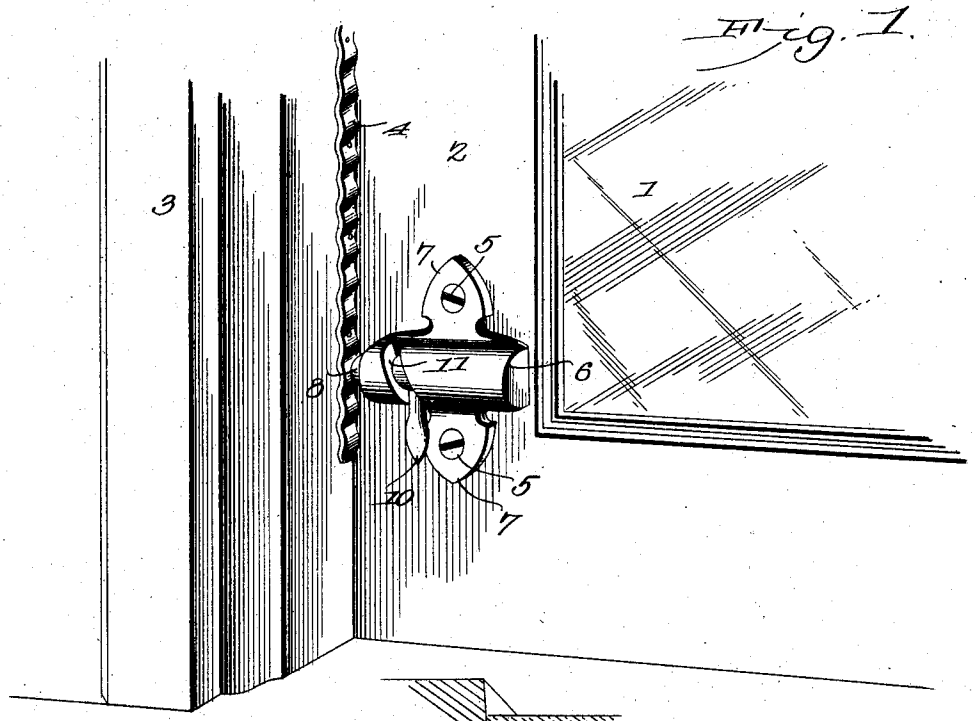
W. D. RANKINS.

SASH LOCK.

APPLICATION FILED JUNE 27, 1904.

901,470. Patented Oct. 20, 1908.

Fig. 1.



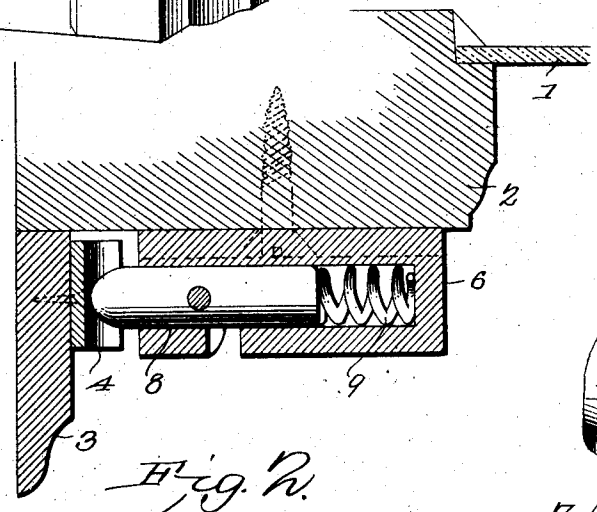
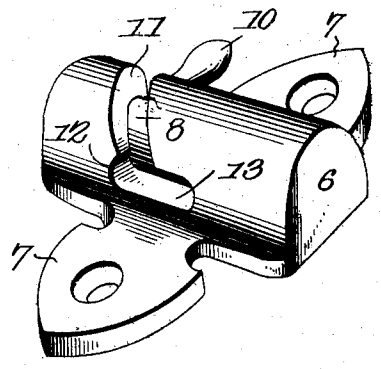


Fig. 2.

Fig. 3.



Witnesses

E. C. Stewart

G. J. Amor

William D. Rankins, Inventor

by C. A. Snow & Co

Attorneys

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM DWIGHT RANKINS, OF MODESTO, CALIFORNIA.

SASH-LOCK.

No. 901,470. Specification of Letters Patent. Patented Oct. 20, 1908.

Application filed June 27, 1904. Serial No. 214,361.

To all whom it may concern:

Be it known that I, WILLIAM D. RANKINS, a citizen of the United States, residing at Modesto, in the county of Stanislaus and State of California, have invented a new and useful Sash-Lock, of which the following is a specification.

My invention relates to sash locks and has for its objects to produce a comparatively simple, inexpensive device of this character which may be readily manipulated to permit raising or lowering the sash or for securely locking the latter against movement, and one in which the device will, when in locked position, effectually prevent rattling of the sash within its casing.

To these ends the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a perspective view of a portion of a window and its casing showing my invention tional view centrally and longitudinally applied thereto. Fig. 2 is a horizontal sec- through the sash lock. Fig. 3 is a perspective view of the lock removed from the sash.

Referring to the drawings, 1 designates a window, 2 its sash, 3 the sash frame or casing, and 4 a vertical longitudinal rack or its equivalent applied to the latter adjacent to the outer face of the sash. The window, the sash and the casing, may be of the usual or of any preferred construction, but the rack 4 preferably consists simply of a strip of metal, corrugated to present a series of undulations, each of which may be regarded as constituting a tooth of said rack.

Attached by means of screws or other suitable fastening devices 5 to the sash 2, is the casing 6 of my improved lock, this casing, which is composed of metal, being preferably of tubular form as shown and provided with a pair of oppositely extended perforated ears 7 for the reception of the fastening devices.

Arranged for longitudinal reciprocation within the shell or case 6, is a locking member or bolt 8 which normally projects through the forward open end of the case for engagement with the rack 4 and is pressed to engaging position by means of an expanded spring 9 bearing at its ends respectively against the rear end of the bolt and the rear closed end of the case.

Detachably engaged with and carried by the bolt 8 is a transverse projecting actuating and locking member or arm 10 adapted to travel in a transversely inclined cam slot or way 11 provided through the wall of the casing 6, said slot being provided at the normally lower end of its front marginal wall with a slight depression or seat 12 and opposite said seat with a rearward extension or branch 13 disposed longitudinally of the casing.

In practice the spring 9 will normally press the locking bolt forward into engagement with the corrugated strip constituting the rack 4 with sufficient force to hold the window in any desired position against accidental movement and under such conditions the arm 10 will lie within the seat or depression 12 to prevent accidental movement of the member. When, however, it is desired to securely lock the window against movement the arm 10 is turned from its normal position, as seen in Fig. 1 to the locking position shown in Fig. 3 and will, in traveling through the cam slot 11, be actuated by the latter for pressing the forward end of the locking bolt into firm and secure engagement with the corrugated strip or rack 4. It is to be noted that under these conditions the sash will be forced in an opposite direction from the bolt and will thus be prevented from looseness or rattling within its casing. When it is desired to release the sash for free movement within its frame, the member 10 is brought opposite the forward end of and pressed rearward into the longitudinal extension 13 of the slot, thereby retracting the bolt against the action of spring 9 to fully release the forward end of the latter from engagement with the rack 4. The rack 4, which, as already described, is preferably constructed or composed of a corrugated, undulating strip of metal, as clearly shown in Fig. 1 of the drawings, may be produced at a very trifling expense as compared with devices of this class ordinarily employed; it will also be observed that the projecting, engaging point of the bolt 8 is rounded so that, when the handle member 10 of the said bolt is not in engagement with the cam groove 11, the engaging point of the bolt will be capable of sliding freely over the teeth or undulations of the corrugated strip or rack, and at the same time be held operatively in engagement therewith by the tension of the spring 9. In other words, a device is provided which permits the sash to

be raised or lowered without necessity for operating the fastening device, the bolt of which will slip or slide over the corrugated or undulating strip constituting the rack, in such a manner, however, as to engage the latter, under the tension of the actuating spring, with sufficient tenacity to support the sash in any position to which it may be adjusted. The construction of the bolt and its casing is extremely simple and effective, the former being throughout its length of an exterior diameter equal to the interior diameter of the casing, which latter is closed at its outer end, the said closed outer end affording a seat for the small coiled actuating spring which is housed between said seat and the inner end of the bolt.

From the foregoing it is apparent that I produce a simple, inexpensive device admirably adapted for the attainment of the ends in view, it being understood that minor changes may be resorted to without departing from the spirit of the invention.

Inasmuch as the distance between the rear side of the arm 10 and the tip of the rounded end of the bolt 8 is greater than the distance between the rear edge of the spiral portion 11 of the slot in the vicinity of the closed end thereof and the surfaces of the valleys of the keeper 4 when the said arm 10 is forced into the spiral portion 11 of the slot the rear edge of the said portion will move the bolt 8 longitudinally and force the pointed end thereof into engagement with the valleys of the keeper 4. Thus a positive lock is provided.

Inasmuch as the distance between the forward side of the bolt arm 10 and the tip of the rounded end of the bolt 8 is less than the distance between the bottom of the seat 12 and the surface of the valleys of the keeper 4; and is greater than the distance between the bottom of the seat 12 and the surfaces of the ridges of the keeper 4; when the said arm 10 is lodged in the seat 12 the end of the bolt 8 will have resilient contact with the ridges of the keeper 4, thus the window may be moved up or down without manipulating the bolt and the window will be retained at any desired position but is not positively locked in such position as above described.

Inasmuch as the distance from the closed rear end of the longitudinal portion 13 of the slot to the open end of the casing 6 is greater than the distance from the bolt arm 10 to the tip of the rounded end of the bolt 8; when the said arm 10 is manually moved back into the portion 13 of the slot the bolt 8 is entirely out of engagement with the keeper 4.

Having thus described the invention, what is claimed is:—

In a device of the kind described, a keeper, a lock comprising a casing provided with a cylindrical recess therein adapted to receive a bolt, and a cam groove extending therethrough and further provided with a T-slot at one end of said cam groove arranged parallel with the axis of said cylindrical recess, a bolt held in said cylindrical recess, a spring in said recess arranged to normally press said bolt outward, a handle attached to said bolt projecting outward from the casing arranged to lie in said slots, said handle being arranged to force said bolt into positive engagement with said keeper by means of said cam slot, to permit spring pressed frictional engagement of said bolt with said keeper when lying in one end of said T-slot, and to permit the freeing of said bolt from said keeper when drawn into the opposite end of said T-slot.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM DWIGHT RANKINS.

Witnesses:
C. O. ANDERSON,
J. D. HARP.