(No Model.)

C. H. DEXTER.

SASH FASTENER.

No. 396,548. Patented Jan. 22, 1889.

Fig 1.

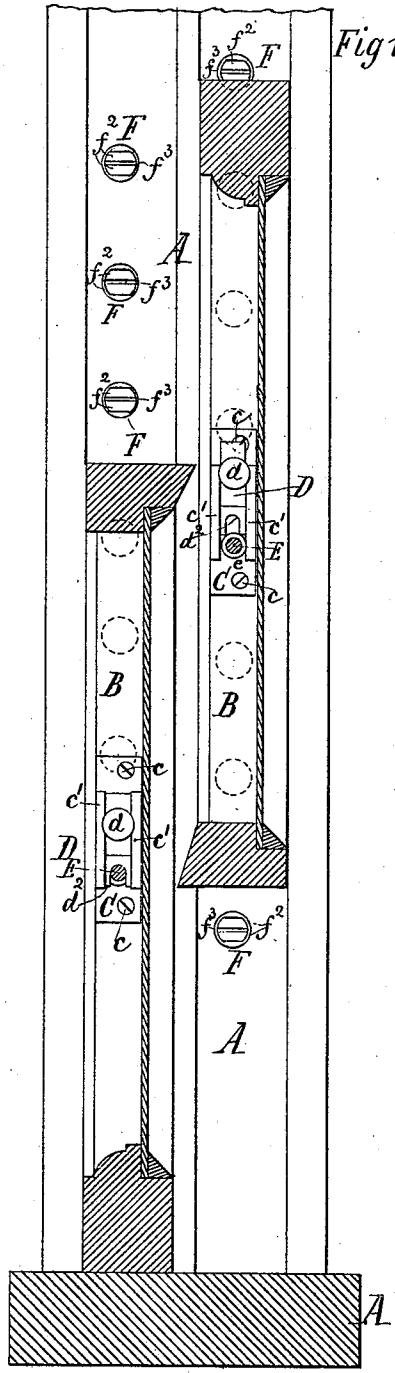


Fig 2.

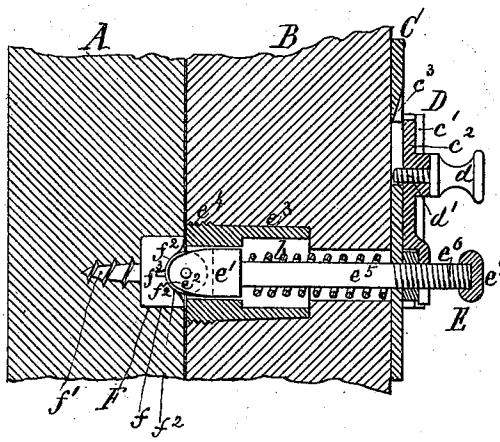


Fig 4.

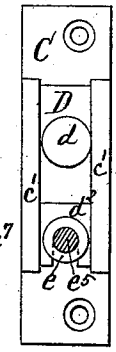


Fig 3.

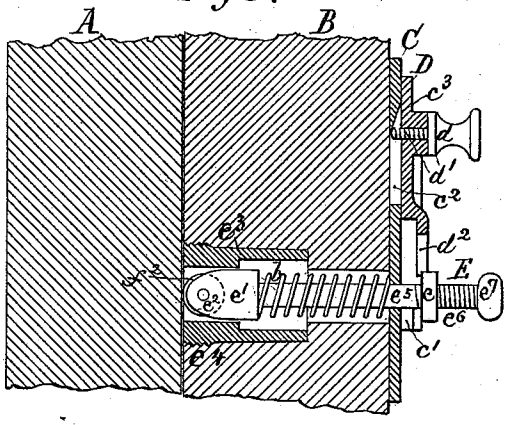


Fig 5.

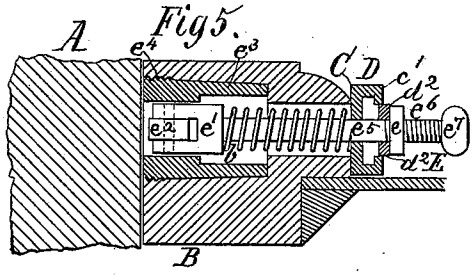


Fig 6.

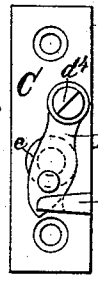


Fig 7.



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UNITED STATES PATENT OFFICE.

CHARLES H. DEXTER, OF ANNAPOLIS, MARYLAND.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 396,548, dated January 22, 1889.

Application filed July 6, 1888. Serial No. 279,196. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. DEXTER, a citizen of the United States, residing at Annapolis, in the county of Anne Arundel and State of Maryland, have invented certain new and useful Improvements in Window-Sash Locks; and I do hereby 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.

My invention relates to sash-locks which are adapted to have their spring-bolts and adjuncts applied to the vertical side pieces of the sash-frames and their keeper-sockets to the vertical side pieces of the window-frame; and it consists in certain novel constructions, combinations, and arrangements of parts of sash-locks of the class mentioned, as will be hereinafter described and specifically claimed, whereby the spring-bolts of the lower and upper sashes can be held locked in keeper-sockets when the sashes are to be safely closed, by means of sliding or swinging lock-plates, and said bolts can be freed by an adjustment and retention either by frictional bind or the nut-collar of the spring-bolt or by hand, so as to permit the lower sash to be raised or lowered and the upper sash to be lowered or raised to positions which will bring the said bolts in coincidence with the keeper-sockets and allow the said bolts to be projected by their springs into the keeper-sockets, so as to hold the sashes open at any desired altitude, the construction also being such that the spring sash-bolts can be locked back by the said plates, so that their springs cannot project them into the keeper-sockets and the sashes can be raised and lowered and the spring-bolts allowed to pass the keeper-sockets without entering the same.

In the accompanying drawings, Figure 1 is a vertical section of a portion of a window-frame and of two window-sashes, showing my invention applied to the latter. Fig. 2 is a sectional detail view showing the sash locked by my invention. Fig. 3 is a sectional detail view showing the locking-bolt raised and the spring-bolt traveling against the window-frame and adapted to be projected by the spring of the bolt into the keeper-sockets of the window-frame. Fig. 4 is an elevation of my sash-lock, showing the spring-bolt held by the locking-plate in such position that it cannot be projected by the spring of the bolt into the keeper-sockets of the window-frame. Fig. 5 is a transverse section through the spring-bolt, sash, and a portion of the window-frame, showing the same condition of parts as described in Fig. 4; and Figs. 6 and 7 are modified constructions of the locking-plate of my invention.

A in the drawings represents a window-frame; B, a sash; C, a plate by which the lock is fastened to the sash; D, a gravitating locking-plate; E, a spring-actuated bolt, and F a keeper-socket. The plate C is fastened by means of screws *c*, Fig. 1, to the inner edge of a side rail of either a lower or an upper sash, B, and it holds, by means of angular flanges forming with the body of the plate guides *c'*, the flat gravitating locking-plate D, adapted to slide vertically in the same. The gravitating locking-plate D is provided with a thumb-button, *d*, having a screw-threaded shank, *d'*, the end portion of which projects beyond the plate D and moves in a slot, c^2, of the same, so as to limit the movements of the plate. With this button the plate can be moved upward, so as to free the bolt E when necessary, and when it is desired to release the bolt the locking-plate D is pushed up by the button until the end of the button-shank *d'* comes in contact with an inclined surface, c^3, formed on the plate C at the upper terminus of the slot c^2, and in sliding upward the plate D is forced outward from the plate C, and thereby suspended by frictional bind between the plate D and flanges forming the guides *c*.

The lower portion of the locking-plate D is forked, as shown at d^2, and this forked portion is sufficiently raised or projected out from the plate C to ride over a round collar-nut, *e*, of the spring-bolt E, as illustrated in Fig. 3. The spring-actuated bolt E consists of a forked end portion, *e'*, carrying an anti-friction roller, e^2, which end portion moves by preference in a metallic guide, e^3, formed with a bore of two different dimensions, as shown, and inserted into the sash B, and held there by means of screw-threads e^4. The shank e^5

of the spring-bolt is of much smaller diameter than the end e', and passes through the sash B and the bolt-plate C, and around it a spring, b, by which it is projected, is coiled and arranged to bear upon the plate C and forked end portion, e', thereby keeping the anti-friction roller e^2 in spring contact with the window-frame A, or in one or the other of the keeper-sockets set in uprights of the window-frame.

The inner end portion, e^6, of the shank e^5 of the bolt E, is provided with screw-threads, upon which the nut-collar e and a thumb-button, e^7, are secured, the purpose of the nut-collar e being to form a locking-shoulder for the gravitating locking-plate D. This office would be performed if the collar were a fixed one; but as it is advantageous to provide for adjusting the bolts for different widths of side bars of sashes, and to compensate for wear it is preferable to employ an adjusting nut-collar, as shown.

In the path of the roller e^2 of the bolt, and at suitable distances apart, the metallic keeper-sockets F are provided in the window-frame, those for the lower sash being in one line, and those for the upper sash in another line, as shown. The keeper-sockets externally are of cylindrical shape, as at f, and have a pointed screw-threaded shank, f'. The portions f are inserted into holes bored with an auger, and the shanks f' follow the center marks left by the conical ends of the auger. The interiors of the keeper-sockets are concaved to conform to the periphery of the roller e^2, as illustrated at f^2, the outer edge of the socket being slightly flared, so as to facilitate the passage of the roller into and out of the said sockets. In the inner concave portion of the socket, opposite the screw-shank f', a straight groove, f^3, is formed for the reception of the end of a screw-driver, thus facilitating the screwing of the keeper-sockets into the window-frame, and also the removal of the same when necessary. When the sash is to be moved, the locking or gravitating plate D is pushed up sufficiently to be held up by the frictional bind between the inclined surface c^3 and the angular flanges c', when the sash B can be moved up or down, the roller e^2 traveling against the window-frame and gliding in and out of the keeper-sockets F in its path with great freedom. When the bolt arrives at and enters the keeper-socket F, into which it is to remain, the operator disengages the plate D from the inclined surface c^3, and it thereupon drops until its forked portion d^2 comes in contact with the shank of the spring-actuated bolt in front of the nut-collar e, thereby holding the bolt in the keeper-socket. When it is desired to set the spring-bolt out of operation, the button e^7 is pulled until the nut e is moved outward beyond the forked portion d^2 of the gravitating plate, whereupon said portion d^2 drops down behind said nut and holds the bolt out of contact with the window-frame or from entering a keeper-socket. This latter operation is especially convenient on window-sashes balanced by weights, in which case the sashes can be suspended at any desired elevation without other special catches.

In Fig. 1 on the upper sash and in Fig. 3 I have illustrated a way in which the nut-collar may be used as a riding support for the forked locking-plate D, and by this construction the sash can be lowered and raised without the necessity of retaining it by frictional contact or by hand.

In Fig. 6 the sliding gravitating plate D is substituted by a swinging plate, D′, which turns on a screw-pivot, d^4, and is swung into a hook, d^5, for the purpose of keeping it steady while it abuts against the end portion of the bolt-shank e^5, and thus locks the bolt in its keeper-socket. In Fig. 7 the swinging plate is slotted, and the slotted portion d^6 keeps the collar-nut e and bolt E from moving, so as to liberate the sash. The swinging plate performs the same operation as the gravitating plate, inasmuch as it locks the spring-actuated bolt in the keeper-socket and also out of contact with the window-frame.

I claim—

1. The combination of the spring-actuated bolt E, having collar e, and the gravitating locking-plate D, substantially as described.

2. The keeper-socket F, formed with a flared entrance, a roller-bearing concave surface, a groove, and a screw-shank, in combination with the spring-actuated bolt B and its roller e^2, and the gravitating locking-plate D, substantially as and for the purpose described.

3. The gravitating locking-plate D, having the angular flanges, thumb-button d, having shank d', and the plate C, provided with an inclined surface, c^3, and slot c^2, substantially as and for the purpose described.

4. The combination of the spring-actuated bolt having a locking-collar and a roller, the gravitating locking-plate, and a keeper-socket, substantially as and for the purpose described.

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

CHARLES H. DEXTER.

Witnesses:
S. F. RAWLINGS,
W. J. HYDE.