Oct. 20, 1953 F. J. RUSSELL ET AL 2,656,207

LATCH WITH DEAD LOCKING MECHANISM

Filed Jan. 28, 1950 4 Sheets-Sheet 1

Fig. 1.

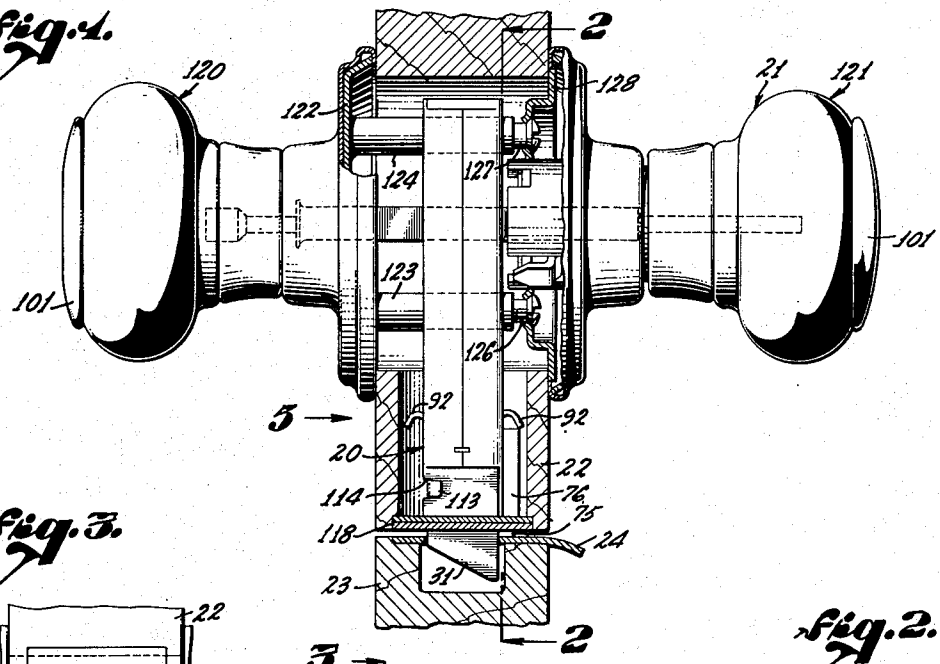


Fig. 3.

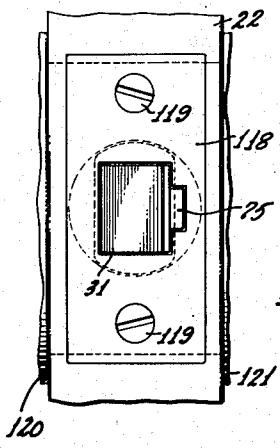
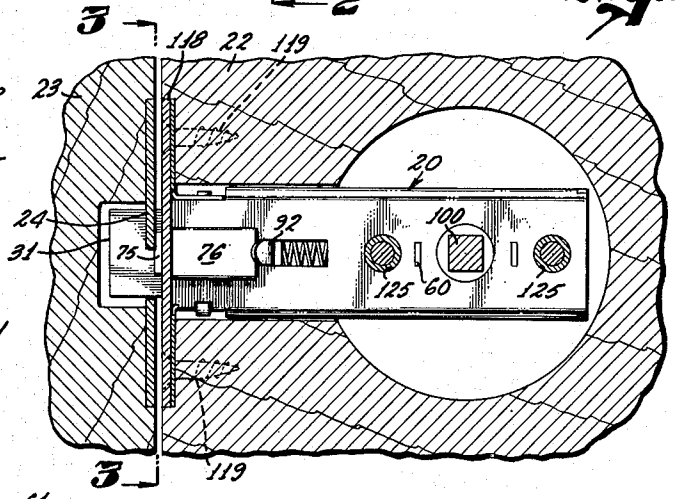


Fig. 2.



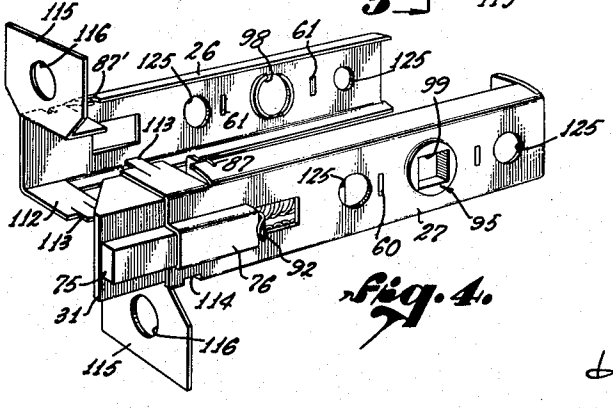


Fig. 4.

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Fig. 5.

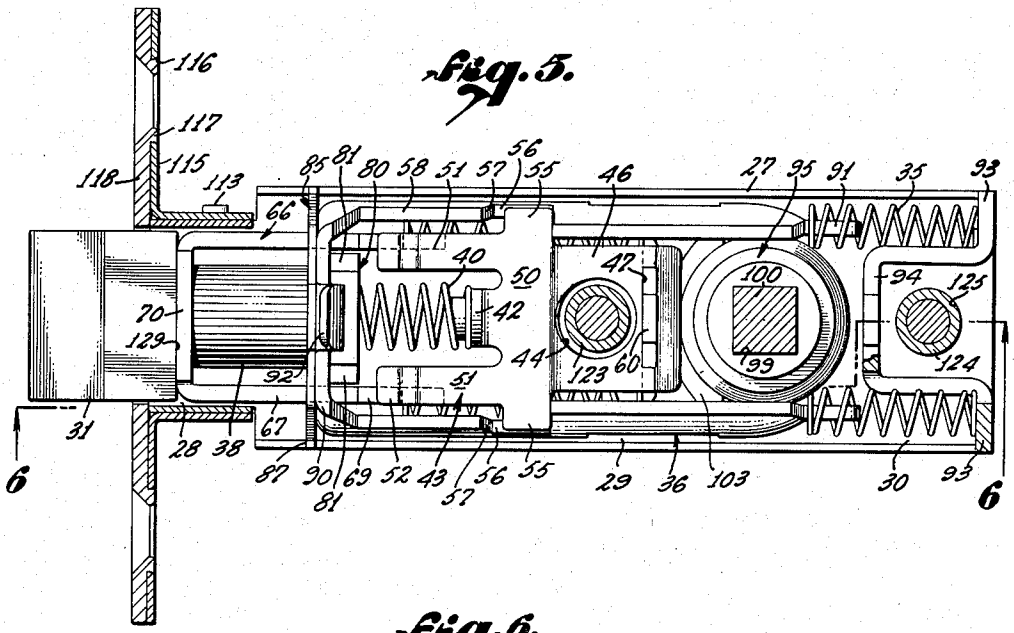


Fig. 6.

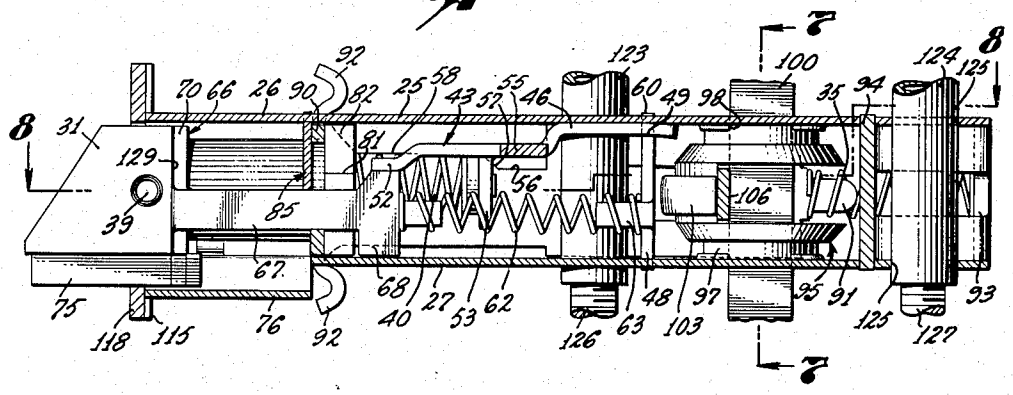
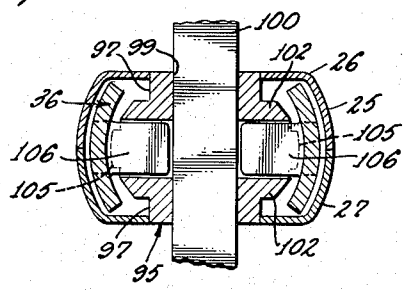


Fig. 7.



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Fig. 8.

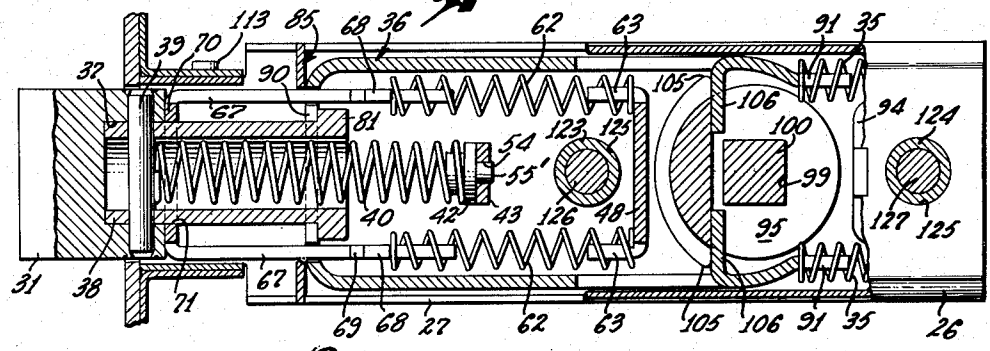


Fig. 9.

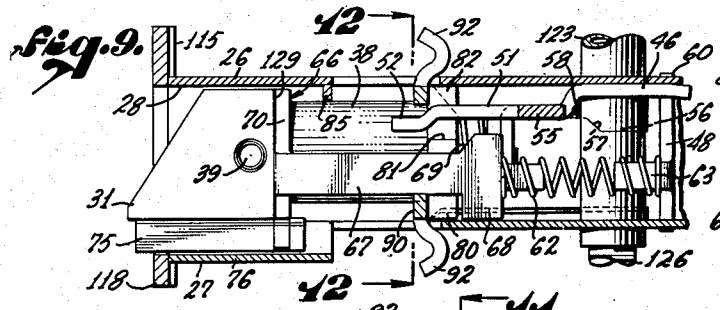


Fig. 11.

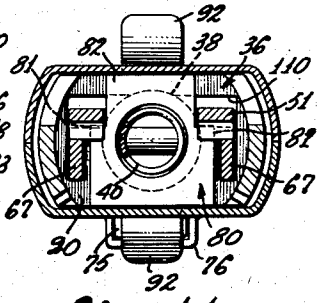


Fig. 10.

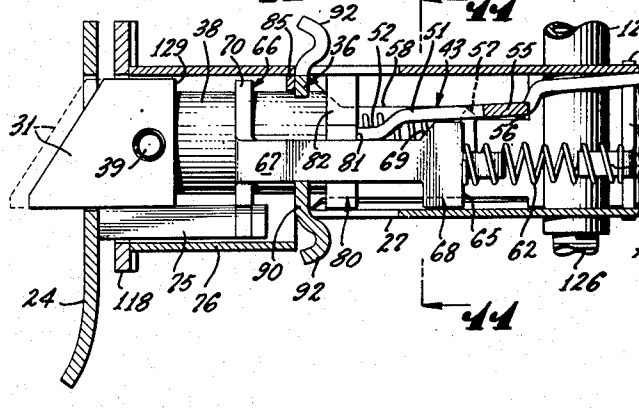
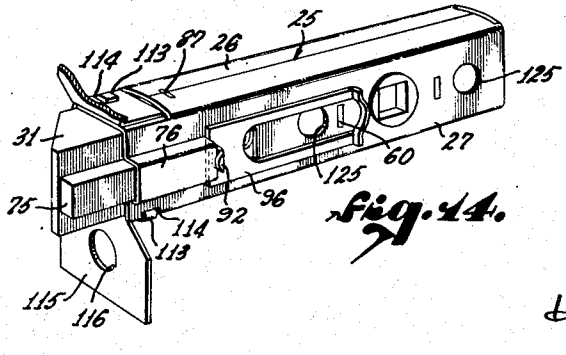


Fig. 14.



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LATCH WITH DEAD LOCKING MECHANISM

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Fig. 13.

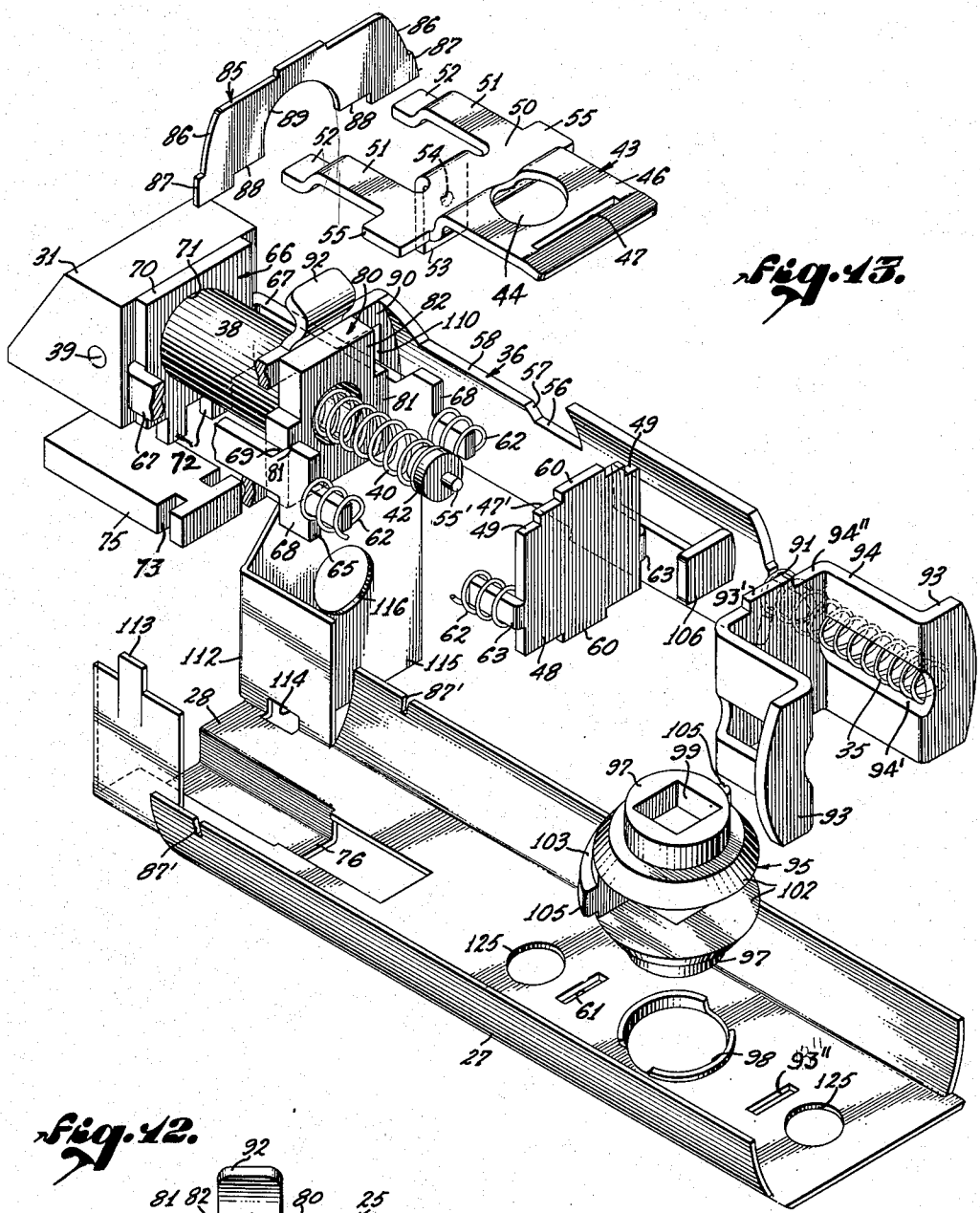
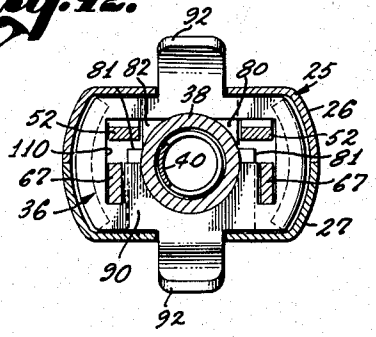


Fig. 12.



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Patented Oct. 20, 1953

2,656,207

UNITED STATES PATENT OFFICE

2,656,207

LATCH WITH DEAD LOCKING MECHANISM

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Application January 28, 1950, Serial No. 140,986

4 Claims. (Cl. 292—169)

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The invention relates to door latches with dead locking means, namely, mechanism which will resist inward movement of the latch bolt by pressure against the latch bolt when same is engaged in a strike plate.

A general object of the invention is to provide a latch of the character described which is compact, relatively simple in construction, smooth and positive in operation, yet providing indexing means by which knob mechanisms or equivalent are automatically aligned and retained in proper position in relation to the latch assembly.

A more particular object is to provide a dead locking arm which can be made by a stamping operation, and which is supported for and limited to, a slight rocking movement in a fixed plane, the support being a spacer in the latch case, and the dead locking arm being urged into dead locking position by spring pressure directed against the arm below the plane of support.

A further object is to provide in combination a central spring partially encased in a tubular latch bolt member, such member being retractable by a main slide member which is normally urged forward by a pair of separated springs disposed rearwardly in the latch case.

Another object is to provide a novel rod slide mechanism connected with a dead locking bolt, and cooperating with the dead locking arm to lift the latter out of dead locking position when the dead locking bolt is advanced.

An additional object is to provide in combination a latch bolt and tubular bolt member, the latter retaining a central spring, a rod slide mechanism connected with a dead locking bolt, and a dead locking arm cooperating with the rod slide mechanism.

A still further object is to provide in a latch assembly of the character described a bridge spacer transverse of the latch case furnishing a hold-down guide to retain the rod slide mechanism in correct operating position.

Another object is to provide in a latch assembly of the character described, a novel main slide member normally urged forward by a pair of compression springs acting at its rear end, the springs being nested in and positioned by a pair of channels formed at the rear end of a latch case which houses the various working parts, the main slide member having the function, among other things, of engaging the latch bolt assembly to retract the same.

These and other objects of the invention will become more apparent from the detailed description which follows and by reference to the accompanying drawings.

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In the drawings:

Figure 1 is a horizontal plan view of our latch assembly in association with a door knob assembly mounted in a door, the latter and a door jamb being illustrated in section.

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

Figure 3 is an elevational end view of the door and face plate as seen in the direction of arrows 3—3 in Figure 2.

Figure 4 is a perspective view of the latch assembly shown in Figures 1 and 2 with one of the latch case halves separated from the other.

Figure 5 is a view of the latch assembly as seen in the direction of the arrow 5 in Figure 1 but with one of the latch case halves removed to show the parts.

Figure 6 is a section taken on the line 6—6 of Figure 5 and assuming the latch case to be complete.

Figure 7 is a cross section taken on the line 7—7 of Figure 6.

Figure 8 is a section taken on line 8—8 of Figure 6.

Figure 9 is a section similar to Figure 6 but showing only the forward portion of the latch assembly and with the latch bolt retracted by the main slide member.

Figure 10 is a view similar to Figure 9 showing the dead locking bolt and dead locking arm acting to block the inward thrust of the latch bolt. This occurs by the dead locking arm dropping down, and the dead locking arm does the blocking after the latch bolt moves inward about $\frac{1}{32}$".

Figure 11 is a cross section taken on the line 11—11 of Figure 10.

Figure 12 is a section taken on line 12—12 of Figure 9.

Figure 13 is a perspective view of the latch assembly partially exploded and with one-half of the housing case omitted.

Figure 14 is a perspective view similar to Figure 4 but showing a slide bar to use in place of a knob and spindle to retract the latch bolt.

Our latch assembly 20 is illustrated in association with a door knob assembly 21 mounted in a door 22 which is in proximity with a door jamb 23 on which a strike plate 24 is fixed.

The latch assembly is characterized by a dead locking device embodying novel structural and functional features which will be made apparent as the description proceeds.

The latch assembly comprises a two part case 25 formed of mating halves 26 and 27 secured together at the throat 28 by self-contained tab and slot combinations and by spacers as will be referred to subsequently. The case embodies, in

addition to the throat 28, a central housing 29, and a spring channel end 30. The throat guides a latch bolt 31, the central housing confines and supports most of the latch operating parts to be described, and the spring channel end locates and houses a pair of springs which normally advance a main slide member 36.

The latch bolt 31 is formed with a socket 37 which receives a tubular member 38, the latter being rigidly connected with the bolt by a transverse pin 39 which is staked in. A compression spring 40 seats within the tubular member 38, bearing at one end against the pin 39. Its other end bears against a spring seat 42 of a dead locking arm 43. The dead locking arm 43 has a clearance hole 44 to loosely receive the sleeve of a mounting bolt means discussed later. The arm 43 has a fulcrum mounting, at its rear end, the details and purpose of which will appear. Suffice it to say, at this point, that the dead locking arm is restrained against longitudinal movement by its mounting, and the spring 40 yieldably urges the bolt 31 to its advanced position.

This dead locking arm 43 comprises a mounting plate section 46 formed with a transverse slot 47. The slot 47 receives the upper reduced part 47' of a spacer 48, upon the shoulders 49 of which the arm 43 fulcrums, the arm being retained between the shoulders 49 and the adjacent wall of the latch case. Forward of the mounting plate section 46 is a depressed bifurcated element 50 formed with fingers 51 with depressed tips 52. Between the fingers 51 is a diametrically struck tongue 53 formed with a hole 54 which receives a pin 55', the latter being part of the spring seat 42. The location of the spring seat on the tongue 53 of the dead locking arm 43 is offset (as shown) from the fulcrum mounting plane on the shoulders 49, as a result of which there is a constant spring pressure against the dead locking arm tending to depress the forward end thereof. The bifurcated element 50 has transversely extending ears 55 which can enter notches 56 in the main slide member 36, the surfaces of such notches acting as stop elements for downward movement of the fingers 51 under influence of the offset spring 40. Ears 55 are raised out of notches 56 by cam surfaces 57 and elevated surfaces 58 of slide 36 when slide 36 is retracted at a time when the dead locking bolt is held in by the strike plate and the latch bolt is advanced (Figure 10), this lifting action taking place before the tubular member has moved rearwardly a sufficient distance to be obstructed by the fingers 52, as later described.

The dead locking arm performs an important function in controlling the dead locking mechanism as a whole. Generally speaking, when it is depressed, the latch bolt cannot be retracted beyond a limited travel by pressure against its outer end, as might be exerted by an unauthorized person prying or prodding with a blade; and when the dead locking arm is raised, the bolt may be pushed in, as by normal sliding contact of the tapered face of the bolt with the strike plate or may be retracted, as by normal rotation of knobs.

The spacer 48 not only offers the fulcrum support for the dead locking arm, as shown and described, but spaces the two halves 26 and 27 of the latch case 25. Oppositely extending tabs 60 extend through slots 61 in the housing and are staked to assist in securing the two halves together, also contributing to the spacing apart of the two halves of the housing, and centering the working parts supported from it. These parts include, in addition to the dead locking arm, a pair of compression springs 62, the rear ends of which are mounting on spring retainers 63 which extend forwardly from below center at each side of the spacer 48.

The forward ends of the springs 62 bear against the rear ends 65 of a rod slide member 66. The latter is a U-shaped element, the legs 67 of which are in alignment with the fingers 51 of the dead locking arm. The tips 52 of these fingers can ride on the upper surface of the legs 67. Each leg 67 has a T form, the cross piece 68 of the T being at the rear end of the leg. The lower end of the cross piece 68 rides on the wall of the latch case. The upper end is formed with a taper 69 and functions as a cam when the slide member is shifted. When it is shifted rearwardly (Figure 10), the tips 52 move down under the influence of the spring 40 pressing on the tongue 53 of the dead locking arm. When it is shifted forwardly, the tips 52 ride up on the upper end of the cross piece 68 (Figure 6).

The forward closed end part of the U-shaped rod slide member is a substantially square plate 70 formed with a circular hole 71 through which the tubular member 38 is relatively slidable.

The plate 70 is formed with depending lugs 72 adapted to key into slots 73 of a dead locking bolt 75 and thus make a rigid connection therewith. The dead locking bolt 75 has a sliding fit in an auxiliary housing 76 of the latch case.

The latch bolt 31 and the dead locking bolt 75 are retractable together when the dead locking bolt is in advanced position at the start of the movement, as when the door is in the process of being closed. When the dead locking bolt stands retracted, as by restraint imposed by its contact with the strike plate 24 (Figure 10), and while the latch bolt 31 is extended in engagement with said strike plate the extended latch bolt cannot be pushed in, for reasons which will appear.

The rear end of the tubular member 38 is provided with a stop element 80. The latter has a pair of horizontally extending blocks 81 and a vertical block 82. The horizontal blocks are aligned with the tips 52 of the fingers 51. When the tips are in depressed position, they interrupt rearward movement of the blocks 81 and consequently of the latch bolt 31. When the tips are in elevated position, the interruption is removed, and the blocks 81 can then slide under the tips 52. The vertical block 82 and the blocks 81 coact with the main slide member 36 in a manner later described.

The relative sizes and positions of the tips 52 and the raised portions 68 are such that whenever the latch bolt and dead locking bolt are moved rearwardly in unison, as by pushing or pulling the door closed, the tips 52 are not released by the raised portions 68 until after the blocks 81 have already begun to pass under said tips 52, thus avoiding the possibility of the tips 52 obstructing the rearward movement of the blocks 81 and related tubular member and latch bolt. However, when the latch bolt is released to extended position in engagement with the strike plate 24 while the dead locking bolt still is retained in inward position by the face of said strike plate, the blocks 81 move forward beyond the reach of tips 52, thus allowing said tips under the influence of spring 40 to depress to the position which subsequently would obstruct the rearward movement of the latch bolt as the result of end pressure or prying pressure being exerted against same while said latch bolt is engaged in extended position within said strike plate.

A bridge 85 aids in spacing the halves of the

latch casing, having shoulders 86 conforming to a part of the cross sectional contour of the casing, and ears 87 which extend through slots 87' in the casing. Notches 88 provide a slide bearing for the legs 67 of the rod slide member 66, preventing any upward straying thereof. An arch 89 provides a slide bearing for the tubular member 38.

The main slide member 36 is generally U shape in plan with its closed end piece 90 forward and its free reduced ends 91 engaging the springs 35. The opposite ends of the springs 35 seat against outwardly extending butt tabs 93 of a U-shaped spacer 94 at the rear of the latch case and are guided by slots 94' formed in the sides of the spacer. The diameter of the springs 35 is greater than the width of the slots 94', and the springs 35 are so confined by case halves 26 and 27 as to always be in slidable, guided engagement with slots 94'. The springs 35 yieldably urge the main slide member forward to its limit of movement, governed as later described. The closed end piece 94'' is formed with tabs 93' which fit into slots 93'' in the case and are staked to further secure the case. The main slide member also embodies cam surfaces 57 which lift, and surfaces 58 which retain, ears 55 of dead locking arm 43 in elevated position above the inward path of blocks 81 of tubular member 38. This action is accomplished when the main slide member is retracted and said dead locking arm happens to be in a depressed position, which would block or prevent the continued inward movement of the blocks 81. The dimensions and relationship to each other of cam surfaces 57 and surfaces 58 and ears 55 are such that the tips 82 of dead locking arm 43 are elevated before the cross piece 90 of main slide can draw the member 80 and its blocks 81 to the position where said blocks would be in obstructing contact with said tips 82.

The main slide member has the primary function of retracting the latch bolt 31 by operation of knob mechanism or equivalent mechanism while actuated against pressure of the springs 35 either by a rotatable hub 95 or by a slide bar 96 attached to a tab 92 in a position on the outside of the case 25 when a grip handle mechanism is used in place of a knob and accomplishing this while completely removing any obstruction of blocks 81 by the dead locking arm 43 in advance of the time when the further inward retraction of said latch bolt by said main slide member might otherwise be blocked by said dead locking arm.

The hub 95 is formed with annular bosses 97 which have rotatable bearing support in bearings 98 struck from the case halves 26 and 27. A square hole 99 extends axially through the hub for reception of a square spindle 100 actuated by one of the knobs 101. The hub comprises two annular discs 102 spaced by a cam 103. This cam has identical ends 105 engageable with cam followers 106 in the form of projections struck inwardly from the main slide member 36 and accommodated in the space between the two discs 102 of the hub 95. Rotation of the hub will cause one of the cam ends 105 to push its companion follower 106 back, thus retracting the main slide member. When the cam 103 is in neutral position (Figure 8), the ends 105 are both in contact with the cam projections 106, and this engagement limits the forward movement of the main slide member.

The closed end piece 90 of the main slide member is formed with an opening 110 (see Figures 11 and 12) to align and guide the tubular member 38, the legs 67 of the rod slide member 66, and yet clear the fingers 51 of the dead locking arm 43. This end piece engages the stop element 80 including the blocks 81 thereof of the tubular member 38, and thereby moves the tubular member to retract the latch bolt when the main slide member is shifted rearwardly.

The operating parts are assembled in the case half 27, and the other half 26 is closed down over them. The throat 28 provides interlocking means in the form of tabs 113 which project through slots 114 and can be bent to assist in holding the two halves together. The throat section 112 of each case half is formed with a wing 115 having a hole 116 for the reception of locating bosses 117 in the face plate 118 and secured at these holes by staking. The latch assembly and face plate are mounted in a door by wood screws 119.

Knob assemblies 120 and 121 which include the knobs 101 are secured on opposite sides of the door by the following means. A mounting plate 122 has extending from it hollow threaded posts 123 and 124 which extend through aligned holes 125 in the latch case. The post 123 also goes through the clearance hole 44 in the dead locking arm and the post 124 passes through the area between the side walls of the spacer 94. Machine screws 126 and 127 pass through a mounting plate 128 and are threaded into the posts 123 and 124. This arrangement enables the latch assembly to be installed in doors of different thicknesses without any adjustment in the knob assemblies or latch assembly.

A latching type of assembly is shown in the drawings. The knob assembly 120 or 121, or equivalent members such as grip handles, will embody mechanisms to lock the outside knob or member against retracting the latch in the case of a locking type lock.

Operation

Assuming that the latch is installed in a door, as illustrated in Figures 1 and 2, and that the door is open at the beginning of the operation, the latch bolt 31 and the dead locking bolt 75 are fully advanced under the combined influence of spring 40 acting directly on the latch bolt, springs 62 acting on the dead locking bolt, and springs 35 acting on the main slide member 36. The dead locking bolt being extended keeps the tips 52 of fingers 51 above the level of blocks 81. The outward limit of movement of the main slide member, as previously indicated, is determined by engagement of the cam 103 reposing in neutral position against the cam projections 106 of the main slide member. The limit of advance movement of the latch bolt 31 is determined by engagement of the stop element 80 and the blocks 81 with the cross piece 90 of the main slide member. The outward limit of movement of the dead locking bolt 75 is determined by engagement of the square plate 70 of the rod slide member 66 with the rear face 29 of the latch member 31.

If the door is drawn closed, the beveled face of the latch bolt 31 engaging the strike plate 24 will cause the latch bolt to be pushed in against the yielding pressure of the spring 40. The same action will push in the dead locking bolt 75 against the pressure of springs 62 due to the engagement of the rear face of the latch bolt 31 with the square plate 70 of the rod slide member 66, such plate being attached to the dead locking bolt. However, the dead locking bolt's cross pieces 68 hold up the fingers 51 until the blocks 81 have passed under the tips 52. If the peak of

the latch bolt passes the inner edge of the strike plate, the latch bolt will advance into the door jamb recess which, however, is not wide enough to simultaneously afford entrance of the dead locking bolt, and the latter will be held retracted by engagemeit with the strike plate as shown in Figures 1 and 10.

In the latter position, as shown particularly in Figure 10, the tips 52 of the fingers 51 will be lowered to rest on the depressed surface of the rod slide member 67 being thus disposed under the influence of the spring 40 asserting pressure against the dead locking arm 43 below its point of support on the spacer 48. In such position the forward ends of the tips 52 are aligned to obstruct the blocks 81 of the stop element 80 at the rear end of the hollow tubular member 38 thus affording insufficient inward movement of the latch bolt as the result of longitudinal pressure at the outer end thereof to permit the latch bolt 31 to clear the strike plate 24.

To open the door the main slide member 36 is retracted either by turning one of the knobs 101 of the installation illustrated in Figure 1 or drawing on the bolt plate 96 (shown in Figure 14), by a grip handle mechanism which would constitute an alternate to a knob 101.

When the main slide member is retracted as, for example, through the agency of a knob 101 turning the square spindle 100, which in turn rotates the hub 95, rotating the cam 103 so that one of its peaks 105 pushes its companion follower 106 back, the ears 55 of the dead locking arm 43 are elevated by reason of sliding contact with cam surfaces 57. This action elevates the tips 52 of the fingers 51 to a position above the blocks 81, a position maintained by the surfaces 58 sliding under while supporting the ears 55 so that the tubular member 38 to which is pinned the latch bolt 31 is free to be drawn inwardly as the main slide member is retracted, which action is accomplished by engagement of the main slide member cross piece 90 with the member 80. During the retraction of the main slide member, the action of elevating the tips 52 of the fingers 51 to a position above the blocks 81 is accomplished by the cam surfaces 57 ahead of the time when the main slide member cross piece 90 will have drawn the member 80 to the position where the further inward movement of the blocks 81 of member 80 otherwise would be obstructed by the ends of fingers 51.

Having retracted the latch bolt and swung the door so that the latch bolt is clear of the strike plate, release of the door knob (or the slide plate 96) enables the latch bolt as well as the dead locking bolt 75 to advance under spring action to the starting position described. In such position the tips 52 of the fingers 51 are elevated by engagement with the raised surfaces of the cross pieces 68 of the rod slide member 66. This elevated position of the finger tips 52 removes the finger tips from their blocking position so that upon a succeeding closing of the door the dead locking bolt 75 and the latch bolt 31 may move inwardly together.

The central portion and the end piece 90 of the U-shaped main slide substantially fill the latch case from top to bottom and along the sides, their sides being rounded to conform to the rounded contour of the side walls of the case, as shown. This sliding fit in the case, and the dual springs, one on each side of the case, assure a free guided movement of the main slide member.

The rod slide of the dead locking mechanism has twin slide elements, twin springs and a cross piece, itself being U-shaped, and the guide for these side elements furnished by the bridge spacer imparts added stability and accuracy of longitudinal movement of the rod slide member.

The cross piece of the rod slide member provides a slide bearing for the tubular member of the latch bolt mechanism, augmented by the arch of the bridge spacer, and the arcuate notches of the cross piece of the main slide member.

The bifurcated dead locking arm is positive in action and functions with exceptionally slight rocking movement.

The whole device is compact, well balanced and smooth in operation. It is easily installed in a door of any thickness, provides indexing holes for alignment of knobs or equivalent trims, and requires no adjustments.

Although the invention has been herein shown and described in what is conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope of the invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices.

Thus, as an example, the central spring 40 may enclose the tubular member 38 instead of being housed thereby, although such an alternative would present some complications and is not the preferred arrangement. While the U-shaped rod slide mechanism, the bifurcated dead locking arm, the U-shaped main slide member, and dual springs for the rod slide mechanism and main slide member are preferred, these parts may take different forms, and at some sacrifice of the advantages offered, may be reduced to single instead of dual functioning elements, and single springs may be employed. Other examples of variation will be obvious to one skilled in the art.

The invention having been herein described, what we claim as new and desire to secure by Letters Patent is:

1. In a dead locking tubular latch comprising a casing having a pair of longitudinally separable mating parts forming a single common chamber of uniform cross-sectional area with end and intermediate spacing partitions extending across the casing, automatic latch bolt actuating components and manually responsive latch bolt actuating components, the combination of a main latch bolt including a slide comprising a pair of spaced elements lying slidably against opposite sides of the casing and a return spring means between the casing and said latch bolt, an auxiliary latch bolt reciprocably mounted in the casing and including a rod slide member comprising a pair of legs lying within said spaced elements, and spring return means between the casing and said auxiliary latch bolt, a locking arm having one end apertured and in a position loosely connected to the casing and comprising a pair of fingers at the opposite end lying one adjacent and operably engageable with each leg, a pair of ears lying one adjacent and operably engageable with each of said spaced elements, a tilting spring between a portion of said arm and the main latch bolt, said fingers having a spring-tilted position in abutting relation with the main latch bolt when the auxiliary latch bolt is depressed and a released relation with the main latch bolt when the auxiliary latch bolt is released.

2. In a dead locking tubular latch comprising a casing having a pair of longitudinally separable

mating parts forming a single common chamber of uniform cross-sectional area with end and intermediate spacing partitions extending across the casing, automatic latch bolt actuating components and manually responsive latch bolt actuating components, the combination of a main latch bolt including a slide comprising a pair of spaced elements lying slidably against opposite sides of the casing and a return spring means between the casing and said spaced elements, an auxiliary latch bolt reciprocably mounted in the casing, said auxiliary latch bolt including a rod slide member comprising a pair of legs lying within said spaced elements, and spring return means between the intermediate partition and said legs, a single piece dead locking arm having one end apertured and in a position loosely engaged by the intermediate partition and comprising a pair of fingers at the opposite end having depressed tips lying one adjacent and operably engageable with each leg, a pair of ears lying one adjacent and operably engageable with each of said spaced elements, a transversely extending centrally disposed tongue and a spring between said tongue and the main latch bolt, said tips having a spring-tilted position in abutting relation to the main latch bolt when the auxiliary latch bolt assembly is depressed and a released relation to the main latch bolt when the auxiliary latch bolt is released.

3. In a dead locking tubular latch comprising a casing having a pair of longitudinally separable mating parts forming a single common chamber of uniform cross-sectional area with end and intermediate spacing partitions extending across the casing, automatic latch bolt actuating components and manually responsive latch bolt actuating components, the combination of a main latch bolt including a slide comprising a pair of spaced elements lying slidably against opposite sides of the casing and a return spring means between the casing and said latch bolt, an auxiliary latch bolt reciprocably mounted in the casing and including a rod slide member comprising a pair of legs lying within said spaced elements, and spring return means between the casing and said auxiliary latch bolt, a locking arm having one end apertured and in a position loosely connected to the casing and comprising a pair of fingers at the opposite end lying one adjacent and operably engageable with each leg, a pair of ears lying one adjacent and operably engageable with each of said spaced elements, a tilting spring between a portion of said arm and the main latch bolt, said fingers having a spring-tilted position in abutting relation with the main latch bolt when the auxiliary latch bolt is depressed and a released relation with the main latch bolt when the auxiliary latch bolt is released, said latch bolts and the dead locking arms having an operative assembled relation in one mating part and the spacing partitions independent of the other mating part thereby to enable assembly with the mating parts in separated relation.

4. In a dead locking tubular latch comprising a casing having a pair of longitudinally separable mating parts forming a single common chamber of uniform cross-sectional area with end and intermediate spacing partitions extending across the casing, automatic latch bolt actuating components and manually responsive latch bolt actuating components, the combination of a main latch bolt including a slide comprising a pair of spaced elements straddling the actuating components and lying slidably against opposite sides of the casing and a return spring means between the casing and said spaced elements, an auxiliary latch bolt having an initially assembled relation with the main latch bolt and reciprocably mounted in the casing, said auxiliary latch bolt including a rod slide member comprising a pair of legs straddling the automatic actuating component and lying within said spaced elements, and spring return means between the intermediate partition and said legs, a single-piece dead locking arm having one end apertured and in a position loosely engaged by the intermediate partition and comprising a pair of fingers at the opposite end having depressed tips lying one adjacent and operably engageable with each leg, a pair of ears lying one adjacent and operably engageable with each of said spaced elements and a transversely extending centrally disposed tongue, a spring between said tongue and the main latch bolt assembly, said tips having a spring-tilted position in abutting relation with the main latch bolt when the auxiliary latch bolt is depressed and a released relation with the main latch bolt when the auxiliary latch bolt is released, said latch bolts and the dead locking arm having an operative assembled relation in one mating part with the spacing partitions independent of the other mating part thereby to enable assembly with the mating parts in separated relation.

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