

No. 845,772.

PATENTED MAR. 5. 1907.

M. H. GABA.
WINDOW SASH LOCK.
APPLICATION FILED JULY 25, 1906.

2 SHEETS—SHEET 1.

Fig. 2.

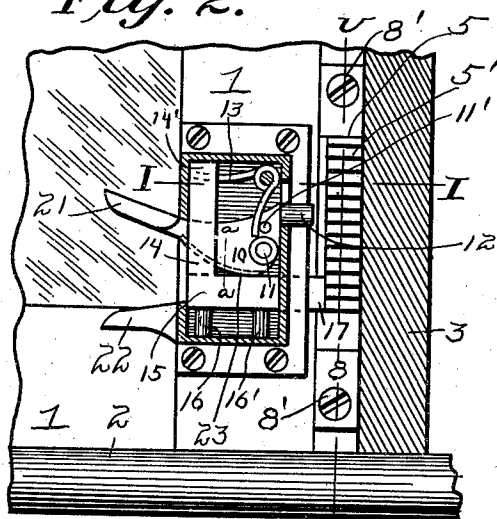


Fig. 1.

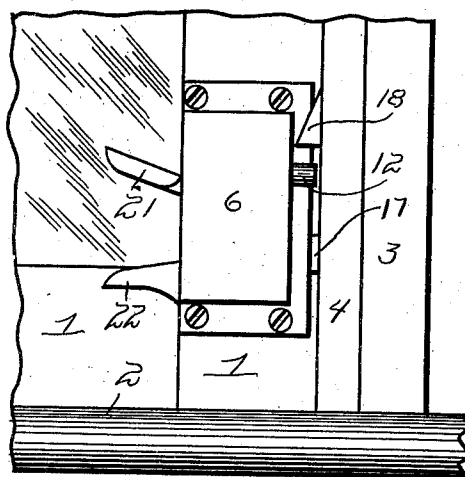


Fig. 11.

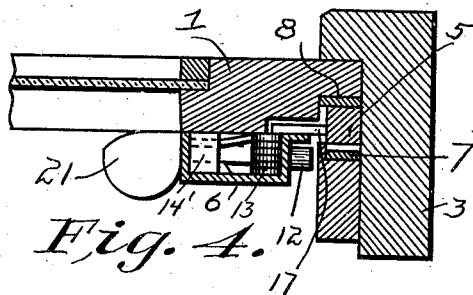
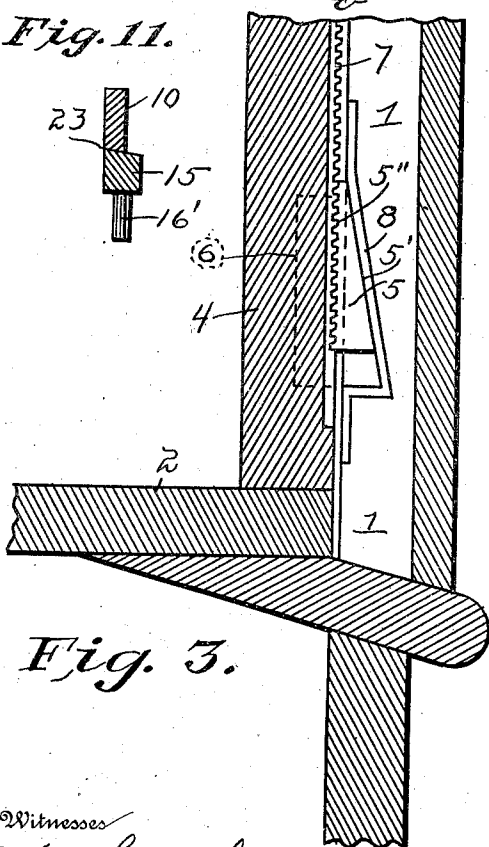


Fig. 4.

Fig. 3.

Witnesses
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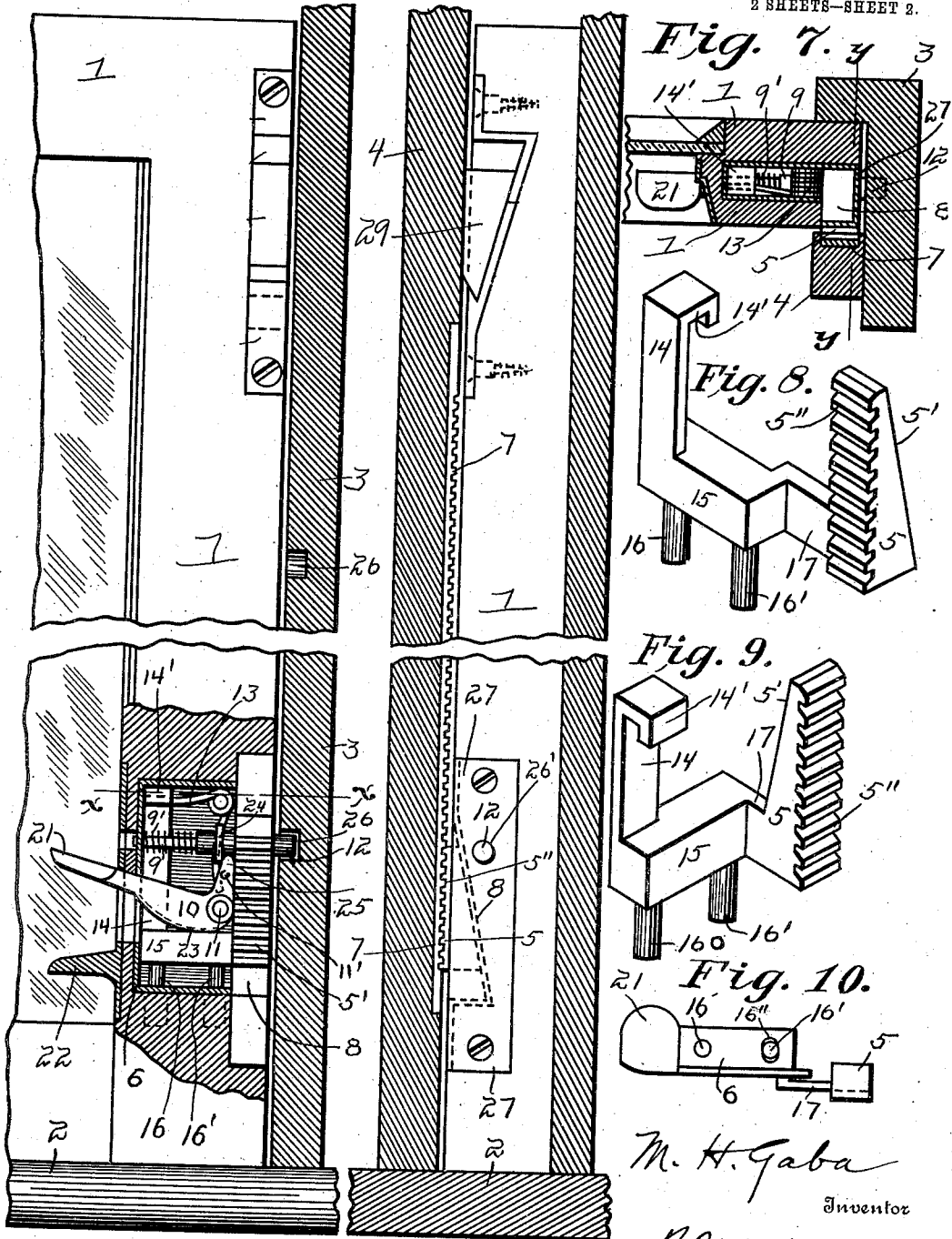
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2 SHEETS—SHEET 2.



Witnesses **Fig. 5.**
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Fig. 6.
By

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UNITED STATES PATENT OFFICE.

MELVIN H. GABA, OF DAYTON, OHIO.

WINDOW-SASH LOCK.

No. 845,772.

Specification of Letters Patent.

Patented March 5, 1907.

Application filed July 25, 1906. Serial No. 327,604.

To all whom it may concern:

Be it known that I, MELVIN H. GABA, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Window-Sash Locks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in window-sash locks, and possesses the new and useful structural features set forth in the accompanying drawings and described in the annexed specification and claims.

Among the essential features of the invention are a slidable frame carrying a block with a toothed face, with means for simultaneously moving said frame and block downwardly and outwardly in lowering the window-sash.

Sheet 1 of the drawings illustrates my improvements as applicable to a railway-car window. Sheet 2 illustrates the same as applicable to a house-window, the modification being slight in either case.

Figure 1 is an inner front view of the corner of a railway-car window, showing my improved sash-lock in position, the sash being in its lowest position and locked. Fig. 2 is a view similar to Fig. 1, with the lock-casing in section to disclose the lock devices. Fig. 3 is a sectional view on the line V V of Fig. 2. Fig. 4 is a sectional view on the line I I of Fig. 2. Fig. 5 is a front elevation of one side of a window, partly in section and showing my improvements applied to a house-window. Fig. 6 is a sectional view on the line Y Y of Fig. 7. Fig. 7 is a sectional view on the line X X of Fig. 5. Fig. 8 is a detached perspective view of the toothed block-supporting frame of the lock devices shown in Fig. 2. Fig. 9 is a similar view of the toothed block-supporting frame slightly modified as shown in Fig. 5. Fig. 10 is a detached bottom plan view of the lock-casing as shown in Fig. 2. Fig. 11 is a detail sectional view on the line a a of Fig. 2.

In a detail description of the invention similar reference characters indicate corresponding parts.

Referring to the drawings on Sheet 1, these illustrate, as before stated, my improved sash lock or fastener applied to a car-window, 3 indicating the window-frame, 2 the window-sill, and 1 the window-sash. Mortised in the inner side of strip 4, which is secured to the frame 3, is a toothed bar 7, which is secured in place by screws penetrating the extreme ends of said bar.

Secured to the inner side of the sash 1, adjacent to one of the lower corners of said sash, is an inclined metallic bar 8, the extreme ends of which are secured to the sash by screws 8'. This inclined bar 8 is placed in a suitable recess in the sash, (see Fig. 4,) and between said incline bar 8 and the toothed bar 7 on the window-frame strip 4 there is a toothed block bar 5, one side of which is tapered, as at 5', to match the inclination of the bar 8, and the other side of which is provided with ratchet-teeth 5'', which engage the teeth of the bar 7. The contact of the bar 8 and the block 5 is such as to maintain a proper engagement between the teeth when the sash 1 is raised. The shape of the teeth on these parts is such as to allow the window-sash to be elevated without any interference from the teeth and to prevent the window-sash from being lowered unless a disengagement of said teeth is first effected.

The triangular bar 5 is carried on an arm 17, which projects from a frame 15, having an upright extension 14, terminating in a head 14', the whole being otherwise termed a "sliding frame." This frame is inclosed within the lock-casing 6, which is secured to the inner side of the window-sash 1 near one corner thereof, said lock-casing having a suitable opening to permit of the arm 17 extending therethrough to support the toothed block 5. Projecting from the bottom of said frame are two guide-pins 16 and 16', which pass through openings in the bottom of the lock-casing 6. The opening 16'', through which the guide-pin 16' passes, is essentially oblong to permit of some lateral movement of the pin 16' for a purpose hereinafter specified. On the interior of the lock-casing there is a two-arm spring 13, one arm of which engages the under side of the head 14' of the sliding frame 15 and holds said frame, together with the toothed block 5, in an upper position, as shown in Fig. 2. This is the normal position of the frame and toothed block 5. 10 designates a cam-latch, which is pivoted

within the lock-casing 6 at 11 and is normally held in an upper position by one arm of the spring 13 engaging a pin 11' on a side of said cam-latch, as shown in Fig. 2.

5 Projecting from an end of the cam-latch 10 is a bolt 12, which passes through a suitable opening in the lock-casing and normally lies below a stop 18, which is on the window-frame strip 4 at a suitable point near the
10 lower end of said window-frame, as shown in Fig. 1. The bolt 12 and stop 18 provide a lock to secure the window-sash in its lower position, so that it cannot be raised from the outside of the window. The inner end of the
15 cam-latch 10 has a finger-piece 21, which projects through a suitable opening in the casing 6 and is pressed downwardly by the fingers to remove the bolt 12 in raising the window-sash. In thus pressing downwardly
20 the inner end of the latch 10 the fingers engage a stationary projection 22, extending from the lock-casing. The lower side of the latch 10 has a cam-surface 23, which engages the horizontal portion of the frame 15 and
25 lowers the ratchet-bar 5, together with the frame, when the latch is pressed downwardly. The bolt 12 and the supporting-frame 15 are thus simultaneously moved when said latch 10 is pressed downwardly by the fingers. In
30 this movement of the cam-latch 10 the bolt 12 is moved out of the path of the locking projection 18, and the toothed block 5 is lowered on the incline 8 to free the teeth 5' from the stationary toothed bar 7 and to permit
35 the sash to be raised. After this the cam-latch 10 is released and the toothed block 5 moves up the incline 8 to reengage the toothed bar 7, and the sash is held in its raised position by said teeth being maintained in such
40 position by the incline 8.

It will be understood that the lengths of the toothed block 5 and the bar 7, also the inclined bar 8, are sufficient to permit the window-sash to be raised and held at the desired
45 height. In pressing down upon the latch 10 to separate the toothed block 5 and toothed bar 7 it will be understood that the block 5 must have sufficient downward and outward movement to allow it to disengage the bar 7.
50 This movement of the block 5 from the toothed block 7 at the same time that the said block 5 is moved downwardly is accomplished by the cam-surface 23 of the latch 10 and a corresponding tapered surface of the
55 frame 15, which is engaged by the latch. These are illustrated in Fig. 11, where it will be understood that owing to the surfaces of these parts the frame 15, carrying the ratchet-block 5, will have some outward movement
60 during the depression of said frame. This renders necessary the elongated opening 16'', hereinbefore referred to, in the bottom of the lock-casing 6 (shown in Fig. 10) in order that the pin 16' may have sufficient lateral move-

ment. The guide-pin 16 acts as a pivot for 65 this movement of the frame 15 and block 5. The extent of such movement is sufficient to disengage the ratchets.

It will be understood that the incline 8 permits the block 5 to move away from the bar 70 7 because at the same time the block 5 is moving downwardly. The construction of the lock devices shown in Fig. 5 for the purposes of a house-window is attended with the following modifications: The bolt 12 is on 75 the end of a pin 9, which works through suitable openings in the casing 6 and has a portion of its body surrounded by a helical spring 9' to press it outwardly. The middle portion of said bolt has a rigid collar 24, 80 which is engaged by a nose 25 of the latch 10 to draw back said bolt. The latch 10 in all other respects is substantially the same as that shown in Fig. 2. The bolt 12 may enter any of a series of holes 26 in the window-frame 3. These holes take the place of the 85 stop 18 in the other modification. (Shown in Fig. 1.) In this construction the lock-casing 6 is mortised in the window-sash, so that all portions of the device are concealed from 90 view with the exception of the projecting end 21 of the latch 10. In depressing the latch 10 the nose 25 thereof draws the bolt 12 outwardly against the tension of the spring 9' by engaging the collar 24. Also in 95 this modified construction the incline bar 8 is mortised in the window-sash and is attached to a plate 27 which is screwed to the window-sash. This plate 27 has an opening 100 26' for the bolt 12 and in which the bolt enters in locking the window-sash in its lowered position.

I claim—

1. In a window-sash lock, a frame supporting a toothed block carried upon the 105 window-sash, a stationary inclined bar inclosing said toothed block, a stationary toothed bar with which the toothed block is made to engage by the inclined bar when the sash is moved upwardly, and a cam-latch 110 engaging said frame to move the toothed block downwardly and laterally simultaneously to effect a disengagement between said toothed block and said toothed bar in lowering the window-sash. 115

2. In a window-sash lock, a slidable frame carrying a wedge-shape toothed block, and guide-pins projected from said frame, a latch engaging said frame to move it downwardly, means for maintaining the frame and toothed 120 block in their upper positions when released by the latch, a bolt projecting from said latch, an inclined bar upon the window-sash engaging the smooth surface of the toothed block, a toothed bar on the window-frame 125 engaging the toothed block, and means on the window-frame to interlock with the bolt on the latch.

3. In a window-sash lock, a slidable frame,
a block supported thereon having teeth on
one side and a smooth surface on the other, a
cam-latch adapted to move said frame and
5 block downwardly and laterally simultane-
ously, an incline bar secured to the window-
sash and inclosing said block, and a station-
ary toothed bar fixed to the window-frame
and adapted to engage with the teeth on the

block when said block is moved upwardly 10
against the inclined bar.

In testimony whereof I affix my signature
in presence of two witnesses.

MELVIN H. GABA.

Witnesses

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