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Fig. 1.

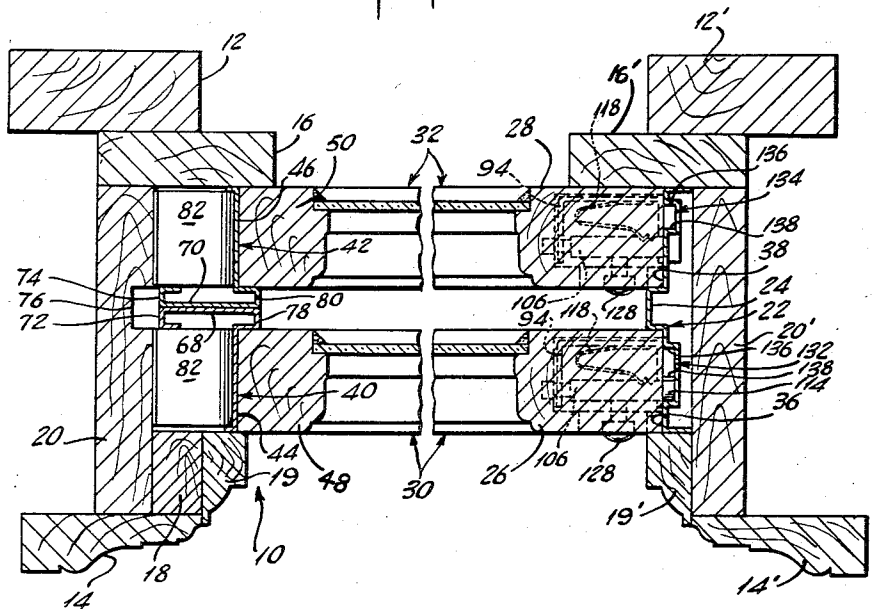

Fig. 2.

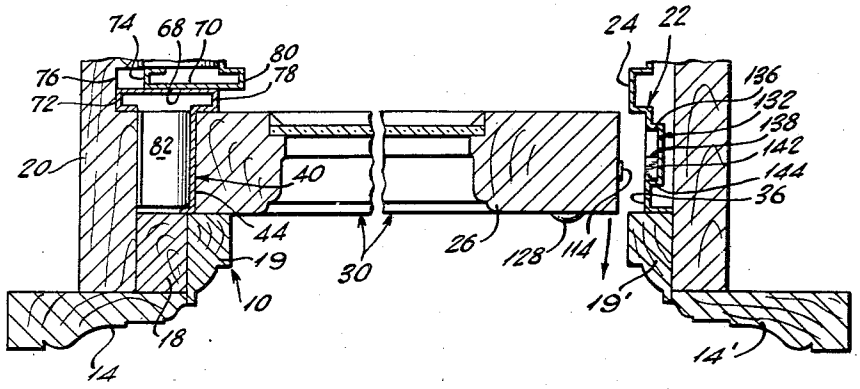

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Fig. 3.

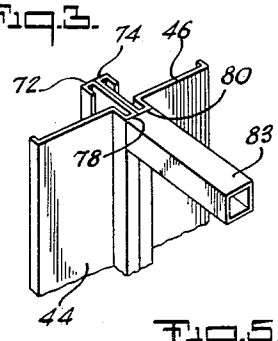

Fig. 8.

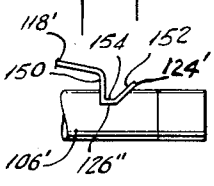

Fig. 4.

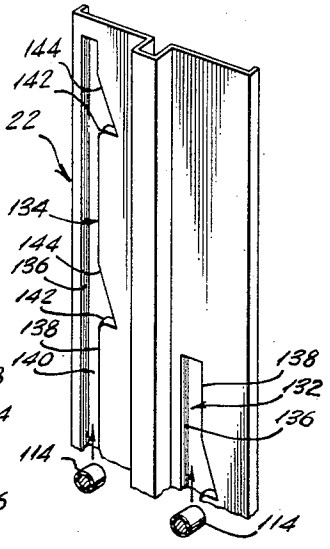

Fig. 5.

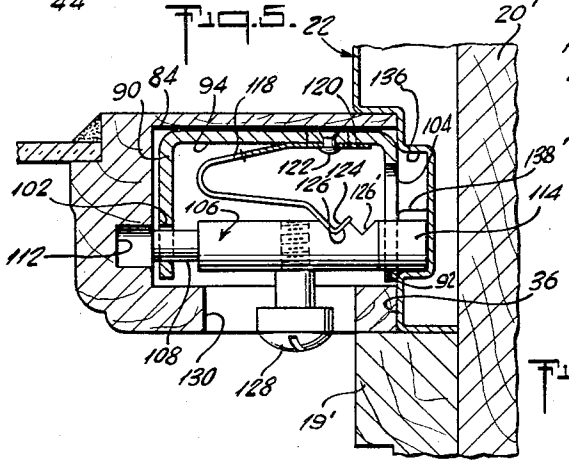

Fig. 6.

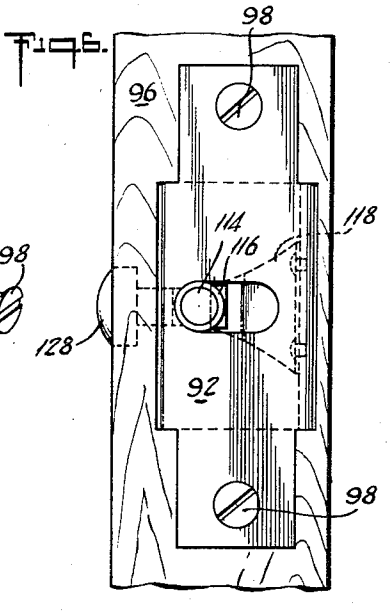

Fig. 7.

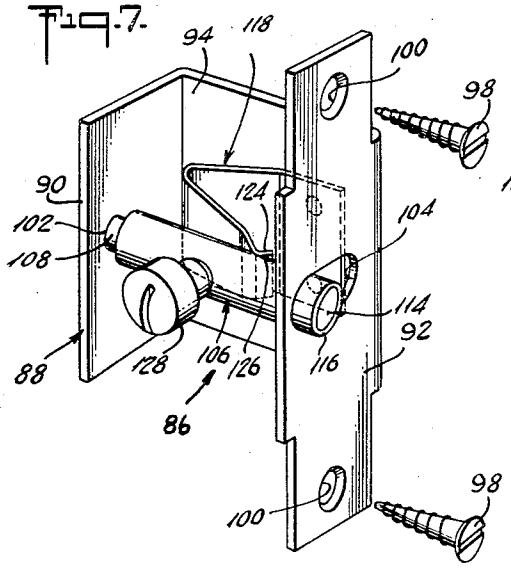

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Fig. 8.

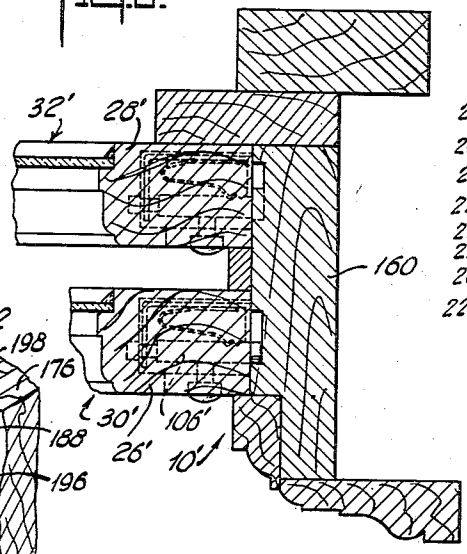

Fig. 14.

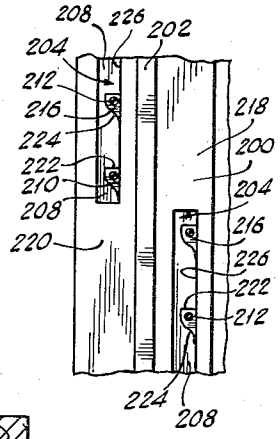

Fig. 13.

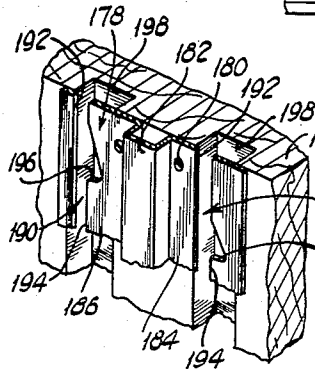

Fig. 12.

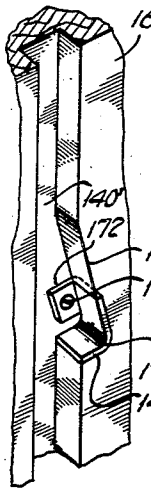

Fig. 10.

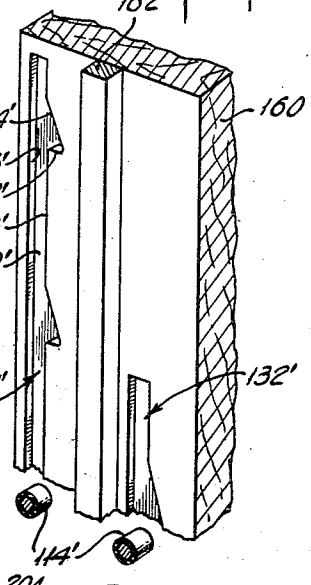

Fig. 11.

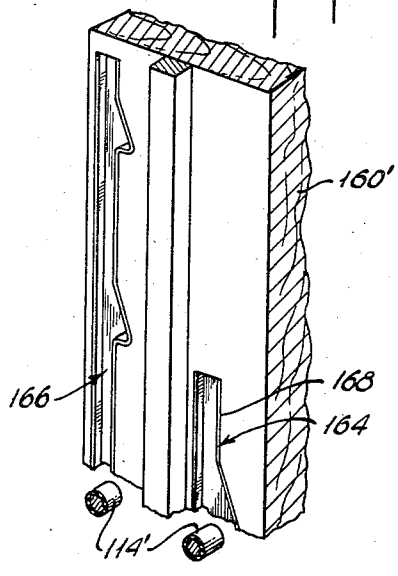

Fig. 15.

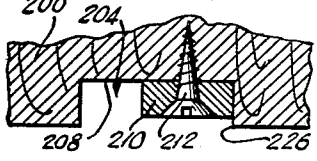

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Fig. 16.

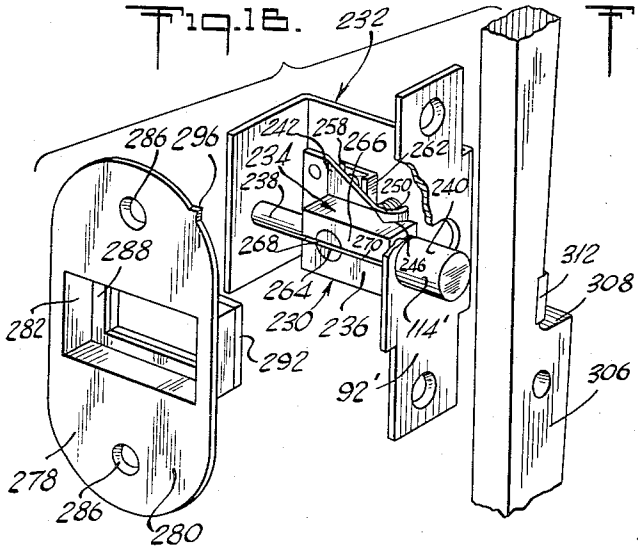

Fig. 18.

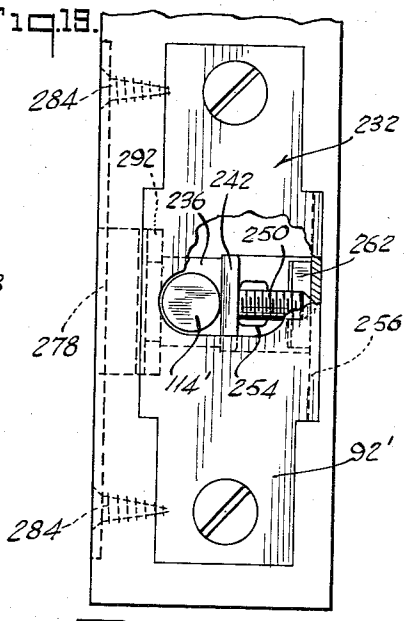

Fig. 17.

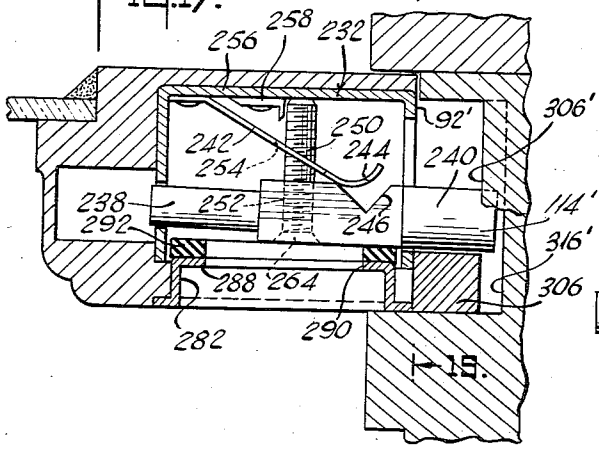

Fig. 20a.

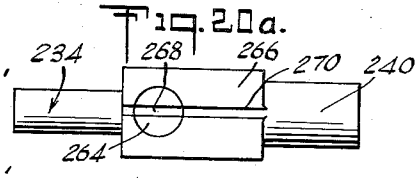

Fig. 20b.

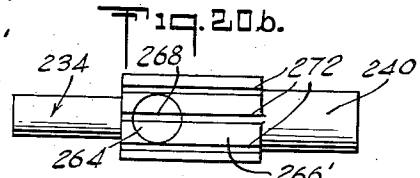

Fig. 20c.

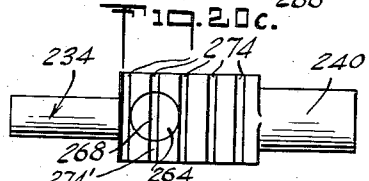

Fig. 18.

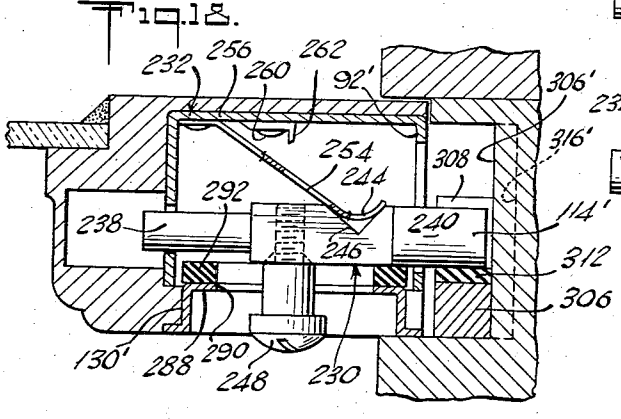

Fig. 20d.

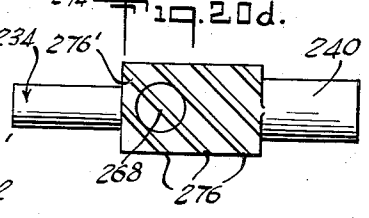

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Fig. 21.

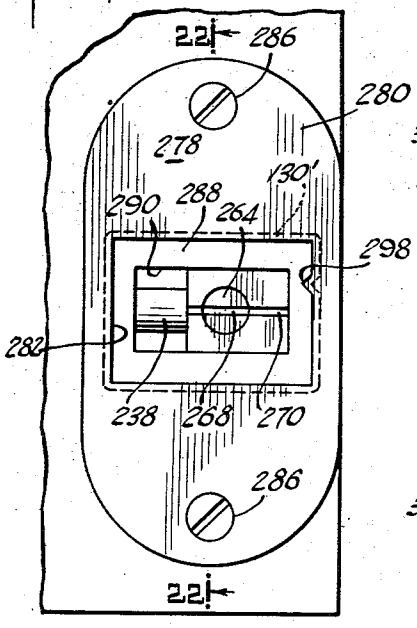
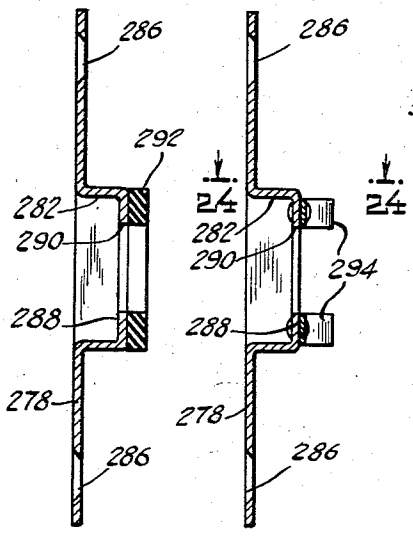


Fig. 22. Fig. 23.



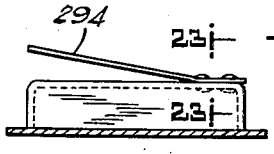


Fig. 24.

Fig. 25. Fig. 26.

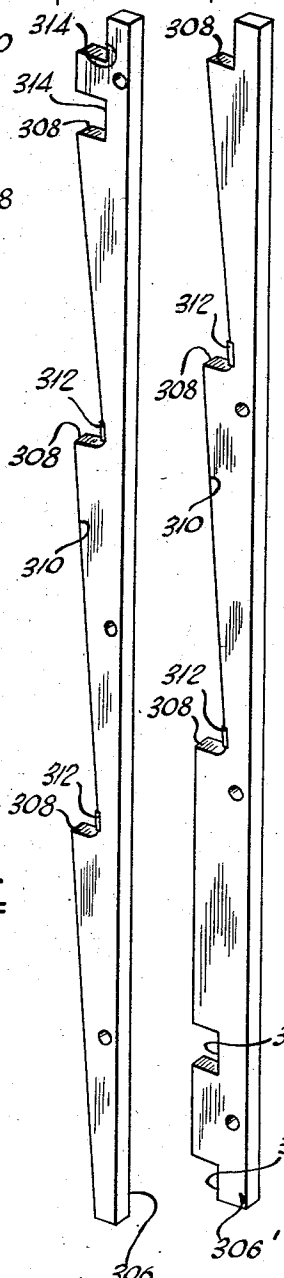
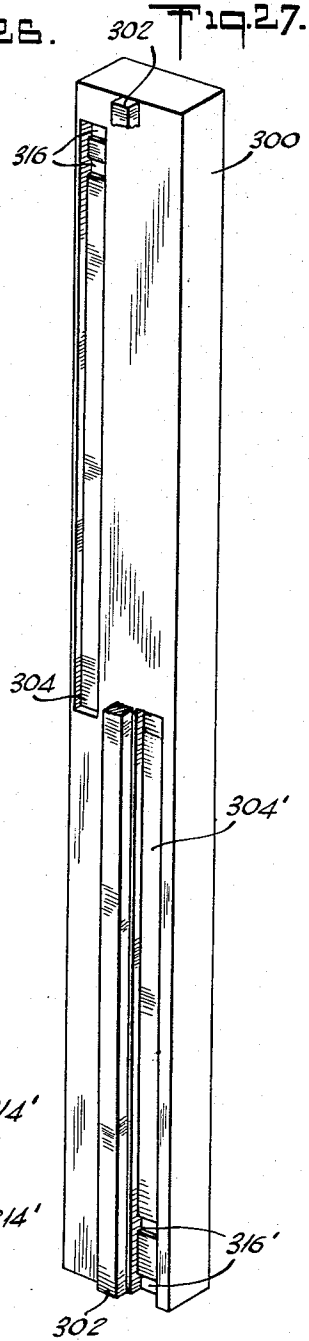


Fig. 27.



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United States Patent Office 2,850,312 Patented Sept. 2, 1958

2,850,312

WINDOW CONSTRUCTION

Michael Rifkin, Lyndhurst, N. J.

Application August 3, 1956, Serial No. 602,031
7 Claims. (Cl. 292—149)

This invention relates generally to improvements in window construction and, more particularly, to improvements in window construction having sashes mounted for vertical reciprocation in a window frame and being adapted to be removed therefrom.

This application is a continuation-in-part of my application Serial No. 537,714 filed September 30, 1955 for Window Construction which in turn is a continuation-in-part of my application Serial No. 520,966 filed July 11, 1955 for Window Construction.

In my Patent Number 2,694,237 for Window Construction, issued on November 16, 1954, there is disclosed a window construction in which each of the sash members is mounted for vertical reciprocation between a companion pair of runners, one of which is fixed with the opposite one being laterally movable toward its associated jamb member against the bias of spring means disposed between said jamb member and the movable runner. In this arrangement the movement of the movable runner towards its associated jamb member where auxiliary holding means are not utilized, caused for example through inadvertence or accident, or by a frolicking child may be effective to release a sash for downward movement when the latter is in a raised position, and it is accordingly an important object of the present invention to provide an improved window construction which obviates this disadvantage of the above noted construction.

Another object of the present invention is the provision of a window construction having an improved arrangement providing for the slidable movement of the window sashes with a minimum of effort and for retaining said sashes in their vertically adjusted positions, said arrangement including a series of vertically spaced latched positions for positively releasably latching the sashes in corresponding positions.

Another object of the present invention is the provision of an improved latch arrangement for a window construction of the above character for releasably retaining the sashes in their vertically adjusted positions and for positively releasably latching the sashes at vertically spaced positions whereby the application of pressure on the lower ends of the movable runners will be ineffective to release their associated raised sashes for downward movement beyond the next latched position, said latch arrangement including a selectively movable provision for facilitating the removal of the sashes from the window frame.

Another important object of the present invention is the provision of an improved latch arrangement of the aforenoted character having novel means for locking the sashes in a closed, or near closed, condition in a burglar-proof manner.

Yet another object of the present invention is the provision of a generally improved window construction which is of simple design, easy to install and service, economical to mass produce, which allows for a greater degree of free vertical sash movement, and which is eminently suitable in the accomplishment of its intended purposes.

Other objects, features and advantages of the invention will become apparent as the description thereof proceeds when considered in connection with the accompanying illustrative drawings in which:

Fig. 1 is a fragmentary horizontal sectional view of

a window construction formed according to the present invention;

Fig. 2 is a view similar to Fig. 1 illustrating the operation of removing a sash from the window frame;

Fig. 3 is a fragmentary perspective view of the upper ends of the movable runners in association with the upper fixed parting strip;

Fig. 4 is a fragmentary perspective view of the fixed runner formed according to the present invention;

Fig. 5 is a fragmentary horizontal sectional view showing a sash stile and its associated latch device;

Fig. 6 is a fragmentary side view of a sash stile in the region of the latch device;

Fig. 7 is a perspective view of the latch device formed according to the present invention;

Fig. 8 is a fragmentary elevational view illustrating another form of latching member and its companion spring;

Fig. 9 is a view similar to the right hand part of Fig. 1 illustrating a modified form of window construction which is constructed without the use of a fixed runner;

Fig. 10 is a fragmentary perspective view of the jamb shown in Fig. 9;

Fig. 11 is a view similar to Fig. 10 illustrating a modified form of jamb;

Fig. 12 is a view similar to Fig. 11 illustrating another modified form of jamb;

Fig. 13 is a fragmentary perspective view of another modified form of jamb having a fixed runner associated therewith;

Fig. 14 is a fragmentary front view of yet another modified form of jamb;

Fig. 15 is a horizontal sectional view, on an enlarged scale, of one of the latching member tracks shown in Fig. 14;

Fig. 16 is a perspective view of a modified form of latch device and associated structure with part of the latch device shown broken away to reveal structural details;

Fig. 17 is a fragmentary horizontal sectional view showing a sash stile and associated latch device of the construction shown in Fig. 16 with the latch device in a locked condition;

Fig. 18 is a view similar to Fig. 17 with the latch device shown in an unlocked condition;

Fig. 19 is a sectional view taken on the line **19—19** of Fig. 17;

Figs. 20*a*–20*d* are side views of different forms of latching members;

Fig. 21 is a side elevational view of a sash stile and associated latching device with the latter being slightly modified from the Fig. 16 construction;

Fig. 22 is a sectional view taken on the line **22—22** of Fig. 21;

Fig. 23 is a view similar to Fig. 22 showing a slightly modified form of trim plate and taken on the line **23—23** of Fig. 24;

Fig. 24 is a partial sectional view taken on the line **24—24** of Fig. 23;

Fig. 25 is a perspective view of an upper sash track member;

Fig. 26 is a perspective view of a lower sash track member; and

Fig. 27 is a perspective view of a jamb adapted to receive the track members of Figs. 25 and 26.

Referring to the drawings in detail, there is shown a window construction **10** of the general type disclosed in my above referred to patent, said window construction at one side thereof comprising laterally spaced casings **12** and **14**, a blind stop **16**, a filler strip **18**, a stop **19**, and a window frame jamb **20**, the latter being secured between stop **16** and casing **14**. The opposite side of the window

construction is generally similarly constituted and comprises laterally spaced casings 12' and 14', a blind stop 16', a stop 19', and a window frame jamb 20' which is disposed between said stop 16' and casing 14'. Secured to the jamb 20' is a vertically extending dual fixed runner 22 which is provided with a projecting channel part 24, the latter defining a spacer strip for guiding the vertical sliding movement or reciprocation of associated sash stiles 26 and 28 of window sashes 30 and 32, respectively. The runner 22 is secured to the jamb 20' in any suitable manner, for example by means of suitable fastener elements which extend through apertures provided in part 24. The runner 22 defines tracks 36 and 38 for the stiles 26 and 28, respectively. Disposed adjacent the jamb 20 and laterally movable relative thereto in the manner to be described in detail hereinafter, are a structurally similar pair of independently movable runners 40 and 42 which define tracks 44 and 46 for the vertical sliding movement of their associated sash stiles 48 and 50, respectively. Thus the companion pair of tracks 36 and 44 guide the window sash 30 for vertical sliding movement and similarly the companion pair of tracks 38 and 46 guide the window sash 32 for such movement.

The runners 40 and 42 have flanges 68 and 70, respectively, which are adapted for slidable movement during the movement of said runners, and each of the inner end portions 72 and 74 of the flanges 68 and 70, respectively, is adapted to be received in the vertical slot 76 provided in the jamb 20 on the depression of its associated runner as shown in Fig. 2. The runners 40 and 42 have laterally projecting parts 78 and 80, respectively, which collectively define a vertically extending spacer strip.

It will be understood that the movable runners 40 and 42 may be laterally movably secured to the jamb 20 in any suitable manner. In order to urge the movable runners away from jamb 20, there is provided a series of springs 82 interposed between said jamb and said movable runners, said springs being of the construction, and supported in position in the manner illustrated and described in my above referred to patent or in my copending application Serial Number 477,524, filed December 24, 1954. The parting strip 83 (Fig. 3) corresponds in all respects to the parting strip which is fixed to the jamb head of the window frame of my above referred to copending application.

Pursuant to the present invention each of the sash stiles 26 and 28 is recessed or mortised as indicated at 84 for the reception of a latch device 86, the latter comprising a generally U-shaped bracket 88 having laterally spaced walls 90 and 92 interconnected by transverse wall 94, said wall 92 defining a face plate which is flush with the surface of the outer side 96 of its companion stile. The face plate 92 is secured to its companion stile by means of the screws 98 which extend through complementary apertures 100 provided in said face plate. The walls 90 and 92 have aligned apertures 102 and 104 respectively, extending therethrough, the latter aperture being elongated in a substantially horizontal plane for a purpose which will be evident from the description which follows. The latching member 106 is mounted to the bracket 88 for pivotal bodily movement and for axial reciprocation, said latching member having a reduced diameter shaft portion 108 loosely extending through the aperture 102 (Fig. 5). It will be observed that the stiles 26 and 28 are provided with a closed bottom aperture as indicated at 112 for the extension therein of the portion 108 for a purpose to be described in detail hereinafter. The latching member 106 has an end portion 114 which extends through the elongated aperture 104 and normally projects beyond the surface of the side 96 of its companion stile, said end portion having a sleeve 116, formed of rubber or any other suitable material, secured thereon for silencing the action of said end portion on the movement thereof in association with companion structure to be described hereinafter.

In order to resiliently urge the latching member 106 away from the wall 94, in a horizontal plane, for a purpose which will be apparent from the description which follows, there is provided a generally U-shaped spring 118 having one end portion 120 secured to said wall in any suitable manner, for example by means of the rivets 122, the opposite end portion 124 being V-shaped for interengagement in companion grooves 126 and 126' provided on said latching member. In the normal projected position of the latching member as shown in Figs. 1, 5 and 7 the portion 124 is interengaged in groove 126 for releasably retaining said latching member in said position, said latching member being axially retractible to a substantially flush condition with the face plate 92 as shown in Fig. 2 by the manipulation of the finger piece or element 128 and said portion 124 interengages in groove 126' in said retracted position of the latching member. Thus the spring portion 124 readily disengages from one companion groove and engages in the other companion groove on the reciprocation of the latching member in the manner described above. The latching member 106 may be pivotally bodily moved toward the wall 94 for the purpose to be hereafter noted, against the action of the spring 118, by means of the finger piece 128 which is manually depressible, the latter being threadedly engaged to said latching member and extending through the elongated opening 130 provided in the sash stiles 26 and 28. It will be observed that the portion 108 extends through aperture 102 of wall 90 with sufficient clearance to provide for such pivotal movement.

With reference to Figs. 4 and 5, the fixed runner 22 has defined therein structurally similar tracks 132 and 134 which extend longitudinally of said runner and which are adapted for cooperative association with companion latching members 106 carried by the sash stiles 26 and 28, respectively. The portion 114 of the latching member 106 is adapted to ride along its companion track 132 or 134, the latter having oppositely disposed track edges 136 and 138 interconnected by the base wall 140 of the track. Each of the tracks has a plurality of vertically spaced shoulder portions or ledges 142 adapted for releasable interengagement with a companion portion 114 for releasably positively latching its companion sash at corresponding positions or levels. Each of the track edges 138 is provided with inclined or cam edges 144 extending upwardly from the shoulder portions 142 to provide for sash movement in an upward direction past said shoulder portions without manually releasing the latching member. It will be understood that the tracks 132 and 134 extend for a length corresponding to the range of vertical movement of their companion sashes. In the illustrated embodiment a latch device 86 is provided in the stile 26 in the lower end region thereof while the latch device of the stile 28 is disposed in the upper end region thereof, it being understood that it is within the scope of the present invention to position such latch devices at any desired level on the sash stiles with the tracks 132 and 134 being correspondingly positioned for cooperative association with their companion latch devices.

The fixed runner 22 may be preformed to the shape best shown in Figs. 4 and 5 in any conventional manner, for example by means of a stamping operation. The spring 118 biases the portion 114 of the latching member 106 into engagement with the track edge 138 for concomitantly applying pressure to retain the companion sash in its vertically adjusted position between the fixed and movable runners in conjunction with the springs 82 described above. Thus the cumulative effect of the biasing of the movable runner and the latching member is to releasably retain the companion sash in its vertically adjusted position, it being noted that such biasing pressure is of a magnitude to provide for the manual sliding movement of the sash with ease. It is also within the scope of the present invention to have the movable run-

ner and latching member lightly biased so that the cumulative effect of such biasing is insufficient to retain a sash in its vertically adjusted position, such sash being releasably positively latched in position at a desired level by the interengagement of portion 114 with the shoulder portions 142. While the sash may be slidably moved in an upward direction past the shoulder portions 142 without manually releasing the latching member 106, the movement of the sash in a downward direction past said shoulder portions requires the manual release of said latching member, and this release may be facilely effected by manually depressing the element 128 to pivotally move said latching member out of engagement with said shoulder portions. Thus the lateral movement of the movable runners toward jamb 20 will be ineffective to release their associated sashes for downward movement past the next lower latched position corresponding to the next lower shoulder portion 142 thus introducing a substantial safety factor to the above arrangement.

The latching member 106', shown in Fig. 8, is similar to the latching member 106 previously described except that latching member 106' is provided with a single groove 126'' for interengagement with the end portion 124' of the spring 118', said end portion having vertical and inclined portions 150 and 152, respectively which are interconnected by a transverse portion 154 and said groove being formed complementary to said end portion. In the normal projected position of the latching member 106' the end portion 124' interengages in the groove 126'' for releasably retaining said latching member in said position, said latching member being retractible in the manner described above and being retained in its retracted position by the tension of end portion 124' of spring 118' against an adjacent surface portion of said latching member.

For the removal of a sash from the window frame the element 128 of its companion latching member 106 or 106' is manipulated laterally away from the fixed runner 22 to reciprocate said latching member to its retracted position described above and in this position the sash may be readily bodily removed from the window frame by the movement thereof towards the jamb 20, as shown in Fig. 2, until the stiles 26 or 28 are cleared for movement outwardly of the frame, said sash movement being effective to concomitantly move its associated movable runner toward said jamb against the action of the springs 32 associated therewith.

If desired, the fixed runner 22 may be formed in the manner of the fixed runner of my above referred to copending application in which the tracks are formed without a base wall corresponding to the wall 140 of the illustrated embodiment, and where a fixed runner of this general character is utilized in closely adjacent disposition to the jamb 20', the latter may be slotted or recessed for registry with such tracks for the extension therein of the end portions 114 of the latching members. (See Fig. 13.)

With reference to Figs. 9 and 10, there is shown a modified form of window construction 10' which is similar to the window construction 10 described above except that construction 10' dispenses with the use of a fixed runner corresponding to the runner 22 and is provided with a jamb 160 having defined therein structurally similar tracks 132' and 134' which correspond to the tracks 132 and 134 previously described. The jamb 160 may be formed of any suitable material, for example and without limitation wood, plastic, or the like, and suitably secured to said jamb is a spacer strip 162 for guiding the vertical sliding movement of the window sashes 30' and 32'.

The tracks 132' and 134' extend longitudinally of the jamb 160 and are adapted for cooperative association with companion latching members 106' carried by the sash stiles 26' and 28', respectively in the manner described above in detail. The portion 114' of the latching member 106' is adapted to ride along its companion track 132' or 134', the latter having oppositely disposed track edges 136' and 138' and a base wall 140'. Each track has a plurality of vertically spaced shoulder portions 142' adapted for releasable interengagement with a companion portion 114' for releasably positively latching its companion sash at corresponding levels. The portions 142' are of arcuate configuration to conform to or approximate the curvature of the portions 114'. Each of the track edges 138' is provided with cam edges 144' extending upwardly from the shoulder portions 142' to provide for sash movement in an upward direction past said shoulder portions without releasing the latching member. In all other respects the wnidow construction 10' is similar to construction 10 and functions in a corresponding manner.

With reference to Fig. 11, there is shown a jamb 160' which is identical with jamb 160 of window construction 10' except in the respects now to be specifically noted. The tracks 164 and 166 correspond in all respects to the tracks 132' and 134' except that the former tracks are provided with a coextensive or substantially coextensive liner or insert 168 which may be of any suitable construction and formed of any suitable material, for example a suitable metallic material having the requisite characteristics, said liner being secured in said tracks in any suitable manner. It will be apparent that the liners 168 define bearing surfaces which are adapted for cooperative association with the portions 114'.

In the embodiment of Fig. 12, the jamb 160'' is identical with jamb 160 except that tracks 132' and 134' are provided with liner or insert elements 170 of suitable construction and material on the shoulder portions 142', said elements extending a short distance along the cam edges 144'. The elements 170 are preferably of metallic construction and each of said elements are secured in position in any suitable manner, for example by means of the laterally projecting apertured tab 172 which is secured to the base wall 140' by screw 174, said elements constituting bearing surfaces for the portions 114' in the latched condition thereof. It will be understood that the tabs 172 are disposed to clear the portions 114' on the movement thereof along the tracks.

Accordingly, if desired, as when the jamb 160 is formed of soft wood or other material, said jamb may be provided with a liner of the character shown in Fig. 11 or with liner elements of the character shown in Fig. 12. From the above it will be apparent that the embodiments of Figs. 9–12 possess the inherent economies accompanying the dispensation of the use of a fixed runner of the character of runner 22.

With reference to Fig. 13, there is shown a jamb 176 having a dual fixed runner 178 secured thereto by the fastener elements 180, said runner being of any suitable construction and material, for example a one-piece metal stamping. The runner 178 has a projecting channel part 182 which defines a spacer strip for guiding the vertical sliding movement of associated sash stiles. The runner 178 defines tracks 184 and 186 for associated sash stiles in the manner described above in detail with reference to embodiment 10, said runner having defined therein structurally similar tracks 188 and 190 which are adapted for cooperative association with companion latching members 106. The tracks 188 and 190 have oppositely disposed track edges 192 and 194 and vertically spaced shoulder portions 196, said track edges and said shoulder portions being adapted for cooperative association with a companion portion 114 in the manner described above in detail with reference to window construction 10. The jamb 176 is provided with clearance grooves 198, in registry with the tracks 188 and 190 and extending at least for the length thereof, said grooves being adapted to receive with clearance the portions 114 projecting through said tracks. Thus the embodiment of Fig. 13 is similar to window construction 10 except that

the former is provided with edges 192 and 194 which are of the thickness of the material of the runner 178 and is not provided with track walls corresponding to the base walls 140 of construction 10, said former embodiment additionally being provided with a jamb having grooves 198 for the extension therein of the end portions 114 of the latching members.

With reference to Figs. 14 and 15, there is shown a jamb 200 which is similar to the jamb 160 of window construction 10' except in the respects now to be described, said jamb 200 having a spacer strip 202 suitably secured thereto. The tracks 204 extend longitudinally of the jamb 200 and correspond to the tracks 132' and 134' of embodiment 10', said tracks 204 being adapted to cooperate with companion latching members 106' in the manner described above in detail. The tracks 204 are defined by longitudinally extending grooves 208 formed in the jamb 200, said grooves having a series of vertically spaced latch parts 210 secured therein by means of suitable fastener elements 212 which extend through complementary apertures formed in said parts and into said jamb. The latch parts 210 may be formed of any suitable material, for example a suitable metallic or plastic material, and the external faces 216 thereof may be either flush with the jamb faces 218 and 220 or slightly recessed therefrom.

Each latch part 210 is provided with an upper shoulder defining surface 222, which corresponds to the shoulder portions 142 and 142' previously described, and a cam surface 224 which smoothly merges with an edge 226 of a companion groove 208. Thus the surfaces 222 of the parts 210 are adapted for releasable interengagement with a companion portion 114' in the manner previously described in detail and the cam surfaces 224 provide for sash movement in an upward direction past said surfaces 222 without releasing the latching member. The grooves 208 may have any desired number of latch parts 210 secured therein and said latch parts may be vertically spaced as desired for latching a companion sash at corresponding levels.

The body portion of the latching member 106, between the portions 108 and 114 thereof, of latch device 86 may be of circular cross section as shown in the illustrated embodiment or of any other desired cross section, for example quadrilateral cross section as where it is desired to increase the bearing surface of the grooves 126, 126', and 126'' for their companion spring portions.

With reference to Figs. 16–20*a*, there is shown a modified form of latch device 230 which is generally similar to the latch device 86 described above except in the respects to be pointed out in detail hereinafter. The latch device 230 incorporates an anti-burglary feature so that its associated sash may be locked in a closed or near closed position in a burglarproof manner as will be described in detail below. The latch device 230 comprises a U-shaped bracket 232 which corresponds to bracket 88 described above, said bracket 232 mounting a latching member 234 for pivotal bodily movement and for axial reciprocation in the manner described above in connection with latching member 106. The latching member 234 has a central part 236 of quadrilateral cross section and end parts 238 and 240 of circular cross section, said end parts corresponding to the parts 108 and 114, respectively of latch device 86.

Secured to the bracket 232 is a spring 242 which biases the latching member 234 in a horizontal plane, said spring having an end portion 244 which interengages in the V-groove 246 in the normal projected position of said latching member as shown in Fig. 18. The latching member 234 is axially retractible in the manner previously described for sash removal from the window frame and is axially projectible to a sash locked position as shown in Fig. 17 in which the spring end portion 244 is partially disengaged from the groove 246.

In order to lock a sash in said sash locked position and in a burglarproof manner, the finger piece 248 is threadedly disengaged from the part 236 of latching member 234 and a lock screw 250 is substituted therefor. The lock screw 250 is threaded through the tapped aperture 252 and extends through a registering aperture 254 in the spring 242 into abutting relation with the wall 256 of the bracket 232 and the stop member 258 which is secured to said wall by the rivets 260. The stop member 258 is constituted by an angle part having a depending stop or flange 262 which effectively prevents the axial retraction of the latching member 234 and vertical movement of its associated sash when the lock screw is in a locking position as shown in Figs. 16, 17, and 19. It will be apparent that the lock screw, which abuts the wall 256 of the bracket, effectively prevents the pivotal bodily movement of the latching member and sash release. If desired, the stop member 258 may be constituted by an integral struck-out portion of the wall 256. The lock screw 250 is a conventional screw having a slotted flat head 264 which is in flush relation with the planar surface 266 of the part 236 with the slot 268 of the screw head being in alignment with, and of corresponding thickness as, the slot 270 of said planar surface 266 in the locked condition of said lock screw (see Fig. 20*a*). Accordingly in the locked condition of the lock screw accurate registration of a screw driver with slot 268 is required to remove the lock screw and this may be easily effected by one from an inside position or from inside the building structure but becomes a difficult or near impossible task for a burglar who must gain access to such lock screw from an outside position, as by breaking a window pane, or the like. Thus a burglar without frontal visual access to the lock screw will be frustrated in his attempt to remove such lock screw (assuming he is sufficiently accomplished to know that such lock screw removal is required for unlocking the sash) rendering such construction burglarproof or essentially so. Without frontal visual access to the lock screw, moving a screw driver along slot 270 to register with slot 268 only is a difficult task as any small portion of the screwdriver which extends beyond slot 268 will effectively prevent lock screw backout and removal. The lock screw may be disposed at any position along the length of the part 236 and it is within the scope of the present invention to arrange one or more slots along said part in any desired manner so that the slotted head of the lock screw aligns with at least one of such slots in the flush or locked condition thereof.

In Fig. 20*b* the surface 266' is provided with additional horizontal slots 272 which extend for the length of the part 236 to further confuse and frustrate a would-be burglar without frontal visual access to the lock screw. In Fig. 20*c* the slots 274 are arranged vertically with one of said slots 274' aligning with the slot 268 of the lock screw head in the locked position thereof. In Fig. 20*d* the slots 276 are arranged diagonally with one of said slots 276' aligning with the slot 268 of the lock screw head in the locked position thereof.

Secured in the elongated opening 130' of the sash stiles is a trim plate 278 which comprises an outer plate 280 and a recessed part 282, the latter interfitting in said opening. The outer plate 280 is secured to the sash stiles in flush relation therewith by screws 284 which extend through the apertures 286 provided in said outer plate. The rear wall 288 of the recessed part is provided with an elongated opening 290 for the extension therethrough of the finger piece 248 and the lock screw replacement therefor, said rear wall having a peripheral gasket 292 secured thereto and in adjacent relation with the latching member 234 for deadening or absorbing the sound between said rear wall and the latching member. If desired, springs 294 may be substituted for gasket 292 as shown in Figs. 23 and 24, said springs being horizontally disposed and secured at one end to the rear wall 288 of the recessed part, the opposite end being free and

bearing against the latching member for biasing the latter away from said rear wall. It will be understood that the part 236 of the latching member is accessible through the trim plate and that finger piece 248 is normally secured to said part for actuating the latter as described above, said finger piece being removed and a lock screw substituted therefor by the householder when it is desired to lock the sashes in a burglar proof manner.

As best shown in Fig. 17, the latching member is preferably disposed at an angle to the face of the sash stile and the plate 280 of the trim plate to render it more difficult to engage the lock screw head with a screwdriver from a blind position and thus to further frustrate a would-be burglar. Where the plate 280 of the trim plate overlaps the sash stiles as distinguished from a flush assembly as shown in Figs. 17–19, said plate may be provided with one or more projections 296 (Fig. 16) to frustrate the use of a locating template on said plate for the lockscrew by a burglar, said projection being disposed at any desired peripheral position and different plates may have differently positioned projections. Similarly, if desired, a side wall portion of the recessed part 282 may be provided with one or more projections 298 (Fig. 21) to frustrate the use of a locating template in said recessed part for locating the lock screw by a burglar, said projection being located at any desired position and different trim plates may have differently positioned projections.

With reference to Figs. 25–27, the jamb 300, companion to the latch devices 230, has a spacer strip 302 suitably secured thereto, said jamb being routed to define longitudinally extending grooves 304 and 304' therein similar to grooves 208 previously described. The upper and lower sash track members 306 and 306', respectively are suitably secured in the grooves 304 and 304', respectively and the upper sash track member is adapted to cooperate with the upper sash latch device whereas the lower sash track member is adapted to cooperate with the lower sash latch device. The track members may be of any suitable construction, for example of solid metallic construction or a hollow stamped metal construction, each of said track members having a series of vertically spaced shoulder portions 308 and cam edges 310 extending upwardly from said shoulder portions for the purposes described in connection with the corresponding shoulder portions 142 and cam edges 144. Suitably secured in cutouts at the base of the cam edges 310 adjacent to shoulder portions 308 are sound absorbent pads 312 formed of rubber or any other suitable material, said pads being effective to deaden or absorb the sound of the latching member engaging said shoulder portions.

The track members 306 and 306' are provided with end portion locking recesses 314 and 314', respectively for the latching member and, more particularly, for the end portion 114' thereof, said recesses having registering recess portions 316 and 316', respectively defined in jamb 300 as shown in Fig. 27. The recess portions 316 and 316' extend below the grooves 304 and 304' and are substantially coextensive with said end portion locking recesses.

The outermost locking recesses and registering recess portions are adapted for the reception of companion latching members for locking the sashes in a fully closed position whereas the adjacent locking recesses and registering recess portions spaced from said outermost recesses are adapted for the reception of companion latching members for locking the sashes in a slightly opened position and thereby providing some room ventilation. The registering recess portions provide an extra margin of locking safety as the latching members will remain positively locked in the locking recesses even where the would-be burglar attempts sash removal by the movement thereof away from jamb 300. Accordingly the latching members extend into the recess portions 316, 316' in the locked position thereof as shown in Fig. 17 and a substantial length of the latching members extend into the locking recesses 314, 314' even where a sash is laterally shifted in attempted sash removal. It will be observed that in the locked position of the latching members the part 236 thereof abuts the face plate 92' of the bracket 232. In the normal unlocked position of the latching members as shown in Fig. 18, said latching members are retracted from the recess portions 316, 316' and operate in the manner previously described in detail with reference to latch devices 86.

If desired, an additional conventional locking device may be used for locking the sashes in a closed position. The latching member may be magnetized if desired so as to render it more difficult for a burglar to locate the lock screw with a screwdriver formed of magntically attracted material.

While in the illustrated embodiments, the latch devices have been shown in association with removable sashes, it is within the scope of the present invention to utilize such latch devices in association with non-removable sashes, such as is presently in widespread use in existing building structures, and in such a non-removable sash installation the window frame or jamb member, adjacent the latch devices, will be provided with suitable track structure for the reception of companion latching members of the latch devices as aforedescribed.

While in the illustrated embodiments a pair of sashes are shown installed in a window frame, it will be apparent that it is within the scope of the present invention to provide a window construction of the aforedescribed character utilizing any desired number of sashes.

While there is shown and described herein certain specific structure embodying the invention it will be manifest to those skilled in the part that various modifications and rearrangements of the parts may be made without departing from the spirit and scope of the underlying inventive concept and that the same is not limited to the particular form herein shown and described except insofar as indicated by the scope of the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A latching device for a window construction of the character described, comprising a bracket having aligned apertures one of which is elongated in one plane, a latching member mounted for pivotal bodily movement in said plane in said aligned apertures, said latching member having an end portion thereof extending through said elongated aperture and extending laterally beyond the surface of a companion wall of said bracket, means carried by said bracket for resiliently biasing said latching member in said plane, said latching member being axially movable from said position in which said projecting portion extends laterally beyond said wall surface to a retracted position in which said projecting portion is retracted inwardly of said bracket from said first mentioned position, and means for locking said latching member in said first mentioned position comprising abutment means carried by said bracket and a lock screw carried by said latching member disposed for engagement with said abutment means in the locking position thereof, said lock screw in the locking position thereof being disposed in flush relation with adjacent surface portions of said latching member.

2. A latching device, comprising a bracket mounting a latching member for axial movement between first and second positions, and means for locking said latching member in one of said positions comprising abutment means disposed in fixed relation with said bracket and a lock screw carried by said latching member disposed for engagement with said abutment means in the locking position thereof, said lock screw having a slotted head which is disposed in flush relation with adjacent surface portions of said latching member in the locking position of said lock screw, said latching member surface portions

being slotted with said slot having a cross section corresponding to the cross section of said lock screw head slot, the latter being in alignment with said latching member slot whereby to render lock screw removal burglarproof from a position without frontal visual access thereto.

3. A latching device for a window construction of the character described, comprising a bracket having aligned apertures one of which is elongated in one plane, a latching member mounted for pivotal bodily movement in said plane in said aligned apertures, said latching member having an end portion thereof extending through said elongated aperture and extending laterally beyond the surface of a companion wall of said bracket, means carried by said bracket for resiliently biasing said latching member in said plane towards one end of said elongated aperture, said latching member being axially movable from said position in which said projecting portion extends laterally beyond said wall surface to a retracted position in which said projecting portion is retracted inwardly of said bracket from said first mentioned position, and means for locking said latching member in said first mentioned axial position and disposed at said one end of said elongated aperture, said means comprising abutment means carried by said bracket and a lock screw carried by said latching member disposed for engagement with said abutment means in the locking position thereof, said lock screw having a slotted head which is disposed in flush relation with adjacent surface portions of said latching member in the locking position of said lock screw, said latching member surface portions being slotted with said slot having a cross section corresponding to the cross section of said lock screw head slot, the latter being in alignment with said latching member slot whereby to render lock screw removal burglarproof from a position without frontal visual access thereto.

4. A latching device for a window construction of the character described, comprising a bracket having aligned apertures one of which is elongated in one plane, a latching member mounted for pivotal bodily movement in said plane in said aligned apertures, said latching member having an end portion thereof extending through said elongated aperture and extending laterally beyond the surface of a companion wall of said bracket, means carried by said bracket for resiliently biasing said latching member in said plane towards one end of said elongated aperture, said latching member being axially movable from said position in which said projecting portion extends laterally beyond said wall surface to a retracted position in which said projecting portion is retracted inwardly of said bracket from said first mentioned position, and means for locking said latching member in said first mentioned axial position and disposed at said one end of said elongated aperture, said means comprising abutment means carried by said bracket and a lock screw carried by said latching member disposed for engagement with said abutment means in the locking position thereof, said lock screw having a slotted head which is disposed in flush relation with adjacent surface portions of said latching member in the locking position of said lock screw, said latching member surface portions being slotted with said slot having a cross section corresponding to the cross section of said lock screw head slot, the latter being in alignment with said latching member slot whereby to render lock screw removal burglarproof from a position without frontal visual access thereto, said latching member surface portions having at least one additional slot corresponding in cross section to said first mentioned latching member surface slot laterally spaced from the latter.

5. A latching device for a window construction of the character described, comprising a U-shaped bracket having laterally spaced walls and a connecting transverse wall, said laterally spaced walls having aligned apertures one of which is elongated in a direction towards said transverse wall, a latching member mounted for pivotal bodily movement in said direction in said aligned apertures, said latching member having an end portion thereof extending through said elongated aperture and extending laterally beyond the surface of a companion lateral wall of said bracket, said latching member being axially movable from said position in which said projecting portion extends laterally beyond said wall surface to a retracted position in which said projecting portion is retracted inwardly of said bracket from said first mentioned position, means carried by said bracket for resiliently biasing said latching member in said direction, and means for locking said latching member in said first mentioned axial position with said latching member disposed at the end of said elongated aperture remote from said transverse wall, said means comprising abutment means carried by said bracket and a lock screw carried by said latching member disposed for engagement with said abutment means in the locking position thereof, said lock screw having a slotted head which is disposed in flush relation with adjacent surface portions of said latching member in the locking position of said lock screw, said latching member surface portions being slotted with said slot having a cross section corresponding to the cross section of said lock screw head slot, the latter being in alignment with said latching member slot whereby to render lock screw removal burglarproof from a position without frontal visual access thereto, said lock screw engaging said transverse wall to prevent pivotal bodily movement of said latching member towards said transverse wall.

6. In a window lock, a latching member comprising an apertured device and a lock screw therefor, said lock screw being mountable in said aperture for locking said latching member and axially movable longitudinally on the rotation thereof for unlocking said member, said lock screw having the head thereof disposed in substantially flush relation with adjacent surface portions of said device in the locking position of said lock screw, said lock screw head and the surface portions of said device being slotted with said slots being of corresponding cross section and in alignment whereby to render lock screw removal burglarproof from a position without frontal visual access thereto.

7. A latching device, comprising a bracket mounting a latching member for axial movement between first and second positions, said latching member comprising an apertured device, and means for locking said latching member in one of said positions comprising a lock screw and companion stationary stop means, said lock screw being mountable in said aperture in cooperative relation with said stop means for locking said latching member and axially movable longitudinally on the rotation thereof for unlocking said member, said lock screw having the head thereof disposed in substantially flush relation with adjacent surface portions of said device in the locking position of said lock screw, said lock screw head and the surface portions of said device being slotted with said slots being of corresponding cross section and in alignment whereby to render lock screw removal burglarproof from a position without frontal visual access thereto.

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