Aug. 24, 1926. 1,597,405

F. M. DAVENPORT

SASH OR SCREEN LOCK

Filed June 4, 1925

Fig. 3.

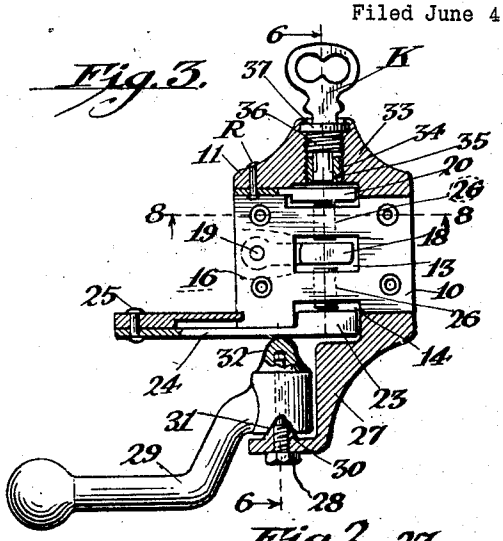


Fig. 1.

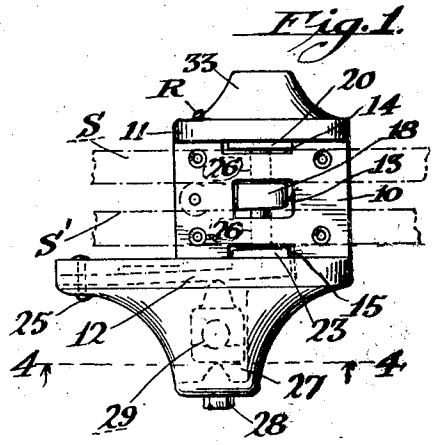


Fig. 2.

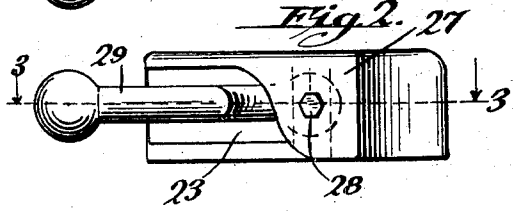


Fig. 4.

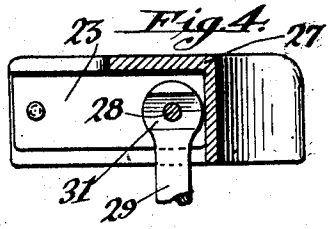


Fig. 5.

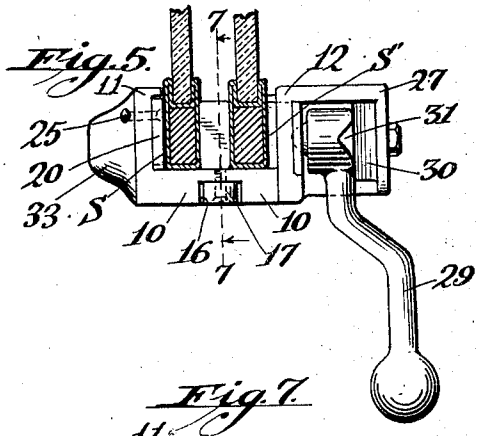


Fig. 6.

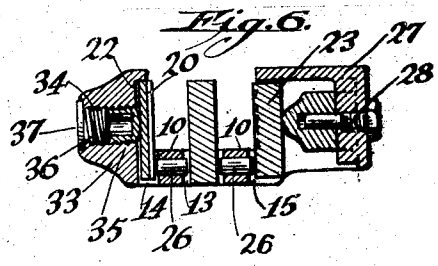


Fig. 7.

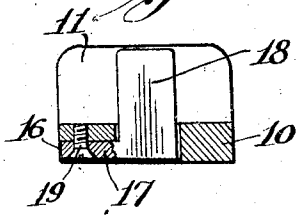
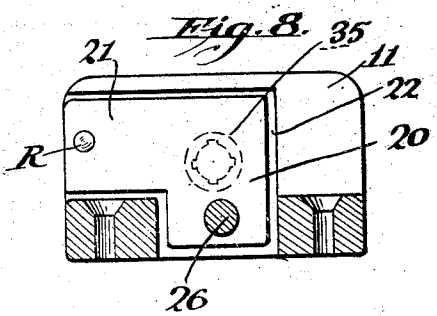


Fig. 8.



Witness:

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Attorneys.

Patented Aug. 24, 1926. 1,597,405

UNITED STATES PATENT OFFICE.

FRED M. DAVENPORT, OF LOS ANGELES, CALIFORNIA.

SASH OR SCREEN LOCK.

Application filed June 4, 1925. Serial No. 34,812.

This invention relates to improvements in sash or screen locks and is particularly an improvement over that type of lock which is disclosed in my prior Patent No. 1,533,725, issued April 14, 1925.

An object of this invention is to provide a sash lock which has an improved shoe arrangement and an improved means for actuating the shoe so as to cause it to frictionally engage the sash.

Another object of this invention is to provide a sash lock having a shoe engageable upon the sash so as to frictionally lock it, and to provide a lock controlled shoe engaging means which will permit the device to be embodied, as for example, upon enclosed vehicles, so that the sash forming the enclosure can be locked in closed position from the outside of the vehicle, so as to prevent unauthorized opening.

A still further object of this invention is to provide an improved sash lock which is capable of locking two sash simultaneously, and to provide shoes capable of engaging the sash which are spaced from each other in an improved manner.

With the foregoing and other objects in view which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a top plan view of the improved sash or screen lock shown in locking position,

Fig. 2 is a side elevation of the lock,

Fig. 3 is a horizontal section taken upon the line 3—3 of Fig. 2,

Fig. 4 is a sectional view taken upon the line 4—4 of Fig. 1,

Fig. 5 is an end elevation taken in the direction of the arrow 5 upon Fig. 3,

Fig. 6 is a vertical section taken on the line 6—6 of Fig. 3,

Fig. 7 is a vertical section taken on the line 7—7 of Fig. 5, and

Fig. 8 is a vertical section taken upon the line 8—8 of Fig. 3.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, the improved sash lock consists of a box having a bottom 10 provided with upstanding sides 11 and 12. In the bottom of the box there are formed three apertures, indicated at 13, 14 and 15. The aperture 13 is positioned at the center of the bottom, and on the under side of the bottom 10 there is formed a recess 16 which is adapted to receive the annular portion 17 of the upstanding shoe 18. The upstanding shoe 18 constitutes the sash engaging member which is adapted to be positioned between the two sash S and S′, when both sash are positioned between the upstanding side walls 11 and 12. The portion 17 of the sash engaging member 18 is pivoted to the bottom of the box as by a screw or rivet 19. The apertures 14 and 15 are arranged adjacent the sides 11 and 12. The aperture 14 is adapted to receive the downwardly extending portion of the shoe 20, which has secured thereto a shoe leaf 21. The shoe leaf 21 may be formed with the shoe 20 or may be a separate part attached thereto. It is preferably resilient or bendable and is disposed within a recess 22 formed in the side 11. The leaf 21 is fastened to the side wall as by a rivet R. The shoe 23 is of a similar construction having a downwardly extending portion receivable in the aperture 15. It is provided with a shoe leaf which is resilient or bendable and which is indicated at 24. The shoe leaf 24 is rigidly fastened to the side wall 12 as by a rivet 25. It will be noted that the apertures 13, 14 and 15 are of such size as to provide a considerable clearance about both of the shoes 20 and 23 and about the center sash engaging member 18, so as to permit a limited movement of these parts relatively to the box.

In the portions of the bottom 10 which are disposed between the apertures 13 and 14 and between the apertures 13 and 15 there are formed bores which slidingly receive spacing pins 26. These spacing pins are slightly shorter than the width of the respective sash S and S′. On one side of the box there is formed an outwardly extending casing, as indicated at 27. On this casing there is mounted an inwardly extending stud 28, which provides a pintle for the lever 29. On the inside of the casing 27 there is formed a wedge shaped boss 30 adjacent the stud 28. This wedge shaped boss is capable of being received within a corresponding recess 31 formed upon the lever 29.

The opposite side of the lever is rounded, as indicated at 32, and engages the outer side of the shoe 23.

The operation of this shoe engaging means is as follows: When the lever 29 is in such position that the wedge shaped boss 30 is disposed within the recess 31, the lever will occupy its retracted position within the housing or casing 27 and the resiliency of the shoe leaf 24 will move the shoe 23 into disengaging position so that it will disengage and free the sash S'. If the lever 29 is partly rotated upon the stud 28, it will cause the recess 31 to be moved out of register with the wedge shaped boss 30, which will cause the lever to be bodily shifted toward the center of the box. This forces the shoe 23 inwardly, bending the shoe leaf 24. The shoe 23 in this position engages the sash S', if it is positioned within the box, and if the sash S' is not within the box, the shoe 23 engages the end of the adjacent spacer pin 26. The opposite end of the spacer pin engages the sash engaging member 18 and will move it toward the side 11, causing the sash engaging member 18 to engage the sash S if it is present. If the sash S is also missing, the sash engaging member 18 engages the other spacer pin 26 which in turn engages the shoe 20. Obviously, if the sash S' is within the box and the sash S is missing, the sash S' will be compressed or frictionally gripped between the shoe 23 and the sash engaging member 18 with the sash engaging member engaging the end of the spacer pin 26 most adjacent the shoe 20. In this manner by rotation of the lever 29, either one or both of the sash S or S' can be frictionally locked within the box.

On the side 11 of the box there is formed a boss or projection 33 adapted to receive parts of a key controlled lock which controls the movement of the shoe 20, so that if the improved sash lock is locked from the side 11, unauthorized opening of the sash will be prevented. Any suitable type of lock can be employed which is capable of shifting the shoe 20. On the drawing there is disclosed an aperture 34 formed in the boss 33. This aperture is interiorly threaded and receives an exteriorly threaded sleeve 35, which has grooves formed upon its interior. An outer part 36 is mounted within the boss over which is rotatable a slotted protecting washer 37. The key K is adapted to be inserted through the protecting washer 37 through the part 36 and into the sleeve 35. Projections upon the key K are receivable within the grooves on the interior of the sleeve 35 and will permit the key to rotate the sleeve. By rotating the sleeve 35, it will be unscrewed from within the boss so that it will engage the outer side of the shoe 20 and cause it to be moved toward the side 12 of the box. The shoe 20 will move bending the shoe leaf 21, and this movement of the shoe 20 will cause either one or both of the sash S or S' to be locked. After the sleeve 35 has been rotated sufficiently to lock the sash, the key can be withdrawn and thus prevent an unauthorized opening of the sash. The apertures 38 formed in the bottom of the box are for the reception of screws or nails in mounting the box in the desired position so that it may receive the sash S and S'.

It will be obvious that the sash lock of the improved construction can be modified in various manners and that the box may be so constructed as to receive three or more sash. Also, the box can be so employed as to lock a single sash by using the lever 29 and the lock on the box.

It will be understood that various changes in the detail of construction may be made without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. A sash or screen lock comprising a box, a resilient shoe secured to the side of the box, and lever and cam means mounted upon the side of the box for moving the shoe so as to cause it to frictionally engage a sash positioned within the box.

2. A sash or screen lock comprising a box, shoes mounted upon the box adjacent both sides thereof, and shoe engaging means upon both sides of the box and associated with each shoe whereby either shoe may be caused to engage a sash positioned within the box, each of said shoe engaging means being operable independently of the other.

3. A sash or screen lock comprising a box, shoes mounted upon the box adjacent both sides thereof, and shoe engaging means upon both sides of the box and associated with each shoe whereby either shoe may be caused to engage a sash positioned within the box, each of said shoe engaging means being operable independently of the other, one of said shoe engaging means being key controlled.

4. A sash or screen lock comprising a box capable of receiving two sashes simultaneously, a sash engaging member movably mounted upon the box adapted to be positioned between the two sashes, a shoe mounted upon the side of the box, means for causing said shoe to engage one of the sashes, and a spacer member slidable upon the box between said shoe and sash engaging member.

5. A sash or screen lock, comprising a box capable of receiving two sashes simultaneously, a sash engaging member movably mounted upon the box adapted to be positioned between the two sashes, shoes movably mounted upon both sides of the box,

shoe engaging means mounted upon both sides of the box capable of engaging said shoes, and spacer members slidable upon the box between said sash engaging member and said shoes.

6. A sash or screen lock comprising a box capable of simultaneously receiving two sashes, a sash engaging member pivoted adjacent the center of the box adapted to be positioned between the sashes, resilient shoes mounted upon the box adjacent the sides thereof, shoe engaging means for forcing said shoes into engagement with the sashes, and spacer pins slidable upon the box between the sash engaging member and the shoes.

7. A sash or screen lock comprising a box capable of simultaneously receiving two sashes, a sash engaging member pivoted adjacent the center of the box adapted to be positioned between the sashes, resilient shoes mounted upon the box adjacent the sides thereof, shoe engaging means for forcing said shoes into engagement with the sashes, and spacer pins slidable upon the box between the sash engaging member and the shoes, one of said shoe engaging means being controlled by a lock.

8. A sash or screen lock comprising a box having a bottom and side walls, a movable shoe mounted upon the box adapted to frictionally engage a sash positioned therein, shoe engaging means for forcing the shoe into engagement, and means for preventing unauthorized operation of the shoe engaging means mounted upon a side of the box.

9. A sash or screen lock comprising a box, a shoe movable upon the box adapted to frictionally engage a sash positioned therein, and lever and cam means mounted upon the box for moving the shoe, so as to cause it to engage the sash, said lever being movable about an axis transverse of the box.

10. A sash or screen lock comprising a box having a bottom and two side walls between which a sash may be positioned, and means for frictionally engaging the sash to hold it between the side walls including a lever mounted for rotation upon a side wall of the box around an axis perpendicular to the side wall of the box.

11. A sash or screen lock comprising a box having a bottom and two side walls between which a sash may be positioned, and means for frictionally engaging the sash to hold it between the side walls comprising a sash engaging member and a lever mounted for rotation upon a side wall of the box and rotatable about an axis perpendicular to the side wall of the box, said lever serving upon rotation to force the sash engaging member into engagement with the sash.

12. A sash or screen lock comprising a box having a bottom and two side walls between which a sash may be positioned, and means for frictionally engaging the sash to hold it between the side walls comprising a resilient sash engaging member secured to a side wall of the box and a lever mounted for rotation upon the side wall of the box, said lever being adapted upon rotation to engage the sash engaging member and force it into engagement with the sash.

13. A sash or screen lock comprising a box having a bottom and side walls between which two sashes may be simultaneously positioned, a central sash engaging member movable relatively to the walls of the box and adapted to be positioned between the sashes, sash engaging means mounted adjacent each side wall, and means for moving each of the last mentioned sash engaging means independently of the other.

14. A sash or screen lock comprising a box having a bottom and side walls between which two sashes may be simultaneously positioned, a central sash engaging member pivoted to the box and movable about an axis perpendicular to the bottom, a sash engaging means mounted upon the box adjacent one of the side walls, and means mounted upon the mentioned side wall of the box for forcing said sash engaging means into engagement with the sash.

In testimony whereof I have signed my name to this specification.

FRED M. DAVENPORT.