A. B. LANDIS.

SASH LOCK.

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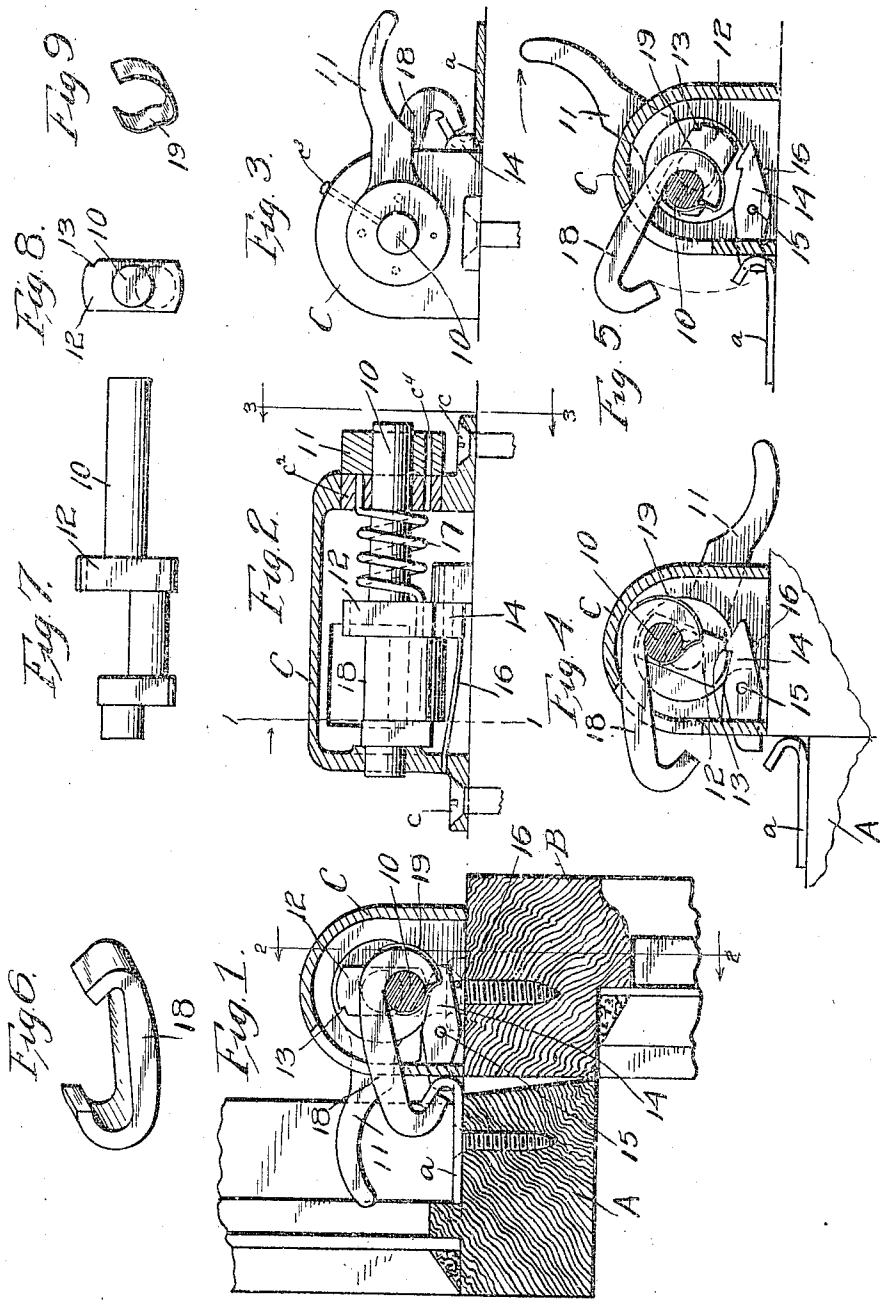
959,559. Patented May 31, 1910.



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SASH-LOCK.

959,559. Specification of Letters Patent. Patented May 31, 1910.

Application filed August 18, 1909. Serial No. 513,481.

To all whom it may concern:

Be it known that I, ABRAHAM B. LANDIS, a citizen of the United States, residing at Waynesboro, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Sash-Locks, of which the following is a specification.

My said invention consists in certain improvements in the details of construction and arrangement of parts of a sash-lock for windows, whereby a lock is provided which will act automatically to lock the window securely closed, and will also hold the sash tightly together, when in locked position, to prevent rattle, etc., all as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is a sectional view through the lower rail of the upper and the upper rail of the lower sash composing a window, in closed position, and through the lock on the dotted line 1—1 in Fig. 2, Fig. 2 a longitudinal section through the lock on the dotted line 2—2 in Fig. 1, Fig. 3 an end elevation as seen from dotted line 3—3 in Fig. 2, Fig. 4 a view similar to a portion of Fig. 1 showing the lock in open position, Fig. 5 a similar view showing the parts in the position they occupy with the lock partially open, and Figs. 6, 7, 8 and 9 detail views showing the different parts separately.

In said drawings the portions marked A represent the upper sash of the window, B the lower sash and C the casing of the lock.

The sash A and sash B are or may be the sash of any ordinary window and need no special description. On the top face of the lower rail of upper sash A is secured a clip *a* having an inturned hook-shaped outer end forming a part of the locking device.

The casing C is of appropriate form to inclose the working parts of the lock and is mounted on the top face of the upper rail of lower sash B being secured by screws *c*, as shown. A crank-shaft 10 is journaled in bearings in the ends of said casing with a lever 11 on its outer end and an arm 12 at a point adjacent to one end of the crank and within said casing, which arm is formed with a notch 13 in the appropriate corner to engage with a pawl 14 mounted on a pivot 15, and supported at its outer end on a spring 16 in the lower part of the casing, when the parts are in the open position shown in Fig. 4. A coiled spring 17 is mounted around said shaft 10 between the arm 12 and a collar c^2 in the end of casing C, one end being secured to said collar and its other end secured in said arm 12 and arranged to exert its tension against said arm to turn said shaft to throw the parts to locked position said arm 12 being secured rigidly to said shaft. The collar c^2 fits in an opening in the end of casing C, provided for convenience in assembling the parts, and is secured to casing C by a pin c^3 extending through a perforation into a perforation in said collar. In order to provide for the adjustment of the tension of spring 17 said collar is provided with a series of perforations in its periphery for engagement with said pin. Said spring is wound up by inserting a pin through a hole c^4 in the end of lever 11 and into a hole in the adjacent side of collar c^2, when the two parts will be coupled together and the turning of said lever will rotate said collar and wind the spring to the point desired when it can be secured by inserting the pin c^3 into the one of the holes in its periphery at this point. On the crank of said crank-shaft 10 is mounted a latch 18 with hook-shaped ends, being formed at its inner end to partially surround said shaft and held thereon by a leaf spring 19, of a form best shown in Fig. 9. Said spring will hold the hook-shaped end into engagement with said shaft so that it will normally be carried therewith in its movement, but will permit a slipping movement, as will be presently described. The outer end of said latch 18 projects through a slot in the casing C and has a hook-shaped end which is adapted, when the parts are in locked position, to engage under the hook of the clip *a* on sash A. The outer end of pawl 14 also projects through a slot in casing C at one side of the clip *a* with the top of which it is adapted to contact when the sash approaches a closed position to trip said pawl and release the spring held shaft.

In operation, supposing the parts to be in the position shown in Fig. 1, and it being desired to open the window, the shaft 10 is

turned by means of the lever 11, which at its start throws the crank portion of the shaft 10 forward, carrying with it the latch 18, until it slides its hook-shaped outer end out of engagement with the hook-shaped end of the clip *a*, thus disengaging the two parts of the lock. As the rotation of the shaft continues the upper side of latch 18 will strike the upper end of the slot (as shown in Fig. 5) in the casing and then slip on shaft 10 by reason of the frictional connection secured through the spring fastener 19. By reason of this arrangement the slot in casing C for said latch need be only of sufficient length to permit the latch to swing sufficiently to lock and unlock. The shaft is turned until the end of arm 12, by its notch 13, engages with the spring-mounted pawl 14 in the lower side of the casing, the parts being in the position shown in Fig. 4. When the window is closed, the parts being in this position, as the sash reaches a closed position, the outer end of pawl 14 strikes the top of clip *a* (see particularly Fig. 3) the pawl is thrown out of engagement with the arm 12 and the spring 17 thereupon acts to throw the shaft 10 over, which carries the crank outwardly, until the outer hook-shaped end of latch 18 passes over the hook-shaped end of clip *a*. The further turning of the shaft to the position shown in Fig. 1 carries said latch backward, drawing its hook-shaped end under the hook of clip *a* and thus automatically locks the sash and at the same time draws them into close contact and holds them against any rattle or vibration.

It will thus be seen that the device operates automatically to lock the windows as they are closed, avoiding any possibility of the locking being forgotten, or neglected, and the sash are brought and held tightly together so as to avoid all rattle between the parts. The locking engagement is such that any effort to open either sash will only serve to draw them more tightly and securely together until the latch is disengaged by turning the crank on which it is mounted.

It will be understood, of course, that the collar c^2 might be an integral part of the casing C, although I prefer the construction shown, on account of the greater convenience it affords in assembling the parts and adjusting the tension of the spring. It will also be understood that other modifications in the details of construction and arrangement of parts may be made without departing from my said invention.

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

1. A window sash-lock comprising a locking part secured to the upper sash and a locking part secured to the lower sash each formed with tapered hook-shaped ends adapted to engage when in locked position, a crank-shaft carrying one of said locking parts, means for holding said crank-shaft in position to keep said locking parts disengaged and means for automatically throwing said crank-shaft to engage said locking parts when the two sash are brought to closed position, substantially as set forth.

2. In a sash-lock, the combination, of a locking part to be secured to one of the sash and formed with a hook-shaped outer end, another locking part to be secured upon the other sash and comprising a casing, a crank-shaft mounted in said casing, a hook-shaped latch mounted on the crank of said crank-shaft, a pawl for holding the parts in open position and a spring for throwing them into closed position, said pawl being arranged to be tripped by the closing of the window, substantially as set forth.

3. In a sash-lock, the combination, of a part with a hook-shaped end to be secured on one sash of a window, another part to be secured on the other sash comprising a casing, a crank-shaft in said casing, a latch mounted on the crank of said crank-shaft, a lever for operating said shaft in one direction, a spring for operating it in the other direction, an arm on said crank-shaft, and a pawl mounted in said casing and arranged to engage said arm to hold the parts in unlocked position, said pawl being arranged to be tripped by the closing of the window, substantially as set forth.

4. A sash-lock comprising a casing to be secured upon one sash of the window, a crank-shaft mounted in said casing, a latch with a hook-shaped inner end frictionally secured on the crank of said crank-shaft by a spring clip, the outer end of said latch being also formed hook-shaped and extending through a slot in said casing, a hook-shaped part to be mounted on the other sash and adapted to engage with the hook-shaped end of said latch, and a pawl for holding said parts in unlocked position arranged to be tripped by the closing of the window, substantially as set forth.

5. A sash-lock comprising a hook-shaped catch to be secured on one sash and a hook-shaped latch to be secured on the other sash, said hook-shaped latch being mounted upon a crank-shaft and means for operating said crank-shaft to engage and disengage said parts, substantially as set forth.

6. A sash-lock comprising a clip secured to one sash and formed with an engaging hook-shaped end, a hook-shaped latch mounted to have a slipping movement upon the crank of a crank-shaft, said crank-shaft mounted on the other sash, and means for operating said shaft to lock and unlock said parts, substantially as set forth.

7. A sash-lock comprising interengaging hook-shaped locking parts one of which is mounted upon a crank and means for operating said crank to lock and unlock said parts, substantially as set forth.

In witness whereof, I, have hereunto set my hand and seal at Waynesboro, Pennsylvania, this 14th day of August, A. D. nineteen hundred and nine.

ABRAHAM B. LANDIS. [L. S.]

Witnesses:
GEO. H. RUSSELL,
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