

(No Model.)

B. J. DANIELSON.
STORM AND SCREEN FRAME.

No. 579,138.

Patented Mar. 23, 1897.

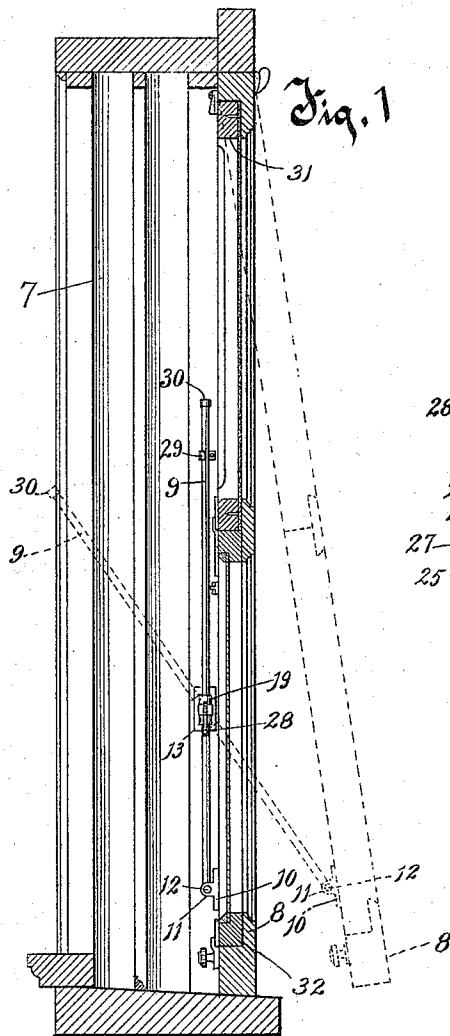


Fig. 1

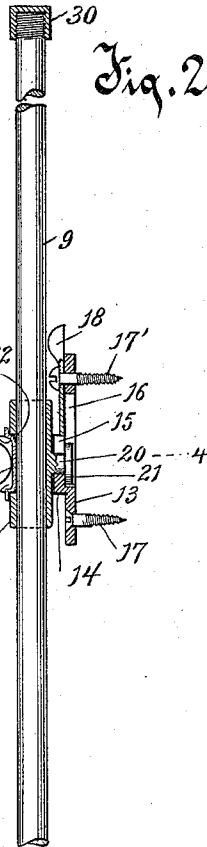


Fig. 2

Fig. 3.

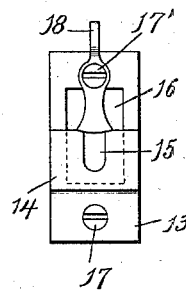


Fig. 6.

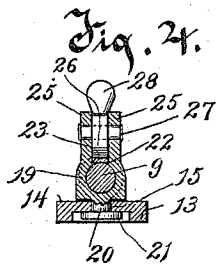
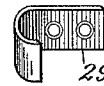


Fig. 4.

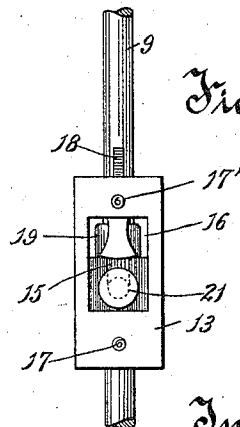


Fig. 5.

Witnesses.

W. Keeney.
Amos P. Faust.

Inventor.

Bernhard J. Danielson.
By Benedict and Morsell.
Attorneys.

UNITED STATES PATENT OFFICE.

BERNHARD J. DANIELSON, OF MILWAUKEE, WISCONSIN.

STORM AND SCREEN FRAME.

SPECIFICATION forming part of Letters Patent No. 579,138, dated March 23, 1897.

Application filed November 27, 1896. Serial No. 613,546. (No model.)

To all whom it may concern:

Be it known that I, BERNHARD J. DANIELSON, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Storm and Screen Frames, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in storm and screen frames.

The primary object resides in the readiness and facility with which the frame can be swung open to admit of proper ventilation and also swung in to a closed position to shut out the cold air, this latter movement being accomplished without danger of tearing the curtain by contact of any of the parts therewith.

A further object contemplated is the employment, in connection with a rod and a swiveled sleeve through which said rod passes, of an improved form of locking mechanism of such construction as to avoid acting directly on the rod and thereby marring the same, and also providing an absolute safeguard against the rod slipping in the sleeve.

Furthermore, the invention comprehends an improved construction whereby the rod and swiveled sleeve may be readily disconnected from the framework and as readily reconnected thereto.

With the above primary and other incidental objects in view the invention consists of the devices or parts or their equivalents, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a vertical sectional view of a window-casing equipped with a storm or screen frame and mechanism for operating the same. Fig. 2 is a detail elevation of the operating-rod and the mechanism used in connection therewith, the latter being in section. Fig. 3 is a detail view of the plate for holding the swiveled sleeve. Fig. 4 is a horizontal section on the line 4 4 of Fig. 2. Fig. 5 is a fragmentary view of the rod, showing the swiveled sleeve thereon, and a rear face view of the plate to which the swiveled sleeve is removably connected; and Fig. 6 is a detail view of the hook which the upper end of the rod is adapted to engage.

Referring to the drawings, the numeral 7 indicates a window-casing of ordinary construction. Fitted within this casing is a storm and screen frame, (indicated by the numeral 8,) which frame at its upper end has a removable pivotal connection with the upper end of the window-casing. The storm and screen frame is advisably provided with removable sashes, which admits of either a storm or screen frame being employed. Pivoted to the opposite side strips of the storm and screen frame, near the lower ends of said strips and upon the inner side of the frame, are rods similar to 9. The pivotal connection is advisably formed by means of plates 10, secured to the side strips of the frame and provided with projecting lugs 11, between which the end of the rod is received, and turns upon a pivot-pin 12.

Secured to the inner side edges of the window-jamb are plates 13. Each plate has a raised central portion forming a boss 14, which raised portion or boss is provided with an upwardly-extending elongated slot 15, which communicates at its upper end with a large opening 16 in the plate. The lower end of the plate is secured to the window-jamb by means of a screw 17, and its upper end is secured by a similar screw 17', which screws pass through the plate and enter the jamb of the window-casing. The upper screw 17', however, also passes through an arm 18 next to the outer face of the plate, said arm being free to turn pivotally upon the screw. The normal position of the arm is perpendicular, as shown in the drawings, so that its lower end will cover the upper end of the elongated slot 15. The rods 9 pass through sleeves 19. These sleeves are provided with inwardly-extending stems 20, said stems passing through the elongated slots 15 of the raised central portions 14 of the plates, and said stems are provided upon their inner ends with enlargements or heads 21, which fit back of the plates 13, between the rear faces of said plates and the jamb of the window-casing. The outer sides of the sleeves are also provided with elongated openings 22, in which openings are fitted plates 23, said plates being provided with end shoulders 24 24, which bear against the bordering end edges of the openings 22, and hence prevent endwise movement of the

plates. The sleeves are also provided with projecting ears 25 25, between which a cam-head 26 is pivoted upon a pin 27. This cam-head is advisably eccentrically pivoted. It is provided with an operating-handle 28.

Secured to opposite side strips of the window-casing at a desired height are hooks 29 29, which are adapted to be engaged by the upper ends of the rods 9 when the storm and screen frame is swung inwardly to a closed position in order to securely hold said frame in such position.

Fig. 1 shows in dotted lines a storm and screen frame as forced outwardly to a partially open position, this being accomplished by turning the handles of the cam-heads so that said heads will not bear forcibly against the plates 23, and then pushing the rods through the sleeves. In order to bring the storm and screen frame to the closed position, (indicated by full lines in Fig. 1,) the rods are pulled inwardly through the sleeves. From the fact that the inwardly-extending stems 20 of the sleeves are free to turn in the elongated slots 15 a swivel connection of the sleeves is obtained, and said sleeves are therefore capable of free turning. As the sleeves are thus turned the rods are turned with them and necessarily describe an arc of a circle, which is essential to successful operation in view of the fact that the storm and screen frame is pivoted at its upper end to the window-casing. When the storm or screen frame is swung out to the open position, (indicated by dotted lines in Fig. 1,) it of course becomes necessary to lock the rods 9 in the position to which they have been necessarily adjusted. This is accomplished by turning the handle 28 of the cam-head 26 so as to bring the edge of the cam-head which is farthest removed from its pivot-pin into engagement with the plates 23. By thus being brought into forcible contact with the plates said plates are caused to bear firmly against the rods and thereby lock said rods in adjusted position. These plates 23 are of great advantage, inasmuch as the cam-heads bear directly thereagainst, and not only is the marring of the rods avoided but all danger of the rods accidentally slipping is prevented and a most secure lock is necessarily provided. If the cam-head contacted directly with the rod, there would always be the danger of the rod slipping and turning the cam-head out of its locking position. By the provision of the interposed plates 23, however, this is absolutely prevented, inasmuch as it is impossible for said plates to slip endwise, owing to the fact that the shoulders 24 of said plates engage the end bordering edges of the elongated openings 22 of the sleeves.

Another important feature of my invention resides in the construction, whereby the rods and the sleeves carried thereby may be readily removed. It will be seen that when the arm 18 is turned down to the position shown in the drawings it is impossible for the stems 20

of the sleeves to pass up into the large openings 16. If, however, the arms 18 are turned to a horizontal position, the upper ends of the elongated slots 15 are brought into communication with the openings 16, and hence there is a free passage to allow for the stems 20 passing up into said openings 16. These openings 16 are sufficiently large to permit the heads 21 of the stems 20 to be drawn therethrough, so as to release the rods and the sleeves carried thereby from engagement with the plates 13. I would also call attention to the fact that by the provision of the plates 13 it is not necessary to recess or mortise the side strips of the window-casing so as to let in the enlargements or heads 21 of the stems in order to form the swivel. The entire connection can therefore be made without in the least marring the window-casing.

The upper end of each rod is provided with a handle 30, forming a convenient hand-grasp for the purpose of releasing the rod from the hook 29. This handle has preferably a threaded connection to the upper end of the rod, so that it may be readily removed to permit the rod to be drawn entirely through the sleeve when necessary.

In the present illustration of my invention I have shown two sashes arranged within the storm and screen frame. This is the preferable arrangement, although it will be readily understood that one continuous sash could be adjusted to the frame 7. Two separate sashes, however, are preferable, inasmuch as they are much lighter and can therefore be more readily and easily removed than a single or continuous sash. The upper sash, which is shown as a screen-frame, is indicated by the numeral 31, and the lower sash, which is shown as a storm-frame, is indicated by the numeral 32.

While in the drawings only one side of the window-casing is shown, and consequently only one rod 9 and the mechanism in connection therewith also shown, yet it will be understood that this arrangement is preferably duplicated on the opposite side of the window-casing, and I have therefore referred to the parts in the plural in the specification.

I would here state that I do not claim in the present application anything claimed in my application filed July 31, 1896, Serial No. 601,172. The present invention differs from that covered in said application of July 31, 1896, principally in providing the plates 23 against which the cams bear, thereby preventing the marring of the rods, as well as all danger of such rods accidentally slipping. It furthermore differs in the provision of the structural feature, whereby convenient means are provided for disconnecting the swivels from their sockets.

What I claim as my invention is—

1. The combination, of a window-casing, a frame pivoted at its upper edge to the upper edge of the window-casing, a rod pivoted at

or near the lower end of the frame, a swiv-
eled sleeve secured to the inner side of the
window-casing, said sleeve adapted to have
the rod pass therethrough, and provided upon
5 its outer side with an opening, a plate fitted
in said opening, and a cam pivoted to the
sleeve, and adapted to bear against the plate
and to cause said plate to bear against the rod.

2. The combination, of a window-casing, a
10 frame pivoted at its upper edge to the upper
edge of the window-casing, a rod pivoted at
or near the lower end of the frame, a swiv-
eled sleeve secured to the inner side of the
window-casing, said sleeve adapted to have
15 the rod pass therethrough, and provided upon
its outer side with an opening, a plate fitted
in said opening and provided with shoulders
bearing against the end bordering edges of
the opening of the sleeve to prevent length-
20 wise slipping of the plate, and a cam adapted
to bear against the plate, and to cause said
plate to bear against the rod.

3. The combination, of a window-casing, a

frame pivoted at its upper edge to the upper
edge of the window-casing, a rod pivoted at 25
or near the lower end of the frame, a plate
secured to the side of the window-casing and
provided with an elongated opening leading
to a larger opening, a pivoted arm adapted
to be turned so as to close the end of the 30
elongated opening, a sleeve through which
the rod passes, said sleeve provided with a
projecting stem extending through the elon-
gated opening of the plate, and formed or
provided at its inner end with an enlarge- 35
ment or head adapted to be located between
the inner face of the plate and the side of the
window-casing, and means for holding the
rod in adjusted position within the sleeve.

In testimony whereof I affix my signature 40
in presence of two witnesses.

BERNHARD J. DANIELSON.

Witnesses:

A. L. MORSELL,
ANNA V. FAUST.