

J. L. WAYNE, Jr.
Fastener for Meeting-Rails of Sashes.
No. 220,891. Patented Oct. 21, 1879.

Fig. 1.

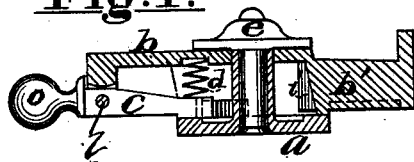


Fig. 2.

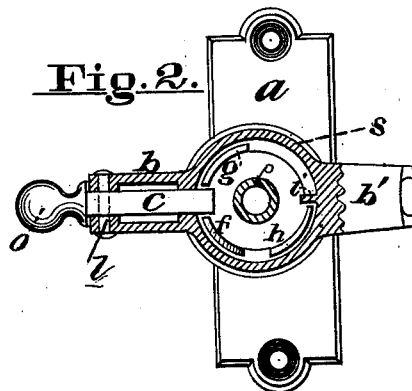
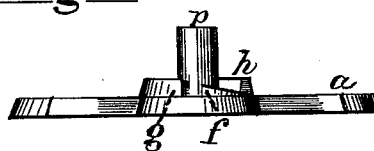


Fig. 3.



Witnesses

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IMPROVEMENT IN FASTENERS FOR MEETING-RAILS OF SASHES.

Specification forming part of Letters Patent No. **220,891**, dated October 21, 1879; application filed May 9, 1878.

To all whom it may concern:

Be it known that I, J. LLOYD WAYNE, JR., of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Sash-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the same, which will enable others skilled in the art to make and use it, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of the fastener. Fig. 2 is a plan view, partly in section; and Fig. 3 is a side elevation of the stop plate.

Similar letters of reference denote like parts in the several figures of the drawings.

My invention relates to that class of sash-fasteners in which a latch is pivoted on the lower sash and adapted to be turned to engage with a keeper on the upper sash for fastening the two together, a catch of some kind being provided for holding the latch engaged with the keeper, which would otherwise, owing to the force of the spring, be disconnected from the keeper and thrown round upon the lower sash to unfasten the window.

In most fastenings of this class the means for locking the latch engaged with the keeper have also been specially formed to prevent the device from being unfastened from the outside of the window, and many different inventions have been made and patented for accomplishing this object. I do not, therefore, claim to be the first and original inventor of means for locking a spring-latch to its keeper, nor for securing the locking device to prevent it from being tampered with from the outside; but, stated in general terms, my invention consists in the special and improved construction of these means, together with an improvement in the means by which the latch is guided and stopped in its movements on the central pivot, for the purpose of obtaining that certainty of action essential to the successful and practical operation of the fastening.

In the accompanying drawings, *a* is a rectangular metal plate to be attached to the top rail of the lower sash. *p* is the central hollow pivot thereof. *b b'* is the latch mounted upon the pivot, and held thereon by the large-headed screw or rivet, *e*.

These several parts in their general form and operation are old and well known, and do not constitute my invention, which I will now proceed to point out specifically. In the first place I cast the latch with a large hollow center-piece, *S*, fitting over the pivot, so as to form a large circular bearing on the plate *a*, and form the handle or rear extension, *b*, with a longitudinal groove in its under side, extending also through the rear edge of the center-piece. Diametrically opposite this groove I provide the inner wall of the center-piece with a vertical rib, *i*, for a purpose to be presently explained. Merely enlarging the bearing of the latch is not in itself new; but the longitudinal groove and rib are new features in the construction and serve important ends, as I will show.

The plate *a* is cast with two segments, *g h*, diagonally opposite each other across the plate, and their front ends serve as stops, against which the rib *i* in the latch is carried. The forward end of the stop *h* arrests the latch when lying along the plate to engage the keeper, and the forward end of the stop *g* arrests it when disconnected from the keeper and lying along the plate. Midway between the rear ends of these two stops there is an inclined guide, *f*, also segmental in form, and terminating at the end next the stop *g* in a vertical wall. The three parts *f g h* form segments of the same circle concentric with the hollow pivot, and act as a guide for the center-piece of the latch, which fits down upon the plate around them. They therefore serve to steady the latch in its movements and prevent it from lateral displacement on the plate, for it will be seen that, aside from these stop-guides, the only lateral support for the latch is the thickness of the metal at the top of the center-piece about the pivot.

c is the catch or detent by which the latch is held to the keeper. It is cast in the form of a square bar of just the width necessary to fit within the groove of the latch and project somewhat into the hollow center-piece, where it rests upon a short spiral spring, *d*. It is pivoted at *l* within the groove, and formed with a knob, *o*, upon the outside, by which it may be operated. The tension of the spring *d* is such that when the latch is turned to en-

gage the keeper it shall throw the squared end of the detent within the recess between the stop *g* and inclined guide *f* and lock the latch in place.

When it is desired to disengage the latch from the keeper the knob end of the detent is depressed by the thumb or fingers to clear its recess. The detent in the meantime rides down the inclined guide *f* and strikes against the stop *h*. At the same time the rib *i* is arrested by the stop *g*. To again lock the sashes together it is only necessary to turn the latch without operating the detent, because the latter is not locked in place, but is free to ride up the inclined guide, and automatically drops into its holding-recess.

From this description it will be seen that the latch is provided with a stop in front and rear of the pivot when turned in either position—that is to say, when the detent is in its recess the rib *i* bears against the stop *h*, and thus the latch is supported both in front and rear, and when the detent bears against the stop *h* the rib *i* is in contact with the stop *g*, thereby supporting the latch longitudinally upon the base-plate on opposite sides of the pivot.

By this construction, therefore, the latch is completely supported and braced, and the whole fastening made strong and secure.

By squaring the shank of the detent it moves steadily in the latch without lateral play, which would be liable to strain its pivot and displace its spring, and by reason of the squared recess in the edge of the center-piece of the latch it is forced to act promptly when the spring depresses it into its locking-recess.

I am aware that a longitudinally-sliding spring-bolt has been used as a detent in the end of a pivoted spring-latch to engage with a series of holes or recesses in a segment on the base-plate; but this is not the same as my

invention, and does not operate in the same manner. It possesses certain defects, which my improvement overcomes—to wit, the difficulty of the spring-bolt entering the holes or recesses in the segment unless the holes are made much larger than the bolt, and if so made the latch will play and rattle on its pivot. The coiled spring, being on the bolt, acts against the friction of the latter, and its frequent movement under full compression soon destroys its force.

If the bolt should by accident become bent it would fail to register with the recesses in the segment, and could only with great difficulty be made to slide in its guides.

My improvements overcome these defects because the detent cannot be bent, it has no lateral play, is supported in front and rear by strong bearings, produces no friction on the spring, and should the spring become displaced or broken the detent would still lock the latch, because it would drop into the locking-recess by its own gravity.

Having thus described my invention, what I claim is—

The combination, with the base-plate *a*, constructed with the segmental flanges *g h*, diagonally opposite each other, inclined guide *f*, and post *p*, of the latch-lever *b b'*, provided with the inwardly-projecting stop-rib *i* and vibrating spring-detent *c*, pivoted within a longitudinal groove in the under side of the latch-lever, and having its operating end projecting beyond the front end of the same, and a square end projecting into the hollow center-piece, all substantially as shown and described.

J. L. WAYNE, JR.

Attest:

WM. T. FINCH,
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