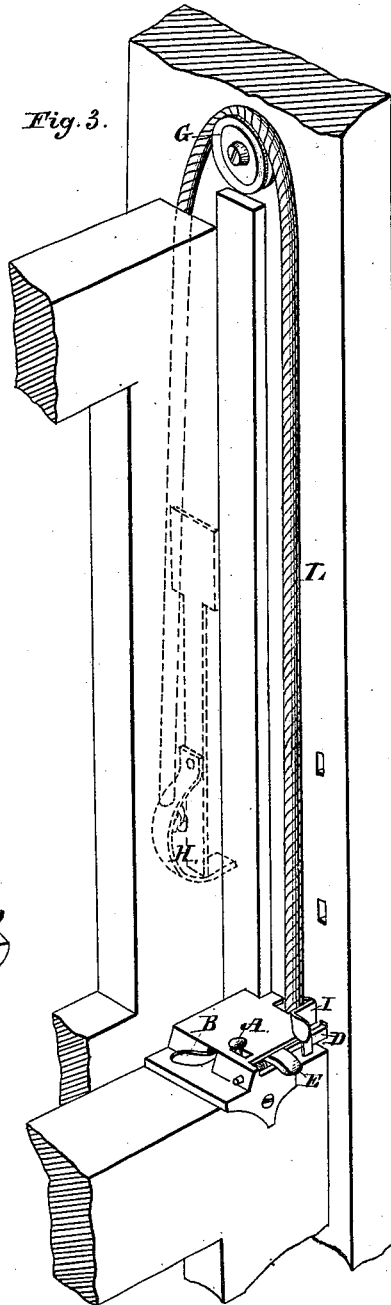
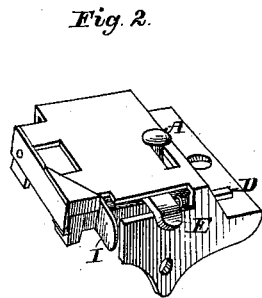
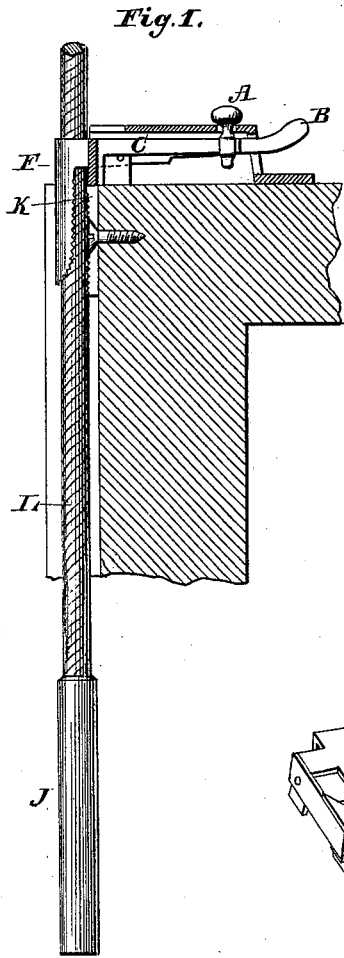


J. Q. INGHAM.  
 Window Hangings and Fastenings.

No. 200,614.

Patented Feb. 26, 1878.



*Attest.*

*Will Cleveland.*  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN WINDOW HANGINGS AND FASTENINGS.

Specification forming part of Letters Patent No. 200,614, dated February 26, 1878; application filed August 23, 1877.

### *To all whom it may concern:*

Be it known that I, JOHN Q. INGHAM, of the city of Elmira, in the county of Chemung and State of New York, have invented a new and useful Improvement in Window-Fixtures, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a plan view of my method of connecting the bottom sash with the sash-line, showing also a small hollow weight, J, at the lower end of sash-line, (which weight may be a small piece of gas-pipe or the like,) and which serves to hold the line straight when the sash is disconnected; Fig. 2, a detached view of my combination of clasp, lock, and lift complete; Fig. 3, a face view of a portion of a window with my devices applied, with the bottom sash disconnected from the line, and showing, also, in dotted lines, the position the spring-fastener would assume when thus relieved of the weight of the bottom sash; and Fig. 4, a detached view of the latch lift or stop.

Like letters of reference indicate like parts.

My invention relates more specially to a two-casement window, as a unit, operating the casements, one as a balance for the other; and my object is to furnish a combined device or devices for opening, closing, and locking the same, in a manner combining safety of operation with economy and convenience, both in applying the fixtures, and in operating the window, when adjusted and trimmed. It is therefore a combination of window-lock, sash-lift, and sash-balance; and while it is obvious that all the parts mentioned, are essential to the device in its complete operation as a window-lock, yet they are so disposed as to render certain of them available likewise in a sash-balance or sash-lift, all as hereinafter more fully described and claimed.

In applying these devices, the edges of the sashes are grooved in the usual manner, and the spring-fastener H is attached about midway of the upper sash, one in each edge. A line is fastened to each of these, and passed over the pulleys G, one at the top of each jamb. The line thus attached, and the upper sash drawn to the top of the window, will pass through the clasp F, and will reach nearly to the sill, terminating with the hollow weight J.

The combined lock, clasp, lift, and latch is applied, with no cutting whatever, to the lower sash, one at each end of the meeting-rail, by means of three screws—one in the face, one in the top, and one in the bottom of groove in the edge of sash. (Seen in Fig. 3.) As many stops as may be required are let into the jamb, the upper one so located as to stop the sash one-fourth ( $\frac{1}{4}$ ) of an inch down from the head jamb. A socket is let into the jamb just back of the face-stop, to receive the bolt D when the sash rests on the sill. Another may be placed two or three inches higher up, if it is desired to lock the sash when slightly lifted.

In operating this device, make the connection between the sash simply by lifting, with the thumb, the lever B till the spring C presses under it to hold it in place.

To break the connection, slightly lift the lever, and remove the spring from under it by pulling on the knob A, and let the lever fall.

The upper sash being locked in place and held within one-eighth ( $\frac{1}{8}$ ) of an inch of the head jamb by the spring-fastener H, slacken each line one-fourth ( $\frac{1}{4}$ ) of an inch by lifting them with the thumb and finger; make the connection as above. Now, by pulling upon the lines enough to lift the upper sash one-fourth ( $\frac{1}{4}$ ) of an inch, then letting the sash slide down three-eighths ( $\frac{3}{8}$ ) of an inch, which will carry the spring-fastener H below the first stop, the upper sash will be unlocked. Now, by placing the index-fingers against the sash-lifts E, (which are fastened to the bolts D,) draw the bolts, and at the same time lift the sash ever so little, and the latch I will fall down over the end, and will hold it within the case. Both sashes being now unlocked, the same movement that would, with ordinary weights, only lift the bottom sash, will lower the top and lift the bottom one. So in closing them, one movement will close both.

When the bottom sash is brought down to the sill, the latch I is lifted by striking against a slight projection placed at the right point on the face of the inside sash-stop, (it may be but the head of a plated screw used in fastening the stop in its place,) and the bolts (ordinary spiral-spring bolts) will be pressed into the sockets, and the sash will be locked.

Having thus fully described my invention,

what I claim as new, and wish to secure by Letters Patent, is—

1. The drop-latch I, in combination with the bolt D, whereby the latter is held within its casing, except when it is desired to lock the sash, and the coacting latch lift or stop M, substantially as specified.

2. The combination of the lock-bolt D, sash-lift E, coacting drop-latch I and latch-lift M, operating-lever B, spring C, and the vertical clasp, having corrugated jaws F K, all substantially as shown and described.

3. The improved combined sash-balance,

sash-lift, and sash-lock, consisting of the lock-bolt and sash-lift D E, drop-latch I, latch-lift M, lever B, spring C, and vertical clasp F K, together with the spring-fastener H, sash-cord L, and hollow weight J, the spring-fastener constituting a lock-bolt and safety-check, all operating substantially as described and shown, for the purposes set forth.

J. Q. INGHAM.

Witnesses:

WILL. CLEVELAND,  
L. J. STURDEVANT.