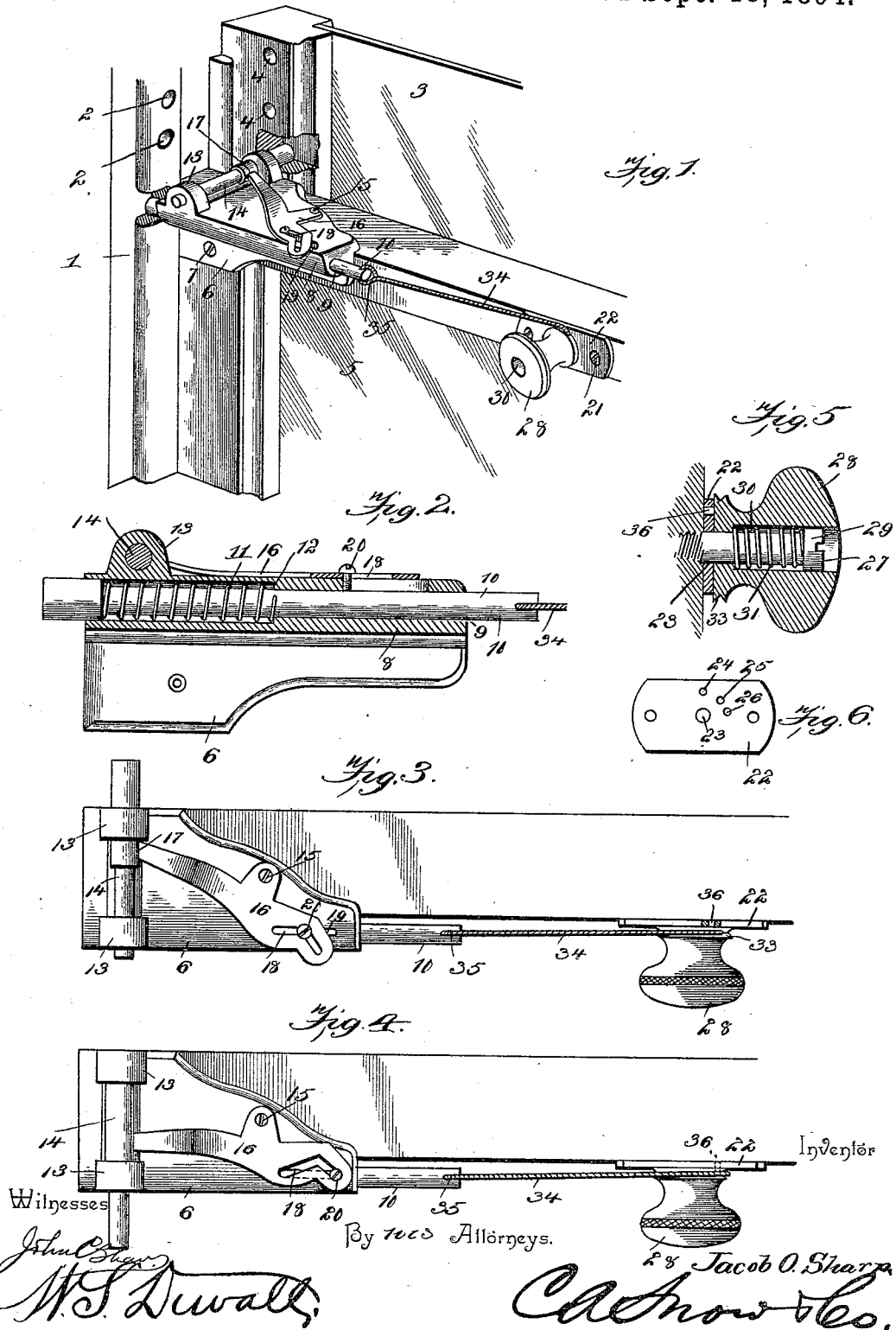


(No Model.)

J. O. SHARP.
SASH FASTENER.

No. 526,118.

Patented Sept. 18, 1894.



UNITED STATES PATENT OFFICE.

JACOB O. SHARP, OF REIDSVILLE, NORTH CAROLINA.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 526,118, dated September 18, 1894.

Application filed October 16, 1893. Serial No. 488,318. (No model.)

To all whom it may concern:

Be it known that I, JACOB O. SHARP, a citizen of the United States, residing at Reidsville, in the county of Rockingham and State of North Carolina, have invented a new and useful Sash-Lock, of which the following is a specification.

My invention relates to sash-locks; and the objects in view are to provide a lock for the above purpose designed to be located upon the meeting-rail of a lower sash in a window, and which is capable of locking said sashes in different relative positions for the purpose of ventilation, and for locking the sashes in their closed positions; and to provide a convenient means for operating the lock and retaining the bolts thereof in desired positions.

With these and other objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a portion of the meeting-rails of an upper and a lower sash, together with a portion of the window-frame. Fig. 2 is a vertical longitudinal sectional view through the bolt-chamber of the lock. Fig. 3 is a top plan view of the lower sash, the parts being in the position they assume when the lower sash-bolt has been withdrawn from its keeper. Fig. 4 is a similar view, the lower sash-bolt being further withdrawn and having actuated the upper sash bolt to withdraw the latter. Fig. 5 is a sectional view through the bolt-operating knob. Fig. 6 is a detail in elevation of the locking-plate upon which the knob is mounted.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the window-frame, and the side of the same is provided at a point opposite the upper meeting-rail of the lower sash and above said point with bolt-receiving openings 2. The upper sash 3 of the window has that side-rail adjacent to the openings 2 likewise provided with a series of bolt-openings 4. Below the upper sash is the usual lower sash 5.

Fitting over the front and upper surfaces of the meeting-rail of the lower sash 5 adjacent to one end thereof is a securing-plate 6, the same being of inverted L-shape when viewed in cross-section, and said plate is perforated at proper points for the reception of

screws 7 which pass therethrough and into the sash-rails. The plate has formed upon its front side at its upper edge a superficial rib 8, the same being bored at 9 and having mounted therein a bolt 10. The bolt 10 is free to reciprocate, and is reduced in rear of its outer end and has fitted thereon a coiled spring 11, the opposite end of which abuts against an annular shoulder 12 with which the bore 9 is provided.

Formed upon the upper side of the securing-plate and transversely opposite each other is a pair of bearing-lugs 13, and mounted for reciprocation therein is a bolt 14 the same being disposed at a right-angle to the bolts 10, as shown, and therefore adapted to engage with the bolt-opening 4 in the upper sash-rail in the same manner as the bolt 10 is designed to engage with the bolt-openings 2 of the window-frame.

Pivoted as at 15 upon the upper side of the securing-plate 6 is a bell-crank lever 16, which at its outer end engages loosely with a slot 17 formed in a bolt 14, and at its inner end is provided with a substantially L-shaped slot 18. A slot 19 is formed in the upper side of the bore 9 of the securing-plate, and the same registers with the slot 18 of the bell-crank lever 16. A pin 20 extends from the bolt 10 upwardly through the slot 18, and is headed, as shown, so that the bolt 10 has a limited reciprocation before the pin acts upon the outer branch of the slot 18 and hence actuates the bell-crank to withdraw the bolt 14 from its engaging hole.

To the front face of the upper meeting-rail of the lower sash 5 I secure by screws 21 a metal locking-plate 22, which as best shown in Fig. 6, is provided with a central perforation 23 and a series of concentric perforations 24, 25 and 26. Through the perforation 23 I insert a screw 27, and arrange upon the screw a knob 28 interposing between the head 29 of said screw and the bottom of a recess 30 in the knob a coiled-spring 31, the tendency of which is to press the knob against the plate 22. The knob is provided adjacent to its inner end with an annular groove 33 in which is fastened one end of a wire-cord 34, the remaining end being loosely connected at its rear end of the bolt 10. The knob is further provided at its inner end with a lug or pin 36 designed to engage with any one of

the perforations 24, 25 or 26, and held in such engagement by means of the coiled-spring 31. It will be obvious that by withdrawing the knob slightly so as to disengage the locking-pin 36 from any one of the perforations said knob may be partially rotated and the lug or pin 36 inserted in any other one of the perforations 24, 25, or 26. In operation to lock the sashes when the window will be entirely closed, the knob is withdrawn and partially rotated toward the lock, and the pin or lug 36 inserted in the hole 24. It will be seen that the coiled spring 11 of the bolt 10 has served to shoot the latter and the pin 20 operated in the slot of the bell-crank lever 16 has served to shoot the bolt 14, so that the lower sash is securely bolted to the frame 1 and the upper sash securely bolted to the lower sash; hence neither frame can be raised or lowered. Now by withdrawing the knob a short distance but rotating the same to the right it will be observed that the wire-cord 34 will withdraw the bolt 10 from the perforation in the window-frame and the pin 20 during such withdrawal will travel to the angle of the slot 18. As yet the bolt 14 which locks the upper sash remains undisturbed. By releasing the knob the pin 36 thereof engages with the central perforation 24 and thus the parts may remain in this position. By a further rotation of the knob away from the lock the pin 20 acting upon the inner branch of the slot 18 serves to oscillate the bell-crank upon its pivot 15 and thus withdraw the bolt 14 from the upper sash, and by inserting the pin 36 in the perforation 26 both bolts will be locked out of operative position and the sashes may be raised or lowered to their full extent. By lowering the upper sash or raising the lower sash, as the case may be, and releasing the upper bolt 14, the two sashes are locked together and hence permit of a ventilation both at the top and bottom of the window and yet will not permit of a raising of the lower sash or lowering of the upper sash to such an extent as to permit of the entrance of an intruder. On the other hand they may both be locked at any point by permitting the bolt 10 to enter one of the upper perforations 2 in the window-frame.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided a very cheap, simple, and economical device, that may be readily applied to the meeting rails of any window and which when in position will serve to lock the window entirely closed or partially open and will permit of any ventilation either at top or bottom that may be desired.

I do not limit my invention to the precise details of construction herein shown and described, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic without departing from the spirit thereof or sacrificing any of the advantages.

Having described my invention, what I claim is—

1. A sash lock, comprising a plate designed to be secured to a sash, a transverse sash-engaging bolt mounted for reciprocation on the plate and disposed horizontally, a horizontal window-frame-engaging bolt mounted on the plate and arranged at right angles to the transverse bolt and provided with a pin, and a bell-crank lever arranged horizontally, fulcrumed on the plate and having one end loosely connected to the transverse bolt and having its other end provided with a slot arranged at an angle to the window frame engaging bolt and receiving the pin thereof, whereby a reciprocation of one bolt will produce a corresponding reciprocation of the other bolt, substantially as described.

2. In a sash-lock, a plate adapted to be secured to the lower sash and having right angularly disposed reciprocating bolts to engage corresponding openings in a window-casing and upper sash, a spring for normally pressing one of the bolts outward, a bell-crank lever mounted on the plate and loosely engaging at one end one of the bolts and provided with an angular slot at its opposite end, a pin projecting from the spring-pressed bolt and engaging the slot, a swiveled knob, a spring pressing the same inwardly, means for locking the knob at any point of rotation, and a flexible connection between the knob and the spring-pressed bolt, substantially as specified.

3. In a sash-lock, a plate adapted to be secured to the lower sash and having right-angularly disposed reciprocating bolts to engage corresponding openings in a window-casing and upper sash, a spring for normally pressing one of the bolts outward, a bell-crank lever mounted on the plate and loosely engaging at one end one of the bolts and provided with an angular slot at its opposite end, a pin projecting from the spring-pressed bolt and engaging the slot, a metal plate adapted to be secured to the lower sash and having a central and an annular series of perforations, a knob arranged in front of the plate and having an axial bore, a headed screw passed through the bore and through the central perforation in the plate, a coiled spring interposed between the head of the screw and the inner end of the bore, a lug for engaging any one of the annular perforations, an annular groove formed on the knob, and a wire-cord connected with the groove and with the inner end of the spring-pressed bolt, substantially as specified.

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

J. O. SHARP.

Witnesses:

J. H. SIGGERS,
W. S. DUVALL.