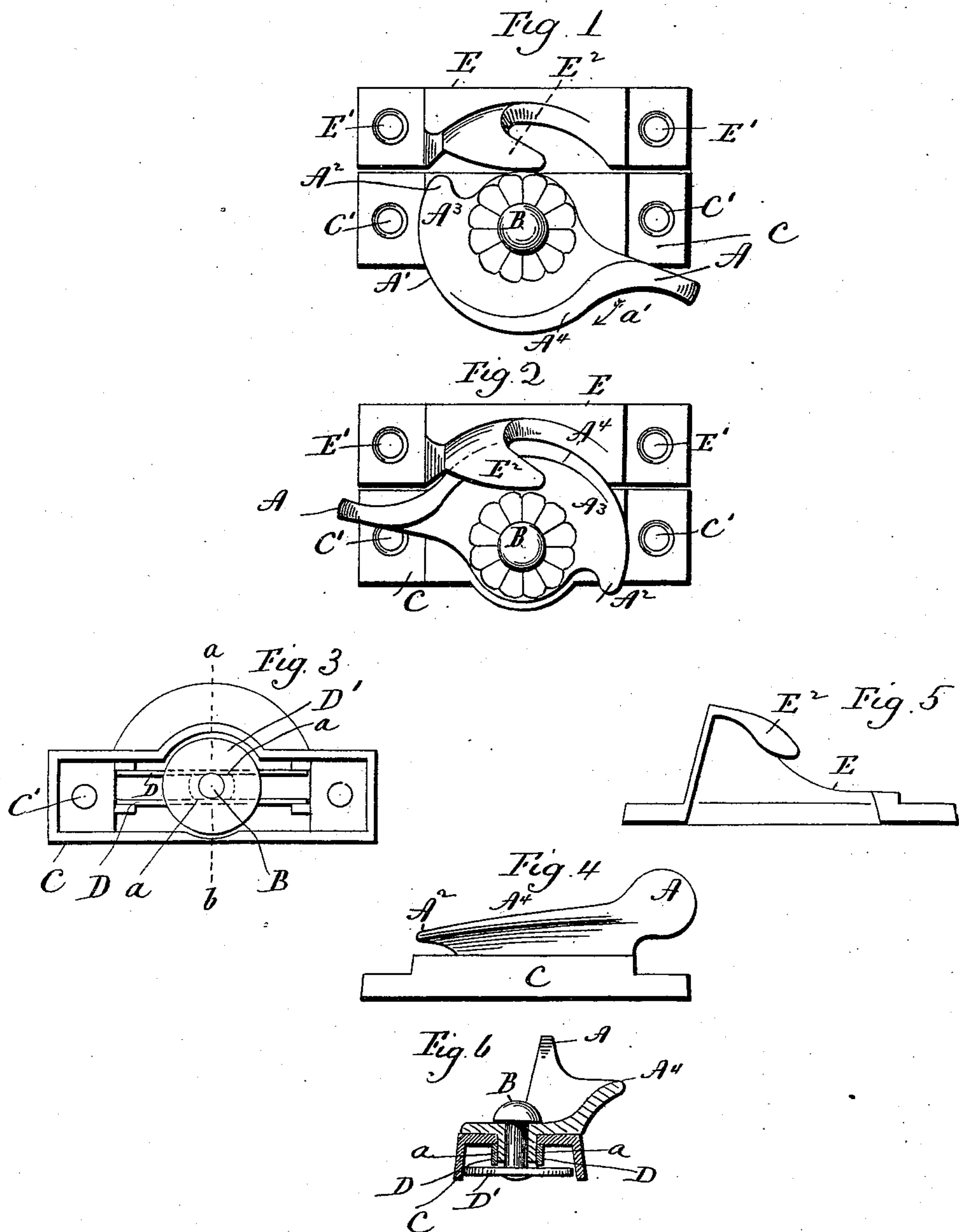


(No Model.)

G. M. HUBBARD.
SASH FASTENER.

No. 564,426.

Patented July 21, 1896.



Witnesses.
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UNITED STATES PATENT OFFICE.

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SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 564,426, dated July 21, 1896.

Application filed November 1, 1895. Serial No. 567,578. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. HUBBARD, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Sash-Fasteners; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a plan view of a sash-fastener constructed in accordance with my invention with its locking-lever shown in its unlocked position; Fig. 2, a similar view with the locking-lever shown in its locked position; Fig. 3, a reverse plan view of the chambered case-plate and locking-lever; Fig. 4, a view in front elevation of the case-plate and locking-lever; Fig. 5, a view in front elevation of the keeper and its finger; Fig. 6, a sectional view of the case-plate and locking-lever on the line *a b* of Fig. 4.

My invention relates to an improvement in sash-fasteners, the object being to produce a simple, compact, convenient, and effective device composed of few parts, adapted to be produced at a low cost for manufacture, and constructed with particular reference to lifting the upper sash into position for locking it before drawing the two sashes together for that purpose, and also constructed with reference to avoiding the disfigurement of the upper sash by the lifting of the lower sash with the lever in a partially-retired position.

With these ends in view my invention consists in a sash-fastener having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention I employ a locking-lever having a finger-piece *A* and an operating-flange *A'*, which for convenience of description I shall speak of as having a nose *A²*, a winding upper lifting-face *A³*, and an inwardly-beveled drawing edge *A⁴*, into which the inner portion of the said face merges. This lever is located in a horizontal

plane and pivotally attached, by means of a vertical pivot *B*, to a chambered case-plate *C*, provided at its ends with screw-holes *C' C'* for its attachment to the upper rail of the lower sash. The said lever has a depending hub entering the said plate, receiving the pivot, and constructed with flattened opposite faces *a a*, which are respectively engaged by straight flat sheet-metal springs *D D*, located within the chamber of the case and coacting with the hub of the lever to hold the same in its open and closed positions. The said springs are retained in place, as herein shown, by means of a flat washer or disk *D'*, engaging with their lower edges, and applied to the lower end of the pivot *B*, the upper end of which is headed.

The keeper *E* of the device is constructed at its ends with screw-holes *E' E'* for the reception of the screws by means of which it is attached to the upper face of the lower rail of the upper sash. It is also constructed with a cammed lifting and drawing finger *E²*, located to the left of its longitudinal center and extending forward, inward, and downward, its longitudinal axis being pitched at a sharp angle with reference to the longitudinal axis of the keeper. The said springs *D D* coact with the operating-flange *A'* of the locking-lever and the drawing-finger *A²* of the keeper in automatically unlocking or locking the sashes in case the lever is not manually thrown fully into its locked or unlocked positions. Thus, supposing the lever were thrown partly around into position to lock the sashes, then the power of the springs being still exerted on the lever would tend to work it into its closed position in case there was any play between the operating-face of the lever and the finger, caused, let us say, by the rattling of the windows. On the other hand, if the lever were only thrown partly into its open position in unlocking the windows, the tension of the springs still being upon it, they would exert a constant effort to work it around into its full open position in case the friction between the lever and finger were relieved, as by the rattling of the windows or otherwise. It will thus be seen that under my peculiar

construction the springs coact with the cam-face of the lever and the finger cooperating therewith.

In using my improved device the two members of it stand related to each other, as shown in Fig. 1, when the two sashes are in their closed positions, but unlocked. Now when the locking-lever is turned in the direction indicated by the arrow a' of the said figure the nose A^2 of its operating-flange will be shot under the base of the finger E^2 of the keeper, and be followed by the outer end of the flat winding lifting-face A^3 . If now the upper sash is not in its fully-elevated position, the said face and finger will combine to lift the said sash until the keeper and chambered case-plate are brought into the same horizontal plane. Then, and not until then, will the drawing inwardly-beveled edge A^4 of the operating-flange of the lever engage with the downwardly-bent end of the finger E^2 and coact with the same to draw the keeper and plate together, this drawing action continuing until the lever has been turned into its fully-closed position, in which it is shown in Fig. 2. It is to be clearly understood, however, that the action of the winding lifting-face of the operating-flange of the lever does not shift the inwardly-beveled drawing edge thereof until the two plates have been brought into the same horizontal plane, so that the drawing action of the device does not begin until after the lifting action thereof has been completed. This is of obvious advantage, as it prevents binding, and thus insures a uniformly easy and correct action of the device.

It will be observed by reference to Fig. 1 that when the lever is in its open or unlocked position its nose A^2 stands directly opposite the finger E^2 of the keeper, for the reason that the same is located to one side of the longitudinal center thereof. On account of this construction the lower sash cannot be raised until the locking-lever is thrown into its fully-retired position, for, otherwise, the nose of the lever would collide with the finger of the keeper, but when the lever is in its fully-closed position its nose lies within the edge of the chambered case-plate, and therefore is so retired that it cannot engage with the lower rail of the upper sash and deface the same in raising and lowering the lower sash.

It is apparent that in carrying out my invention some changes in the particular form and construction of the parts herein shown and described may be made, and I would have it understood that I do not limit myself to the exact construction herein shown, but hold myself at liberty to make such changes therein as fairly fall within the spirit and scope of my invention.

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

1. In a sash-fastener, the combination with a case-plate, of a horizontally-arranged locking-lever pivoted thereto, and having an operating-flange comprising a lifting-face and a drawing edge constructed and arranged to perform their functions in the order in which they are named, and a keeper constructed with a lifting and drawing finger coacting with the lifting-face of the said flange to first lift the upper sash, and then, after the said upper sash has been lifted, coacting with the drawing edge of the said flange to draw the two sashes together, substantially as described.

2. In a sash-fastener, the combination with a case-plate, of a horizontally-arranged locking-lever pivoted thereto and constructed with an operating-flange having a flat, winding, lifting-face, and an inwardly-beveled drawing edge into which the inner portion of the said face merges, and a keeper constructed with a lifting and drawing finger located to one side of its horizontal center and coacting with the lifting-face of the said flange to first lift the upper sash, and then after the said upper sash has been lifted, coacting with the drawing edge of the said flange to draw the two sashes together, substantially as described.

3. In a sash-fastener, the combination with a chambered case-plate, of a horizontally-arranged lever pivoted thereto and constructed with a downwardly-projecting hub entering the chamber thereof, and also constructed with an operating-flange comprising a flat winding, lifting-face and an inwardly-beveled drawing edge into which the inner portion of the said face merges, a keeper constructed with a lifting and drawing finger successively coacting with the said face, an edge to first lift the upper sash, and then, to draw the two sashes together; and one or more springs located within the chamber of the case-plate and coacting with the hub of the lever for automatically completing the movement of the same into its locked and unlocked positions, and, in case the lever is not free to move into its fully-closed position, urging its drawing edge against the said finger and taking advantage of any rattling of the sashes, to move the said edge under the finger until the locked position of the lever is reached.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE M. HUBBARD.

Witnesses:

LUCIUS H. PRINDLE,
HERBERT A. ASHMAN.