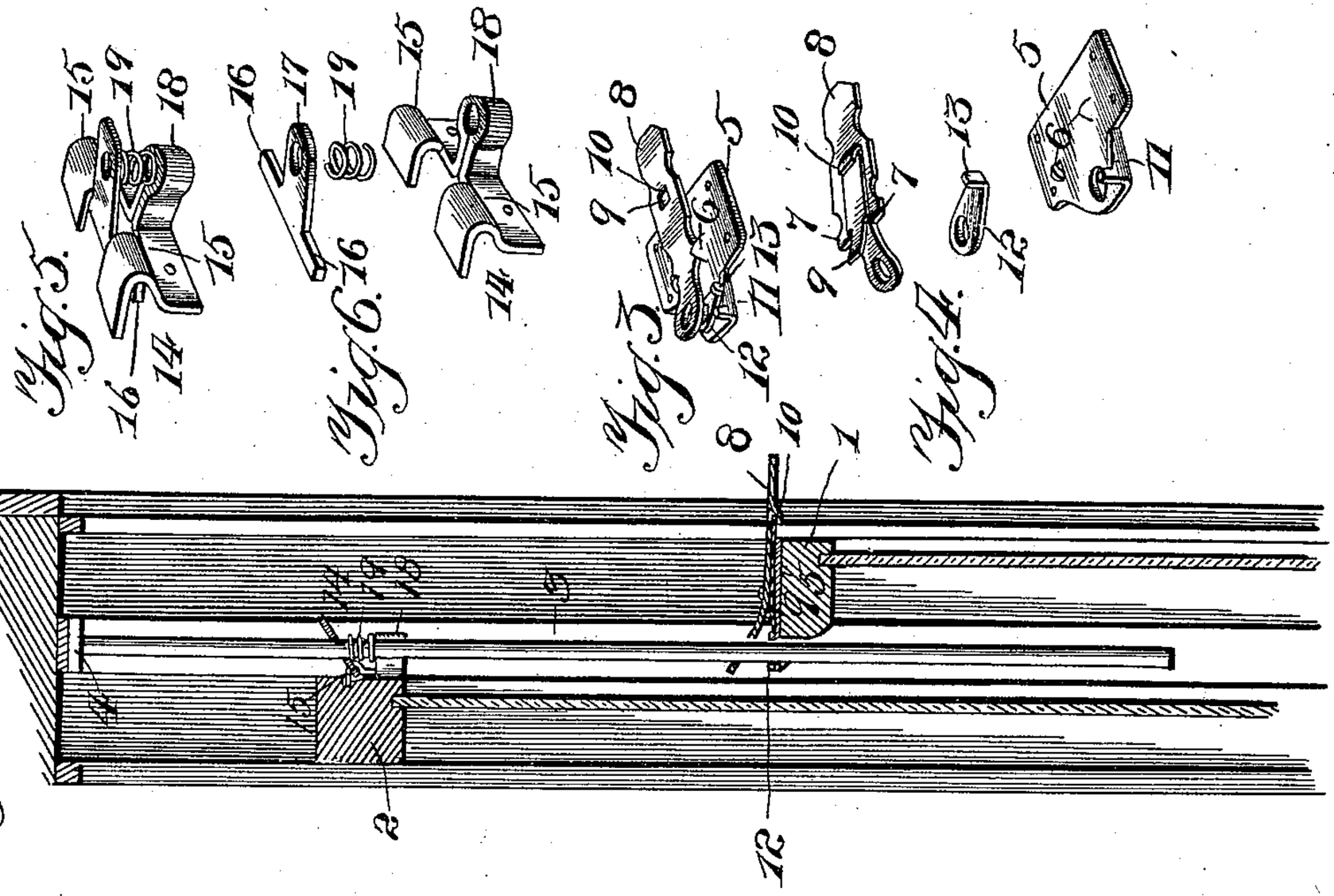
(No Model.)

W. W. SMITH & J. M. ISGRIG.

SASH FASTENER.

No. 575,791. Patented Jan. 26, 1897.



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UNITED STATES PATENT OFFICE.

WILLIAM WALLACE SMITH AND JACOB M. ISGRIG, OF TRAVERSE CITY, MICHIGAN.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 575,791, dated January 26, 1897.

Application filed March 18, 1896. Serial No. 583,789. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM WALLACE SMITH and JACOB M. ISGRIG, citizens of the United States, residing at Traverse City, in the county of Grand Traverse and State of Michigan, have invented a new and useful Sash-Lock, of which the following is a specification.

This invention relates to sash-locks, and has for its object to provide a simple, cheap, and reliable sash fastener and lock whereby either or both of the sashes may be raised and lowered at will and held at any point of elevation.

The principal objects of the present invention are, first, to provide, in connection with a clutch carried by one of the sashes and engaging a vertically-disposed rod, a positive lock whereby the sash may be firmly locked either when closed or partially open, access being had to such lock only from the interior of the building; second, to arrange the supporting-rod between the vertical planes in which the sashes slide, whereby it is out of the way and does not interfere with the curtains or other hangings of the window nor detract from the appearance of the window.

Other objects and advantages of the invention will appear in the course of the subjoined description.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claims hereto appended.

In the accompanying drawings, Figure 1 is a front elevation of a window, showing the improvement applied to the upper and lower sashes thereof. Fig. 2 is a vertical transverse section through the same. Fig. 3 is an enlarged detail perspective view of the lower-sash fastening. Fig. 4 is a similar view of the same fastening with the parts thereof disassociated. Fig. 5 is a detail perspective view of the upper-sash fastening. Fig. 6 is a similar view of the same fastening with the parts thereof disassociated.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

In carrying out the present improvement we prefer to use fasteners of different constructions for the upper and lower sashes, respectively, the purpose of which will be apparent as the description proceeds.

Both the lower sash 1 and the upper sash 2 are supported upon and by means of a depending rod 3, arranged centrally of the window-casing and screwed at its upper end into a keeper 4, secured to the under surface of the top bar of the window-frame. The rod 3 is arranged in a plane between the upper and lower sashes, so that the inner sash slides in front of said rod and the outer sash in rear of the same.

Upon the upper surface of the top bar of the lower sash is secured a plate 5, having at its rear edge an opening through which the rod 3 extends. At or near the center of the plate the metal is struck up, as indicated at 6, to form lips or bearings, beneath which extend the lateral projections 7 of a clutch 8. By this construction the clutch is pivoted intermediate its ends on the plate 5, the outer end of the clutch being projected beyond the top rail of the sash to form a finger-hold and the inner end thereof being formed with a perforation by which it embraces the rod 3. The finger-hold of the clutch is normally depressed and the perforated end thereof normally elevated by means of a leaf-spring 9, secured to the under side of the clutch 8 and bearing at its free end against the plate 5. This spring is held in place by means of a lip 10, struck out from the middle of the clutch 8, the end of the spring being inserted under such lip and clenched.

At its rear edge and adjacent to the opening for the rod 3 the plate 5 is provided with an upturned edge forming an incline or cam 11.

12 indicates a lock which consists of a flat piece of metal having an opening therein, through which passes the rod 3, and also provided with an upturned portion or thumb-piece 13, by means of which it may be rotated. By turning the lock-plate in the proper direction it is caused to travel upward upon the cam 11 and to engage beneath the perforated end of the clutch 8, so that such end of the clutch is prevented from descending and releasing its hold upon the rod 3. By means of this construction the lower sash may be

locked when all the way down, or it may be partially raised and then locked, and when locked it will be impossible either to raise or lower the sash except by manipulating the lock-plate from the inside.

The fastener for the upper sash consists of a plate 14, the upper portion of which is divided and the divided portions thereof bent to form bearings 15 for the laterally and oppositely projecting trunnions 16 of a clutch 17, having at its swinging end an opening through which is received the rod 3. The main body or central portion of the plate 14 is bent to form an eye or loop 18, which embraces the rod 3, and between this eye or loop and the lower surface of the clutch 17 is interposed an expansive coiled spring 19, surrounding the rod 3 and serving to hold the clutch normally in engagement with the rod 3. By depressing the end of the clutch 17 the upper sash may be readily raised or lowered, and when the clutch is released the sash will remain where it is left. It is unnecessary to manipulate the clutch for raising the sash, as it may be pushed all the way up until it reaches and abuts against the top bar of the window-frame, where it will afterward remain. In the same manner the lower sash may be elevated without manipulating its fastener or clutch. When it is desired, however, to lower either of the sashes, their respective clutches must be manipulated and released from engagement with the rod 3.

When the devices hereinabove described are used on large sashes, two or more rods 3 and a proportionate number of clutches may be employed.

All parts of the clutches and their retaining-plates, &c., are designed with a view to stamping the same out of sheet metal, the said parts not requiring any shaping up or finishing after leaving the dies.

The fasteners are simple, cheap, and practical and the sashes are always held squarely within the frame. They are well balanced, and as a result there is no friction or binding of the same within the window-frame.

The locking device is a simple and reliable one and enables the sash to be locked in an elevated as well as a closed position.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. In a sash-lock, the combination with a rod secured within the window-frame, as described, of a clutch, comprising a stationary plate attached to the window-sash, a pivoted clutch proper fulcrumed on said plate, and a lock-plate arranged between the stationary plate and the pivoted clutch, for locking said clutch in engagement with the rod, substantially as described.

2. In a sash-lock, the combination with the rod secured within the window-frame as described, of a clutch secured to the window-sash, said clutch comprising a stationary plate attached rigidly to the sash and having an opening for the rod and also provided adjacent to said opening with an inclined lip or cam-surface, a pivoted clutch proper fulcrumed intermediate its ends upon said plate and provided with an opening for said rod, and a vibratory lock-plate having an opening for the rod and adapted to coöperate with the said inclined lip or cam-surface for locking the pivoted clutch, substantially in the manner and for the purpose described.

3. In a sash-fastener, the combination with a vertical rod secured within the window-casing as described, of a clutch attached to the window-sash and engaging said rod, said clutch comprising a plate having its main body bent to form a loop or eye, or provided with a loop or eye for the rod, the said plate being also divided and having its divided portions bent to form bearings, the clutch proper having oppositely-projecting lateral trunnions arranged in said bearings and also having an opening for the rod, and a spiral spring surrounding the rod and interposed between the loop or eye of the plate and the clutch proper, substantially as and for the purpose described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM WALLACE SMITH.
JACOB M. ISGRIG.

Witnesses:
GEO. W. HALL,
CHARLES S. VADER.