(Model.)

R. H. NORTH.

FASTENER FOR MEETING RAILS OF SASHES.

No. 379,242. Patented Mar. 13, 1888.

Fig. 1.

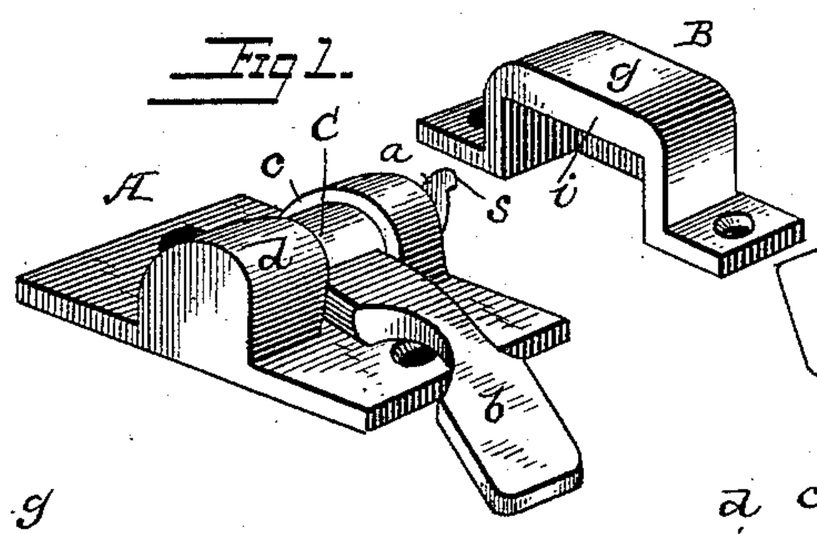


Fig. 2.

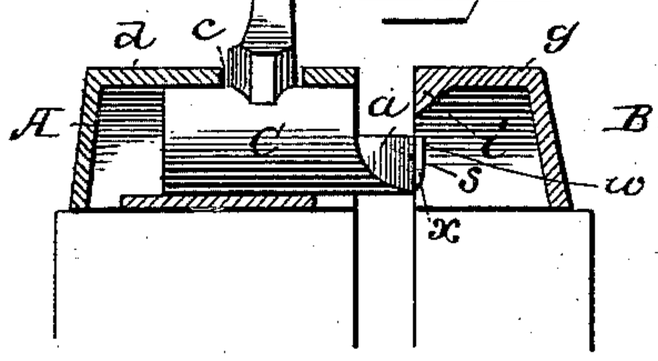


Fig. 3.

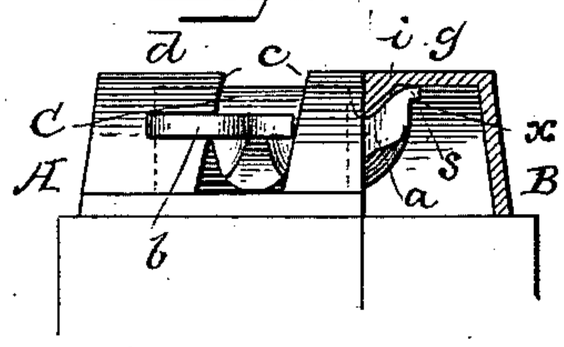


Fig. 5.

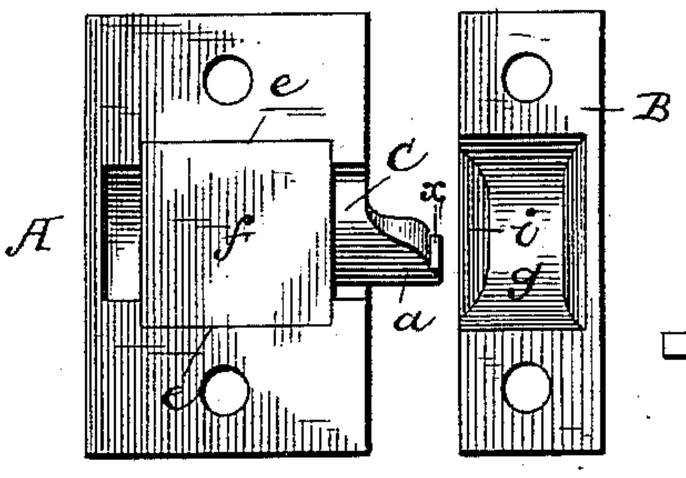


Fig. 6.

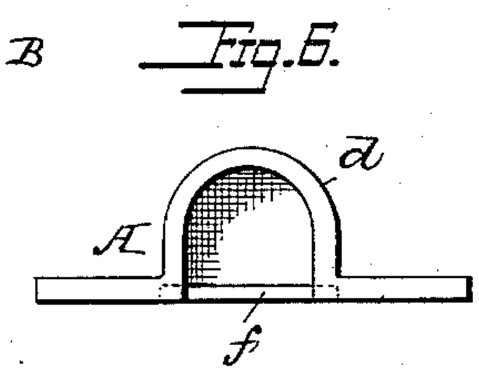


Fig. 7.

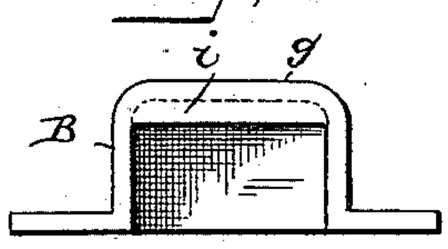


Fig. 10.

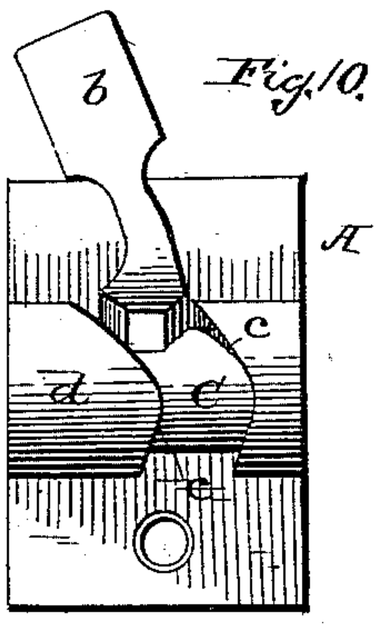


Fig. 8.

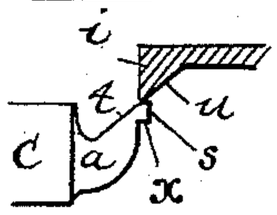


Fig. 9.

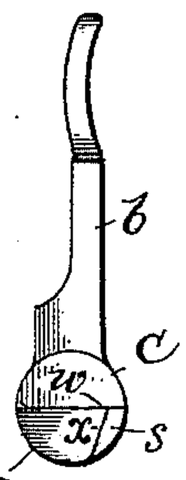
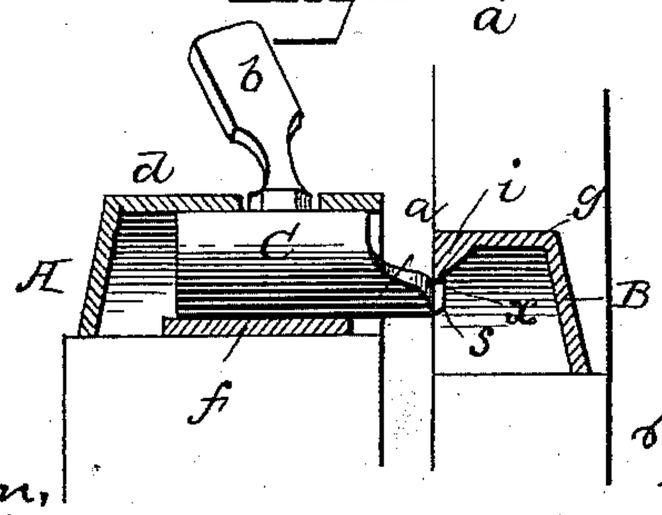


Fig. 4.



Witnesses
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Ralph H. North,
By Foster & Freeman
Attorneys.

UNITED STATES PATENT OFFICE.

RALPH H. NORTH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE NORTH BROTHERS MANUFACTURING COMPANY, OF SAME PLACE.

FASTENER FOR MEETING-RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 379,242, dated March 13, 1888.

Application filed December 9, 1887. Serial No. 257,442. (Model.)

To all whom it may concern:

Be it known that I, RALPH H. NORTH, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Sash-Holders, of which the following is a specification.

My invention relates to that class of sash-holders or sash-locks in which a rocking or sliding bolt upon one sash engages with a retainer upon the other; and my invention consists in constructing the parts, as hereinafter fully set forth, so as to increase the efficiency of the device and obviate certain objections in those of the usual construction.

In the accompanying drawings, Figure 1 is a perspective view illustrating a sash-holder with my improvements. Fig. 2 is a sectional elevation showing the parts in the position they occupy with the bolt half-turned and the sashes separated. Fig. 3 is a part-sectional side view showing the parts in a locked position; Fig. 4, a view showing the action when the upper meeting-rail is depressed. Fig. 5 is an inverted plan view of the parts of the sash-holder. Fig. 6 is an edge view of the bolt-case. Fig. 7 is an edge view of the keeper; Fig. 8, a diagram illustrating the operation of the device; and Fig. 9 is an end view of the locking-bolt. Fig. 10 is a plan view of the bolt-section.

In that class of sash-holders in which a rotating bolt or catch upon one sash engages with a socket-plate or other locking-section upon the other sash the construction has heretofore been such that the locking could only be effected when the two sections of the holder were almost absolutely in line, while when such sections failed to coincide the projection of the bolt would in many instances cause its end to bear forcibly against the opposite section of the holder and force the upper sash away from the lower sash without any interlocking of the parts together. In such case the bolt would be turned and the sash appear to be locked, when in reality there was no engagement.

In order to remedy the difficulties above set forth, as well as to otherwise improve the construction and increase the efficiency of this class of devices, I construct the same as I will now describe.

The bolt-section A of the device consists of a cylindrical bolt, C, carrying a locking-finger, *a*, at its outer end, and provided with an operating-handle, *b*, which extends through a cam-slot, *c*, in the case *d* of the bolt. This cam-slot is so curved for about one-half its length that it will throw the bolt forward by the engagement of the handle *b* therewith during the first quarter of its revolution, while the remaining portion of the slot traversed by the handle during the second quarter of its revolution is substantially straight, so that the bolt has a rotary but not a longitudinal motion.

The case *d* may be in different forms; but as shown it consists of a flat plate arched in the center to form a receptacle for the bolt and with recesses *e e* at the under side to receive a plate, *f*, which lies beneath the bolt, and which is held in place by the case when the latter is fast to the sash, the said plate preventing the bolt from wearing away the sash and avoiding the necessity of making a socketed case, which would necessitate the expense of casting with a core.

The keeper B consists of a plate adapted for attachment to the upper sash, with a dome or hollow projection, *g*, open at the side opposite the bolt and supporting a rib, *i*, with which the finger *a* engages as the bolt is turned, so as to hold the two sections together, as shown in Fig. 3. The dome *g* is wider than the arched portion of the lock-case *d*, so as to support an elongated rib, *i*, (which is best shown in Fig. 7,) thereby insuring the engagement of the finger *a* with the same rib, even if one sash should be moved laterally to a considerable distance out of its normal position, and whether or not the keeper is secured in its precise position on the sash in respect to the bolt-section of the device.

The finger *a* is in an eccentric position upon the end of the bolt—that is, it projects from the end of the bolt to one side of its axis, as best shown in Figs. 2 and 4, and at the end or terminal face of said finger is a forward-projecting lip, *s*, forming a shoulder, *x*, and the side of the said finger which is uppermost when the bolt is forward is preferably cut away from the edge of the terminal lip, so as to form an inclined face or bearing, *t*, when the bolt is forward in its locked position. The rib *i*

upon the hasp B has preferably a flat outer face and an inner inclined face, *u*.

If the two sashes should be in the position for locking, with the bolt-section and keeper separated, the finger, instead of striking the rib *i* and forcing the keeper away from the lower sash, will be carried first without contact below the rib *i*, as shown in Fig. 2, and as the bolt is revolved and the finger is brought against the rib *i* it will catch back of the edge of said rib, thereby drawing the keeper toward the bolt-case with a screw-like action until the two sections of the device are together, as shown in Fig. 3, thus locking the sashes securely. In some cases the bolt is projected when the meeting-rail of the upper sash is somewhat below the lower sash-rail, as shown in Fig. 4. In this case the sliding and revolution of the bolt will first carry the end of the finger *a* below the rib *i*, and as the bolt is turned to about one third of its revolution the end of shoulder *x*, formed by the lip *s*, will rise and engage with the edge of the rib, as shown in Fig. 8, and will lift the keeper and the meeting-rail of the upper sash until the two sash-rails are on a level, the face *t* of the finger being carried behind and locking with the face *u* of the rib, and the keeper being drawn to the bolt-case with the screw-like action before described.

To prevent the keeper from being forced away from the bolt as the finger *a* is brought into contact with the lower sharp edge of the rib *i*, I provide said finger with a flattened face, *w*, which lifts the keeper and presents a surface upon which the sharp edge will catch and which will retain the rib in position until the inclined face *t* turns up to a position to serve as a bearing for said edge.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. The combination, in a sash-holder, of the case and bolt provided with an engaging-finger carried eccentrically at the end of the bolt and having an inclined face, *t*, and a keeper provided with an engaging-rib, *i*, extending laterally beyond the bolt in both directions and having an inclined face, *u*, substantially as set forth.

2. In a sash-holder, a case provided with a sliding and rotating bolt having an end finger for locking with the keeper, with a forward-projecting lip, *s*, on the terminal face of the finger, substantially as described.

3. The combination, in a sash-holder, of a keeper provided with an engaging-rib and a case supporting a rocking and sliding bolt having an eccentric engaging-finger, *a*, provided with an inclined face, *t*, a lip, *s*, on the terminal face of the finger, and a shoulder, *x*, substantially as set forth.

4. The combination, in a sash-holder, of the case supporting the rocking and sliding bolt having a finger with a lip, *s*, on the terminal face of the finger, forming a shoulder, *x*, shoulder *w*, and inclined face *t*, and a hasp, B, having a transverse rib with an inclined inner face, *u*, substantially as set forth.

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

RALPH H. NORTH.

Witnesses:
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CHARLES W. MORRIS, Jr.