S. KRAFKA.

WINDOW LOCK.

APPLICATION FILED FEB. 12, 1919.

1,329,977. Patented Feb. 3, 1920.

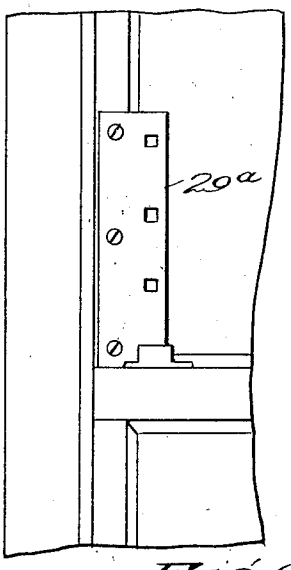


FIG. 6.

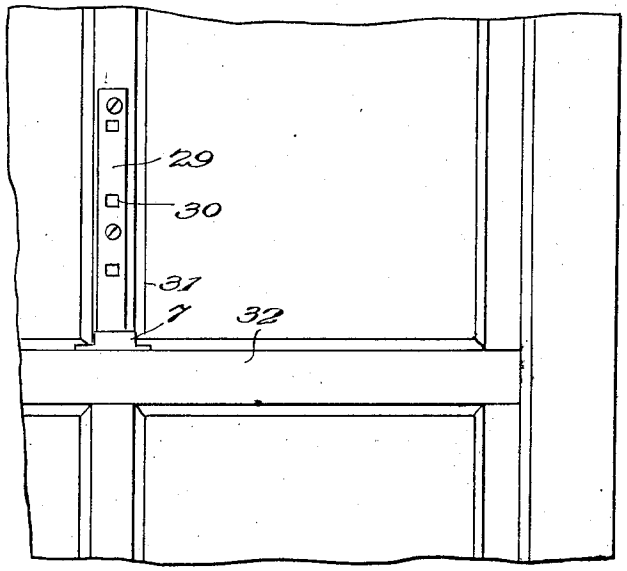


FIG. 1.

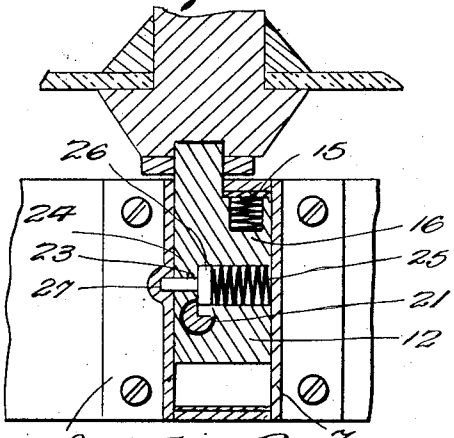


FIG. 2.

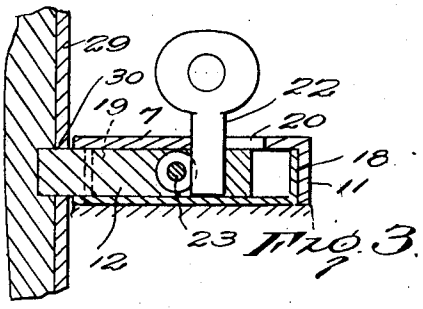


FIG. 3.

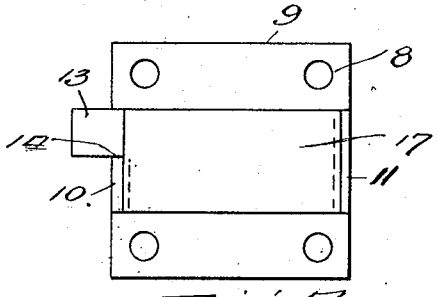


FIG. 4.

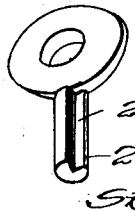


FIG. 5.

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STEFAN KRAFKA, OF CHICAGO, ILLINOIS.

WINDOW-LOCK.

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Application filed February 12, 1919. Serial No. 276,548.

To all whom it may concern:

Be it known that I, STEFAN KRAFKA, a citizen of Austria, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window-Locks, of which the following is a specification.

This invention relates to improvements in locks of that type which is especially designed for locking the sash of a window although the invention is not necessarily limited to such use and may be utilized with equal effectiveness for various other purposes.

The invention has for its primary object to provide a lock equipped with a spring retracted bolt which is locked in projected position by a key controlled plunger, the arrangement of the key and bolt being such that the key is utilized to project the bolt to upward positions.

With the above and other objects in view as will appear as the description proceeds, the invention comprises the novel features of construction, combination and arrangement of parts which will be more fully described in the following specification and set forth with particularity in the claims appended hereto.

In the drawings:—

Figure 1 represents a fragmentary elevation of a conventional type of window illustrating the invention applied thereto,

Fig. 2 represents a horizontal sectional view, partly broken away, of the window showing the interior construction of the lock,

Fig. 3 represents a vertical sectional view taken at right angles to Fig. 2,

Fig. 4 represents a rear or bottom plan view of the lock casing,

Fig. 5 represents a perspective view of the key detached, and

Fig. 6 represents a fragmentary elevation of a window illustrating a modified type of locking plate applied to the window frame structure.

Referring to the drawings in detail, wherein similar reference numerals designate corresponding parts throughout the several views, the numeral 7 indicates the casing of the lock which may be constructed of sheet metal struck up medially to provide the casing portion and having terminal apertures 8 in the extended flanged portions 9 affording adequate means for receiving screws or other fasteners by which the casing is fastened in position upon a window frame or other support. The end walls 10 and 11 of the casing are formed by inturned portions of the sheet metal from which the same is constructed and the bolt 12 is mounted for longitudinal movement in the casing and is provided with a reduced terminal 13 adapted to be projected through the opening 14 formed in the front end wall 10.

The bolt is normally retained in retracted position by the tension of the coil spring 15 confined between the end wall 10 and a shoulder 16 of the bolt and serving also to maintain the rear plate 17 of the lock casing in operative position during operation of the lock. The extremities of the plate 17 are directed angularly as indicated at 18 and 19 and the extension 18 is confined between one end of the bolt 12 and the corresponding end 11 of the casing whereas the opposite angular terminal 19 of the plate is confined between the spring 16 and end walls 10 and thus frictionally held in operative position. The front wall of the casing 17 is formed with a longitudinal slot 20 through which a key hole 21 in the bolt 12 is at all times visible regardless of the position of the bolt and a key 22 is adapted for insertion in the hole to facilitate retraction and projection of the bolt.

A plunger 23 is reciprocably mounted in a transverse opening 24 formed in the bolt and is normally retained in outwardly extending position by the tension of a coil spring 25 bearing at one terminal upon the inner surface of one of the side walls of the casing 7 and engaged at its opposite terminal with the enlarged extremity 26 of the plunger. The outer terminal of the plunger is rounded and adapted for reception in a depression or recess 27 formed internally of the casing and so arranged as to receive the plunger when the bolt is extended as illustrated in Fig. 2. The enlarged terminal of the opening receiving the plunger 24 intersects the transverse key receiving opening 21 and communicates therewith and thus when the plunger is in outwardly extended or operative position as illustrated in Fig. 2 the circular head 26 projects into the opening 21 and is received within the longitudinal slot 28 of the key 22 when the latter is inserted in the key hole. The radial shoulder

defined by the slot in the key abuts the head 26 and as the key is rotated withdraws the plunger 24 from the recess 27 releasing and permitting withdrawal of the bolt 12.

The reduced terminal of the bolt 12 is designed to coöperate with a plate 29 provided with a plurality of variously spaced apertures 30 of such size as to accommodate the bolt and the lock and plate may be applied, respectively, to the upper and lower window sashes 31 and 32 so that the latter may be effectively locked and closed or various other positions, as desired. The bolt 12 is normally retained in retracted or inoperative position by the tension of the spring 15 and when it is desired to lock the window sashes, the bolt is projected with the assistance of the key 22 which is inserted in the opening 21 moving the bolt against the tension of the spring 15 and engaging the reduced forward terminal thereof in one of the apertures 30 of the locking plate 29. As the bolt approaches the limit of its projection the plunger 23 is automatically seated in the depression 27 by the influence of the spring 25 thereby effectively locking the bolt in projected position. To release the bolt, the key is inserted in the opening 21 and partially turned so as to engage one of the radial shoulders defined by the groove 28 with the terminal 26 of the plunger thereby withdrawing the latter from the depression 27 and permitting the bolt to move inwardly under the influence of the spring 15.

In the modification of the invention illustrated in Fig. 6, the plate 29[a] is of slightly greater width than the type of plate illustrated in Fig. 1 and it is designed to be secured along one longitudinal edge to one of the side members of the upper sash instead of to the center member of the sash as shown in Fig. 1.

What I claim is:—

1. A lock including a casing, a bolt reciprocably mounted in said casing provided with intersecting and communicating openings, a spring actuated plunger mounted in one of said openings for locking the bolt in projected position, a cylindrical head carried by said plunger, and a key removably engaged in the other opening having a longitudinal groove defining a radial shoulder for engaging and moving the head inwardly to retract the plunger during rotary movement of the key in one direction.

2. A lock including a casing having an open back and a slotted front wall, a bolt reciprocably mounted in said casing having a reduced terminal adapted for projection through one end of the casing, spring means confined between said end of the casing and the adjacent terminal of the bolt to maintain the latter in retracted position, said bolt having intersecting transverse openings, a spring actuated plunger movable in one of the openings and engageable with the casing to maintain the bolt in projected position, a cylindrical head carried by the inner terminal of the plunger, and a longitudinally slotted key provided with a radial shoulder adapted for insertion in the other opening, the radial shoulder of said key being engageable with the head to withdraw the plunger incident to rotary movement of the key, said key constituting a handle for adjusting the bolt and being slidably received in the slot in the casing.

In testimony whereof I affix my signature hereto.

STEFAN KRAFKA.