59 have been removed and the housings slightly separated then rotating the cover housing so that the eccentric extension 16 occupies any of several positions, as shown in FIGURE 6. In the various parts of FIGURE 6 the letters L indicate the amounts of backset which can be obtained by this means. The amounts of backset shown in FIGURES 6*a* and 6*c* are the same, but there is a variation in the key position. In FIGURE 6*a* the key is in normal or standard position, whereas in FIGURE 6*c* the key is in inverted position.

With the provision of the concentric, relatively rotatable, symmetrical base and cover housings, and with the eccentric extension 16, there are afforded, as shown in FIGURES 5 and 6, numerous variations of assembly in order to accommodate the cabinet lock for use in numerous different environments.

So that rotation of the key cylinder 31 can be translated into reciprocating motion of the bolt 12 within the guideway 53, the torque ring 36 (FIGURE 4*a*) cooperates with a torque plate 65 made to rotate with the ring 36 by a pin 66 and being provided with a driving means 67. In the present instance this means is constituted by the walls of a square aperture. In any case, the configuration of the aperture walls coincides with the configuration of the base housing (square) and cover housing and in the normal position of the cylinder 31 is appropriately oriented to have a telescopic connection with a square driving member 68 projecting from a driving disc 69. The disc can be assembled with the projecting member 68 in any one of four positions with respect to the driving means 67. Thus, when the cabinet lock is appropriately assembled the driving member 68 is correspondingly assembled in the driving means 67 so that despite the particular orientation of the bolt 12 the key slot 33 can remain in normal position.

The driving disc 69 is preferably of thin but stiff metal largely supported by the interengagement of the member 68 within the plate 65. The driving disc 69 is pierced to provide an opening 71 partially arcuate and partially defined by a pair of spaced apart, facing, approximately radial surfaces 72 and 73 slightly below but parallel to a diameter of the disc 69. The driving disc 69 also has a restricted opening 74 extending generally radially at ninety degrees to the walls 72 and 73 and principally defined by parallel walls 76 and 77.

Designed to operate concentrically or coaxially with the disc 69 and the cylinder 26 is a driven disc 78. This is of approximately the same diameter as the driving disc 69 and is similarly made. The disc 78 has a central opening 79 to accommodate the slightly projecting base 80 of the member 68. The driven disc 78 is provided on its obverse face with a projecting crank boss 81 located at a predetermined radial distance from the axis 32. The driven disc is also provided with a crank pin 82 projecting from the reverse face and located diametrically opposite the crank boss 81, the radial distance of the crank pin 82 from the axis 32 being different than that of the crank boss 81, in this instance the distance being twice that of the crank boss 81.

The bolt 12 is provided on its obverse face 83 with a parallel pair of cross slots 84 and 86 disposed so as to be in positions corresponding with the radial displacement of the crank pin 82 and the crank boss 81 from the rotational axis 32. The open topped cross slot 84, for example, is defined by cross walls 87 and 88 spaced apart to afford normal running clearance with respect to the crank pin 82. When the parts are appropriately assembled, the square projection 68 extends into the opening in the torque plate 65, the base 80 extends into the opening 79, the crank boss 81 projects into the opening 71 in the plane of the walls 72 and 73 and the crank pin 82 projects into the cross slot 84.

Under these conditions, when the key is inserted and the cylinder is rotated in a clockwise direction (FIGURE 1 and FIGURES 15–17), the plate 65 is concurrently rotated and so rotates the driving disc 69 simultaneously therewith. But since it requires substantially a half rotation of the disc 69 before the radial wall 72 abuts the crank boss 81, the driven disc 78 is stationary during such half rotation. Promptly upon abutment of the radial wall 72 and the crank boss 81 and upon continued rotation of the cylinder, the next half rotation of the driving disc 69 causes comparable rotation of the driven disc 78 as well. The crank pin 82, being within the cross slot 84, in effect forms a Scotch yoke connection with the bolt 12. With the rotation of the disc 78 the bolt is then projected from its retracted position to its extended position. During this turn the crank pin 82 moves through substantially one hundred eighty degrees from one dead center position in which the center of the crank pin is in linear arrangement with the axis 32 into a second dead center position wherein the center of the crank pin is again in linear arrangement with the axis 32. Since the key mechanism has been rotated to its original position, the key can be withdrawn, leaving the bolt in projected or locked condition.

The reverse rotation of the key cylinder, that is, in a counterclockwise direction (FIGURE 1 and FIGURES 15–17), first causes an idle half rotation of the driving disc 69 as the radial wall 72 retreats from contact with the crank boss 81 and until the radial wall 73 abuts such projecting boss. The final retrograde rotation of the cylinder then not only returns the driving disc 69 to its original orientation but likewise propels the driven disc 78 through a half turn in a counterclockwise direction, the movement of the driven disc 78 being accompanied by a retraction of the bolt 12 from its extended position to its retracted position. In both extreme positions the bolt is in effect in a dead center relationship with the driven disc so that external, inward pressure on the bolt is ineffective to move the bolt or the connected structure.

If the key is to be released when the bolt is in extended position, the parts can be rearranged as shown in FIGURES 18–20 to provide this result with only a half turn. The driven disc and bolt retain their former relationship but the driving disc is lifted free, rotated one-half turn and re-engaged with the driven disc and the key cylinder, which remain in normal position. Then, the first half turn of the key cylinder and driving disc also turns the driven disc one-half turn and so correspondingly projects the bolt. The driving disc and key cylinder can then be turned one-half turn counterclockwise, leaving the bolt projected but repositioning the cylinder in normal position or key withdrawal.

The described relationship of the parts gives a maximum throw to the bolt. In some instances it is desired to have a throw of only a fraction the maximum amount, say, one-half the maximum. Under those circumstances, the unit is partially disassembled and the driven disc 78 is turned over; that is, the crank boss 81 is inserted into the cross slot 86 between the walls 91 and 92 thereof while the crank pin 82 is made to project into the opening 71 in the path of the walls 72 and 73. Under conditions of key rotation as previously described, and since the radial positions of the crank boss 81 and crank pin 82 have been reversed, the crank boss 81 operating within the cross slot 86 affords only half the previous amount of stroke so that the bolt 12 is projected only half the previous amount. In both extreme positions, the bolt is on dead center, so to speak, with respect to the remaining mechanism so that external pressure upon the bolt does not cause motion thereof.

For certain other installations it is desired to have the bolt travel in an amount intermediate the previously described amounts. For that reason the bolt on its reverse face (FIGURE 4*a*) is provided with an open end cross slot 93 having a straight wall 94 and a curved wall 96. In this instance the cross walls 94 and 96 are spaced apart amounts considerably in excess of those required for normal running clearance with a crank pin and in fact amounts sufficient to afford a substantial lost motion. Under these conditions the driving and driven discs are assembled as initially described but the bolt 12 itself is turned over and repositioned so that the crank pin 82 is lodged within the lost motion slot 93.

As especially illustrated in FIGURES 11, 12 and 13, when the key cylinder is rotated as before, there is not only an initial half turn lost motion due to the connection between the driving disc 69 and the driven disc 78, but even the initial movement (about forty-five degrees) of the crank pin 82 produces no motion of the bolt. When the crank pin has traversed the lost motion space and is in contact with the curved cross wall 96, then the remaining rotational motion of the drive disc 78 is translated into a rectilinear reciprocation of the bolt and projects the bolt the desired intermediate amount. As an example, the full projection of the bolt can be one inch, the half projection of the bolt can be one-half inch, and this intermediate projection of the bolt can be three-quarters of an inch. With this arrangement, the bolt can be traversed an intermediate amount with a complete turn of the key cylinder in a clockwise direction for projection of the bolt and with a complete counterclockwise rotation of the key cylinder for retraction of the bolt.

Since in this latter arrangement there is a lost motion connection with the bolt, and since in some attitudes of installation or use the bolt might then have unwanted freedom, I provide a restraining means in the nature of a detent or friction brake which also affords continued good operation despite wear. The base housing 21 adjacent the channel 51 is particularly configured to afford a recess 101 merging with a reduced recess 102 opening into the bolt guideway 53. Seated slidably within the recesses 101 and 102 is a T-shaped friction brake block 103 preferably made of a plastic material such as nylon. The brake block has a friction surface 104 thereon which projects slightly into the guideway 53 under the urgency of springs 106 when the bolt is absent therefrom, the block being slightly depressed when the bolt is in position between the block and the ledge 50.

The block 103 affords a frictional restraint on the movement of the bolt with respect to the housing. This is supplemented by a leaf spring 107 appropriately re-

cessed in the base housing 21 and not only affording frictional loading but also exerting an axial force tending to keep the moving parts in proper axial relation despite minor variations in dimensions.

As an alternative, especially as shown in FIGURE 9, the lost motion connection between the driving disc 69 and the driven disc 78 can be eliminated so that the key need only be turned for something less than a complete revolution and is retained in the key cylinder unless the mechanism is in locked position.

In the relationship of parts shown in FIGURE 9, when the lock cylinder and the torque plate 65 are in the initial standard position (FIGURE 1) in which the key is free, the driving disc 69 is assembled with the driving means 67 ninety degrees out of the FIGURE 4*b* position and with the walls of the radial opening 74 engaged by the crank boss 81 after the crank boss has been rotated about the axis 32 one hundred eighty degrees from the position shown in FIGURE 4*b*. The crank pin 82 under these circumstances is lodged within the cross slot 84 of the bolt 12 when the bolt is in its projected or locked position.

When the bolt 12 is to be retracted, the key cylinder is rotated in a counterclockwise direction (FIGURE 1) and the driving member 68 is rotated concurrently therewith to rotate the driving disc 69 counterclockwise (FIGURE 9). This produces an immediate and corresponding rotation of the driven disc 78. Simultaneously, the crank pin 82 moves within the cross slot 84, thus immediately producing a rectilinear retraction of the bolt.

As soon as the bolt has been retracted sufficiently and is within the housing 13, the lock is in unlocked condition, but the key, having been rotated less than a full turn and so not being in its initial or standard position, cannot be withdrawn. To withdraw the key, it must first be rotated in a clockwise direction, thus propelling all of the parts such as the driving disc 69, the driven disc 78 and the bolt 12 without lost motion until the bolt is again in its projected position and the key has been restored to its standard, polar relationship. Thus the key can be removed only when the lock is in locked condition.

By a special variation illustrated in FIGURE 10, the mechanism can be adapted for use as a spring latch. The key cylinder is oriented in standard position, as before, and the square projection 68 is correspondingly introduced in standard position into the torque plate 65. The walls of the opening 74 are engaged with the crank boss 81, the driven disc 78 still being in its obverse position but ninety degrees out of its FIGURE 4*a* position. The crank pin 82 is disposed in the path of widely separated cross walls 111 and 112 of a top edge notch 113 in a special latch 114 generally similar in many respects to the bolt 12. The length of the notch 113 is greater than the diameter of the crank pin 82 so as to afford a lost motion connection.

The latch 114 at its inner edge is provided with a recess 116 into which extends one end of a coil spring 117, the other end of which abuts the plate 56. The spring 117 tends to project the latch 114 from the housing 13 so that the wall 111 is in close relationship with the crank pin 82. Under these circumstances, the latch 114 can at any time be fully depressed by hand into the housing 13 and against the urgency of the spring 117 without moving the driven disc 78. The latch 114 has a bevel face 118 in position to be cammed into retracted position in the normal fashion of a latch. The depressing movement, because of the length of the notch 113, does not affect the key mechanism.

When the latch 114 is retracted by rotation of the key cylinder, the driving member 68 is rotated counterclockwise (FIGURE 1) as before, so that the driving disc 69 and the driven disc 78 are rotated simultaneously therewith in a comparable rotational amount, and the crank pin 82 then cams against the wall 111 and withdraws the latch 114 into the housing 13.

The latch arrangement of FIGURE 10 is especially useful in connection with a drawer installation as shown in FIGURE 14. For that use the housing 13 is provided with an additional bracket 121 conveniently of bent metal having a top face 122 provided with an opening 123 through which the bevel face 118 of the latch 114 can project. The bracket 121 has a depending portion 124 of somewhat greater width than the housing 13 to provide space for openings 126 to receive fastenings extending into the material of the drawer.

In some instances an unusually long bolt 131 is desired. As especially shown in FIGURE 21, most of the parts are substantially as previously described, but the plate 56 is entirely removed, leaving open both ends of the guideway 53. The long bolt 131 in retracted position projects from one side of the housing 13. Furthermore, the bolt can be so positioned that its leading edge 133 when withdrawn is well within the housing. Then when the actuating mechanism is appropriately assembled and rotated, the bolt 131 is translated not only to take up the amount it has been recessed, but also to project a further amount into locked position wherein the previously projecting bolt end 134 lies within the housing 13.

In all forms of the invention there is provided a cabinet lock which is readily manufactured to a high standard of perfection, which is economical in construction, which is highly versatile in its ability to be assembled in different relationships so as to be adapted to various environments and which in general affords an improved structure.

What is claimed is:

1. A cabinet lock comprising a square base housing, upstanding pads at the corners of said base housing to define channels therebetween, means in said base housing defining a bolt guideway extending in a predetermined direction and opening on one side of said base housing, a cover housing, lugs on said cover housing adapted to occupy said channels when said base housing and said cover housing are assembled in registry, a bolt reciprocably disposed in said guideway, said bolt having a slot therein extending in a direction normal to the direction of said guideway, a rotary actuator, means for mounting said actuator in said cover housing, a driving disc disposed for rotation in said cover housing and having a radial surface thereon, interrelated driving means including a square shaft connecting said actuator and said driving disc, a driven disc disposed for rotation in said cover housing, a crank pin on said driven disc projecting into said slot, and a crank boss on said driven disc engageable by said radial surface.

2. A cabinet lock comprising a housing, a bolt reciprocable in said housing, means forming a pair of transverse walls on said bolt, a driving member rotatably mounted in said housing, means forming a pair of radial walls on said driving member, a driven member rotatably mounted in said housing, a crank pin projecting from one side of said driven member at a predetermined radial distance from the center thereof and projecting between said transverse walls, a crank boss projecting from the other side of said driven member at a different radial distance from the center thereof and projecting between said radial walls, and means for rotating said driving member.

3. A cabinet lock as in claim 2 in which said driven member can be alternatively assembled with said crank boss between said transverse walls and said crank pin between said radial walls.

4. A cabinet lock as in claim 2 in which there are means forming a plurality of pairs of transverse walls on said bolt and in which said crank pin can be alternatively assembled between any selected pair of said transverse walls.

5. A cabinet lock comprising a housing, a bolt reciprocable in said housing, means forming a plurality of pairs of transverse walls on said bolt, a driving member rotatably mounted in said housing, means forming a pair of radial walls on said driving member, a driven member

rotatably mounted in said housing, and crank members projecting from opposite sides of said driven member at different radial distances from the center thereof, either of said crank members being receivable between said radial walls when the other of said crank members is received between any of said pairs of transverse walls.

6. In a cabinet lock having a reciprocable bolt with transverse walls and having a rotary actuator, a driving member rotatable by said actuator and having radial walls facing each other, and a driven member having one crank member disposed between said radial walls and having another crank member disposed between said transverse walls.

7. A cabinet lock comprising a housing, a bolt reciprocably mounted in said housing, a rotary actuator in said housing, a driving member rotatable by said actuator and having radial walls facing each other, a driven member rotatably mounted in said housing, a first crank member on one side of said driven member and extending between said radial walls, a second crank member on the other side of said driven member, said second crank member having a predetermined diameter, and means on said bolt engageable by said second crank member and forming facing transverse walls spaced apart a distance greater than said predetermined diameter to provide a lost motion connection between said second crank member and said bolt.

8. A cabinet lock comprising a housing, a rotary actuator mounted in said housing, a bolt having a cross slot, means for mounting said bolt for reciprocation in said housing, a disc, means for selectively mounting said disc

for rotation in said housing with either the obverse face or the reverse face of said disc adjacent said bolt, a crank boss on the obverse face of said disc projecting into said slot when said obverse face is adjacent said bolt, a crank pin on the reverse face of said disc projecting into said slot when said reverse face is adjacent said bolt, and means for coupling said disc and said actuator for rotation as a unit in both selected positions of said disc.

9. A cabinet lock as in claim 8 in which said crank pin and said crank boss are at different radii from the center of said disc.

10. A cabinet lock as in claim 8 in which the means for coupling said disc and said actuator includes a lost motion connection.

11. A cabinet lock as in claim 8 in which said slot has a lost motion connection with said crank pin and with said crank boss.

12. A cabinet lock as in claim 8 in which means are provided for imposing a limited resistance to reciprocation of said bolt in said housing.

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