

(No Model.)

2 Sheets—Sheet 1.

L. M. BRONSON.

FASTENER FOR THE MEETING RAILS OF SASHES.

No. 477,500.

Patented June 21, 1892.

Fig. 1.

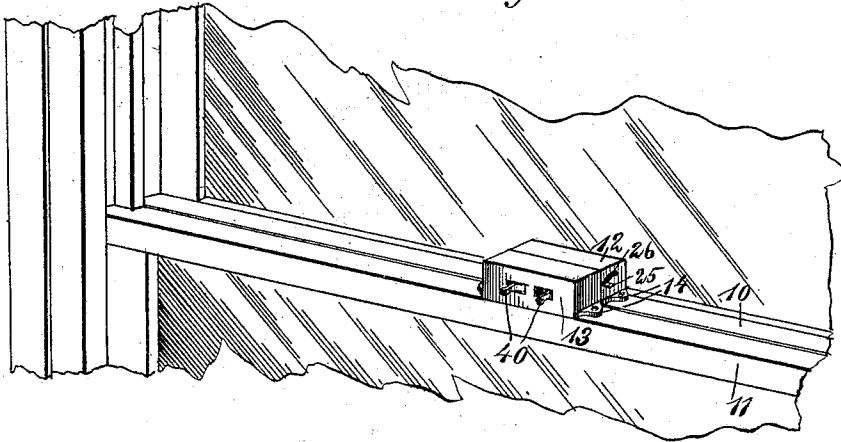


Fig. 2.

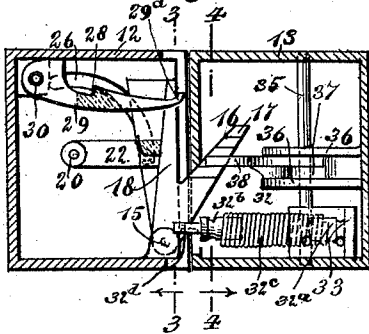


Fig. 3.

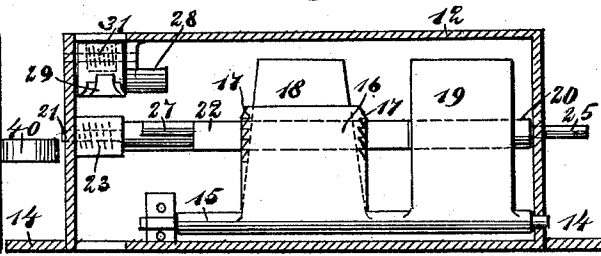
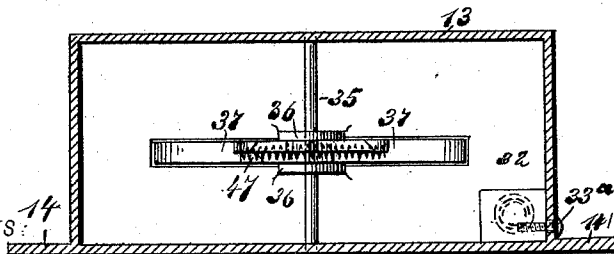


Fig. 4.



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(No Model.)

2 Sheets—Sheet 2.

L. M. BRONSON.
FASTENER FOR THE MEETING RAILS OF SASHES.

No. 477,500.

Patented June 21, 1892.

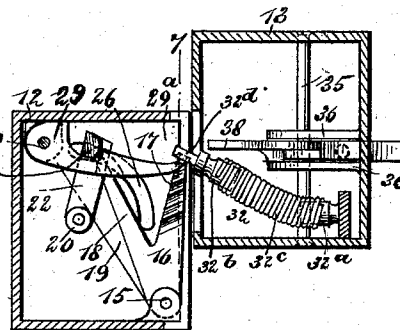
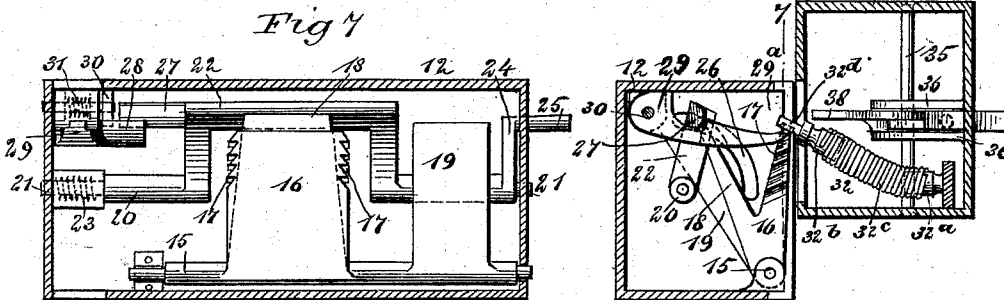
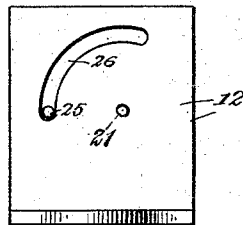
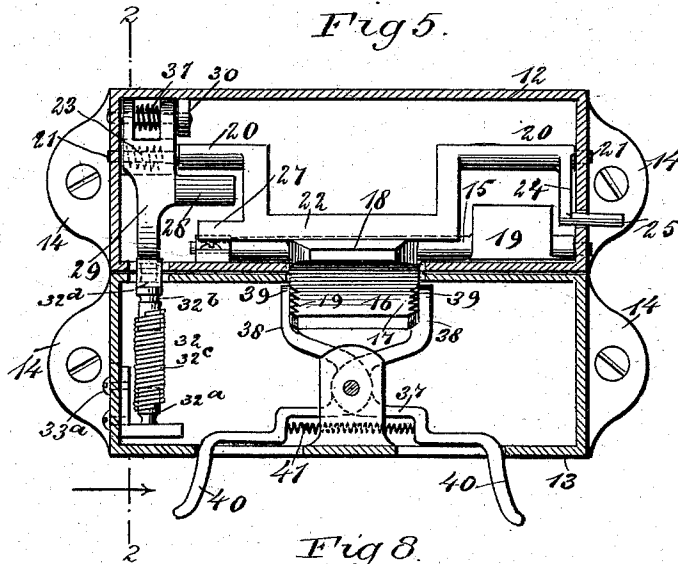
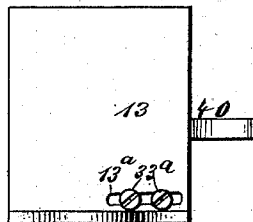


Fig 9.



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UNITED STATES PATENT OFFICE.

LORENZO M. BRONSON, OF RICHMOND HILL, NEW YORK.

FASTENER FOR THE MEETING-RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 477,500, dated June 21, 1892.

Application filed November 21, 1891. Serial No. 412,679. (No model.)

To all whom it may concern:

Be it known that I, LORENZO M. BRONSON, of Richmond Hill, in the county of Queens and State of New York, have invented a new and Improved Sash-Lock, of which the following is a full, clear, and exact description.

My invention relates to improvements in window-sash locks; and the object of my invention is to produce a sash-lock which may be applied to the meeting-rails of the window-sashes and which will operate automatically to lock the sashes and draw them together when the window is closed.

To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken perspective view showing the application of the sash-lock to the window-sashes. Fig. 2 is a cross-section on the line 2 2 in Fig. 5, showing the two parts of the lock united. Fig. 3 is a longitudinal section on the line 3 3 in Fig. 2, showing that part of the lock which is applied to the upper sash. Fig. 4 is a longitudinal section on the line 4 4 in Fig. 2, showing that part of the lock which is attached to the lower sash. Fig. 5 is a sectional plan of the united parts of the lock. Fig. 6 is a cross-section showing the two parts of the lock when about to lock together. Fig. 7 is a longitudinal section on the line 7 7 in Fig. 6. Fig. 8 is an end view of that portion of the lock which is applied to the upper window-sash, and Fig. 9 is an end view of that portion of the lock which is attached to the lower window-sash.

In the drawings, 10 represents the meeting-rail of the upper window-sash, and 11 the meeting-rail of the lower window-sash. The lock is held in cases 12 and 13, which may be of any approved form, the case 12 being secured to the rail 10 and the case 13 to the rail 11, the two cases being arranged so as to register accurately, and each case is provided with end flanges 14 to facilitate its attachment to the sash-rail. Within the case 12 and on the base of the same near its front edge is a shaft 15, which is pivoted in suitable bear-

ings, and which is provided with a tumbler 16, which extends diagonally upward, so as to enter the opposite case 13, which has an opening for this purpose, and this tumbler has upon its edges horizontal teeth 17, which are adapted to engage the locking-arms in the opposing case, as hereinafter described. The tumbler thus serves as a part of a lock, and it also by bearing against the inner wall of the case 13 draws the two cases and sashes together, thus excluding the air and preventing rattling.

On the back of the tumbler 16 is an arm 18, which extends upward and which enables the tumbler to be thrown into and held in locked position. The shaft 15 is also provided with a counter-balance 19, which will normally throw the tumbler 16 out of the locked position; but, if desired, the weight may be produced directly on the back of the tumbler.

Extending longitudinally through the case 12, near the center, is a shaft 20, which is pivoted in the ends of the case, as shown at 21, and which has centrally thereon a forwardly-swinging crank 22, which is adapted to strike the arm 18 of the tumbler 16 and force the tumbler forward, and the weight of the crank will naturally throw it against the arm 18; but in order that the crank may be positive in its action the shaft 20 is normally pressed forward by a spiral spring 23, which is coiled around it at one end, one end of the spring being secured to the shaft and the other to a fixed support, as shown in Fig. 7. This construction of the spring is not shown in detail, as it is the usual method of pressing a shaft by a spring.

At one end of the shaft 20 is an arm 24, which has a handle 25 at its outer end, the handle extending parallel with the shaft 20 and being held to turn in a slot 26 in one end of the case 12, through which slot it projects, so that it may be easily grasped by the fingers. The object of this crank consisting of the arm 24 and handle 25 is to provide means for turning back the crank 22 when the device is to be unlocked.

At one end of the crank 22 and at the outer portion of the crank is an arm 27, which extends in a parallel position with the shaft 20 and which is adapted to be turned behind a stud 28 on the spring-arm 29, and thus hold

the crank 22 away from the arm 18 of the tumbler 16. This arm 29 is pivoted near one corner of the case 12, as shown at 30, and is normally pressed upward by a spring 31, as shown in Fig. 5, so that it will always be in position to engage the arm 27 and hold the device in unlocked position. The free end of the arm 29 is curved upwardly slightly, as shown at 29^a, and is adapted to move vertically in a slot in the front wall of the case 12. The free end of the arm 29 is adapted to be engaged by an arm 32 in the opposite case 13, which arm is secured near one corner of the case 13 to a block 33, and the free end of the arm protrudes through a slot in the case 13 and is adapted to enter the case 12, so as to engage the end 29^a, as shown in Fig. 6. The arm 32 consists of a stationary portion 32^a, which is rigidly secured to or formed integral with the block 33, a movable end portion 32^b, and a spiral spring 32^c, which is secured to the fixed and movable parts of the arm and normally holds them in horizontal alignment. The extreme end portion of the arm 32 is flattened, as shown at 32^d, and this flattened portion is recessed on the under side, as shown in Figs. 2 and 6, to make sure its engagement with the end of the arm 29. It will be seen that the arm 32 being flexible, as described, will permit the easy raising of the lower sash, as the arm may double or bend out of the way of the arm 29 and also out of the way of any cross-rails of an adjacent sash. The block 33 is adapted to be moved back and forth in the case 13, and is held in place by screws 33^a, extending through slots 13^a in the case 13, as shown in Fig. 9.

Extending vertically through the case 13 and near the center of the case is a post 35, which also extends through lugs 36, which are arranged horizontally in the case and which are supported thereon, and pivoted between these lugs are the scissor-arms 37, which operate substantially like the blades of a pair of scissors, and which near the inner ends are bent apart and are formed into parallel arms 38, which are adapted to embrace the tumbler 16, and which are provided with terminal teeth 39, adapted to interlock with the teeth 17 of the tumbler 16, as best shown in Fig. 5.

The outer ends of the arms 37 diverge and protrude through slots in the front of the case 13, thus forming handles 40, which are normally pressed apart by a spiral spring 41 and which when pressed together will cause the inner ends of the arms 38 to be forced apart, so as to release the tumbler 16.

The operation is as follows: We will suppose that the lower window-sash, which carries the case 13, is in a raised position, in which position the case 13 will be above the case 12. When in this position, the crank 22 will be tipped back in the case 12 and will be held there by the stud 28 engaging the arm 27 of the crank. When the sash carrying the case 13 is lowered, the protruding end

of the arm 32 engages the end 29^a of the arm 29, and the arm 27 is depressed, so that the stud 28 is carried downward from in front of the arm 27 of the crank 22, and the crank 22 then swings forward, strikes the arm 18, and causes the tumbler 16 to swing through the opening on the inner side of the case 13. The tumbler will thus swing into the path of the arms 37, and the teeth 39 on said arms will engage the teeth 17 of the tumbler 16, and the two parts of the lock will thus be held firmly in place, and it will be seen that they cannot be accidentally unlocked, as the crank 22 will hold the arm 18 forward, and consequently the tumbler 16 cannot be removed from the case 13 even though the spring-arms 37 should lose their hold. When the window is to be opened, the operator swings back the crank 22 by means of the handle 25 and the arm 27 travels over the stud 28, which is slightly inclined to facilitate the operation, and the crank will be held back by the stud. The handles 40 of the arms 37 are then pressed together, thus freeing the tumbler 16, and the weight 19 causes the shaft 15 to swing back and carry with it the tumbler 16, thus removing the tumbler from the case 13 and permitting the sashes to be operated.

Having thus described my invention, I claim as now and desire to secure by Letters Patent—

1. A sash-lock comprising two registering cases adapted to be secured to the meeting-rails of a window-sash, a weighted tumbler pivoted in the upper sash-case and adapted to protrude into the lower sash-case, said tumbler having teeth thereon, and a pair of spring-pressed arms pivoted in the lower case and having their inner ends adapted to engage the teeth of the tumbler, substantially as described.

2. A sash-lock comprising two registering cases adapted to be secured to the meeting-rails of a window-sash, a weighted tumbler pivoted in the upper sash-case and adapted to extend into the lower sash-case, said tumbler having teeth thereon, a handled crank adapted to swing against the tumbler and force it into the lower sash-case, a pair of spring-pressed arms mounted in the lower sash-case and having toothed ends to engage the tumbler-teeth, and automatic means for throwing the crank against the tumbler by the closing of the lower sash, substantially as described.

3. A sash-lock comprising two registering cases adapted to be secured to the meeting-rails of a window-sash, a weighted tumbler pivoted in the upper sash-case and adapted to extend into the lower sash-case, the tumbler having teeth thereon, a handled crank pivoted in the upper sash-case and adapted to swing against the tumbler, a spring-pressed arm mounted in the upper sash-case and having a stud thereon to engage an arm on the handled crank and hold the crank in unlocked position, a pair of spring-pressed arms pivoted

in the lower sash-case and having inner terminal teeth to engage the teeth of the tumbler, and a tripping-arm pivoted in the lower sash-case and extending into the path of the arm of the upper sash-case, substantially as described.

4. A sash-lock comprising two registering cases adapted to be secured to the meeting-rails of a window-sash, a weighted tumbler pivoted in the upper sash-case and adapted to extend into the lower sash-case, said tumbler having teeth thereon, a handled crank pivoted in the upper sash-case and adapted to swing against the tumbler, said crank having an arm at one end, a spring-pressed arm pivoted in one end of the upper sash-case and having a stud to engage the arm of the handled crank when the latter is swung backward into the case, a pair of spring-pressed

arms pivoted in the lower sash-case and adapted to engage the teeth on the tumbler, and a spring-pressed tripping-arm adjustably secured in the lower sash-case and extending into the path of the arm in the upper sash-case, substantially as described.

5. In a sash-lock, the combination of the oppositely - arranged cases carrying locking mechanism, as described, and the protruding and engaging arms adapted to operate the locking mechanism, one of said arms consisting of a rigid inner portion, an outer movable portion, and a spring connecting the two portions, substantially as described.

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Witnesses:

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FRANK H. GILL.