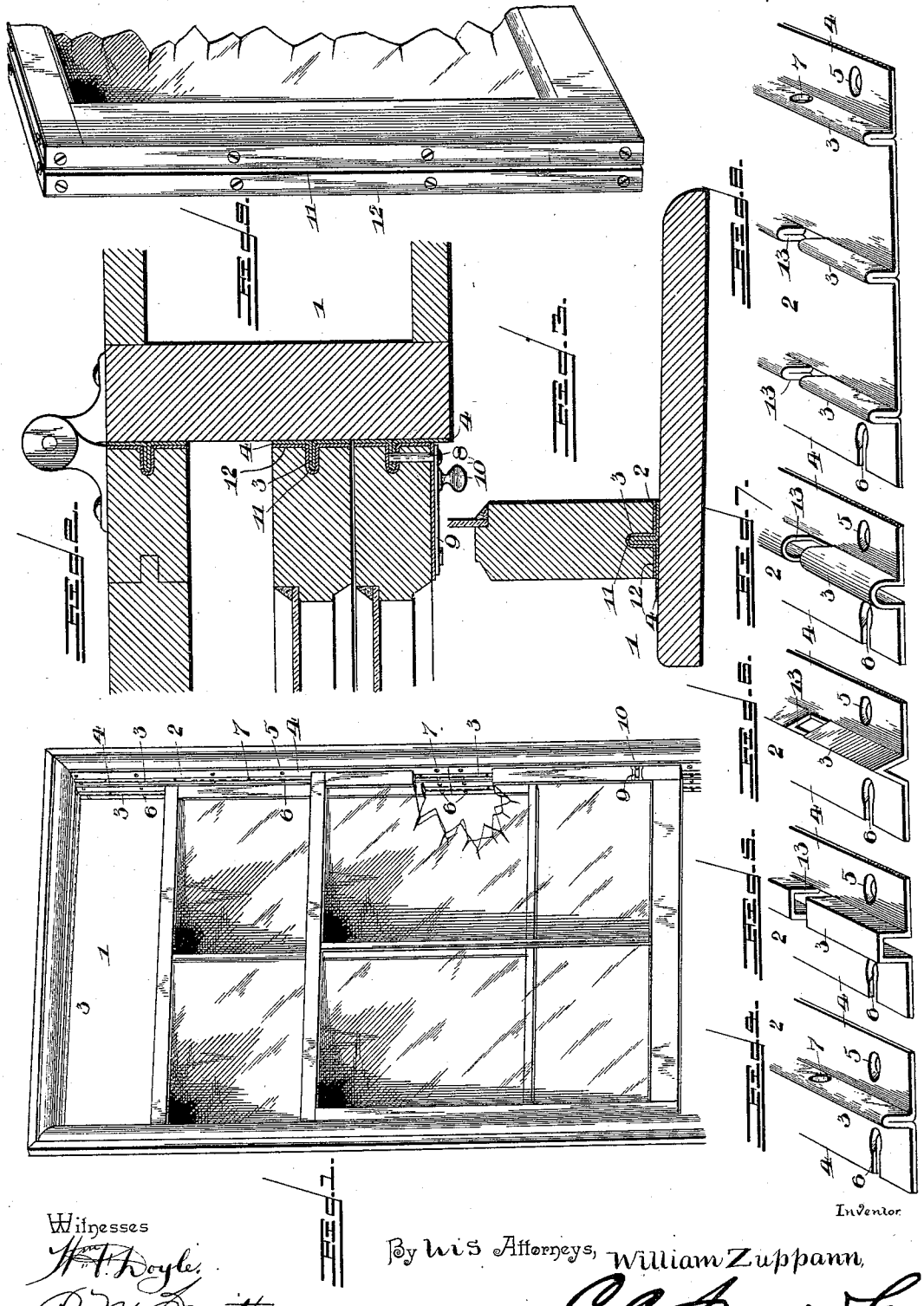
(No Model.)

# W. ZUPPANN.

## METALLIC WINDOW SLIDE.

No. 579,631. Patented Mar. 30, 1897.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

WILLIAM ZUPPANN, OF WARSAW, ILLINOIS.

## METALLIC WINDOW-SLIDE.

SPECIFICATION forming part of Letters Patent No. 579,631, dated March 30, 1897.

Application filed January 20, 1896. Serial No. 576,183. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ZUPPANN, a citizen of the United States, residing at Warsaw, in the county of Hancock and State of Illinois, have invented a new and useful Metallic Window-Slide, of which the following is a specification.

This invention relates to an improvement in metallic window-slides for windows, screens, &c.; and the object in view is to provide a simple and efficient guiding strip or slide which may be used upon any window, which will protect the window-sashes from swelling and warping, and which is constructed in such manner that it may be easily and readily removed whenever it becomes necessary to take out the window-sashes, screens, &c.

A further object of the invention is to construct such slide in a manner that will adapt it to receive and engage a spring-catch carried by one or both of the window-sashes or the screen-frames.

With the above objects in view 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.

In the accompanying drawings, Figure 1 is a perspective view of a sufficient portion of a window frame, sash, &c., to illustrate the application of the present improvement thereto. Fig. 2 is an enlarged detail horizontal section through the same. Fig. 3 is a detail vertical section through the window-sill and lower rail of a sash. Figs. 4 to 8, inclusive, show different forms of slides. Fig. 9 is a detail perspective view showing the grooved metal strip applied to the side rail of a window-sash.

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

Referring to the accompanying drawings, 1 designates a window frame or casing which for the purposes of the present invention is left smooth upon its inner surface, the usual stops or guiding strips or beads being omitted. In lieu of the usual wooden stops or beads I construct a special slide, as indicated at 2. This slide is formed of sheet material, preferably metal, in the form of strips corresponding in length to the height and width of the window-casing. Each strip is formed at or adjacent to its central portion with a longitudinal rib or guide 3, formed by bending or recurving the metal upon itself at such point and extending the edge portions 4 at right angles to such rib portion and in alinement with each other. One of the edge portions 4 of the strip is provided with a series of perforations 5 for the reception of the retaining-screws, and the remaining edge portion upon the opposite side of the rib is formed with a series of open transverse slots 6, extending at right angles to said rib and adapted to receive the heads of other retaining-screws, as shown.

By folding the metal to form the rib 3 and providing the open slots 6 the said rib may expand and contract, and by reason of its elasticity will yieldingly and snugly fit the grooves in the sash and prevent the same from rattling, and also compensate for wear between the parts, while at the same time said slots will permit the slide to be removed simply by loosening the screws, as hereinafter described.

A number of perforations or sockets 7 are formed in or through the central longitudinal rib 3, the same being adapted to receive the inwardly-projecting extremity of a lock-pin 8, attached to a spring 9, secured, preferably, to the inner surface of one of the side rails of the sash, the said spring being provided with a button or finger-grasp 10, whereby the said spring may be drawn away from the sash and the point of the pin removed from engagement with the perforations or sockets 7 in the slide.

The slides or strips above described are secured in the manner referred to to the inner surfaces of the sides, top, and sill of any window-casing, and while the upper and lower slides are preferably made continuous or extended in one piece the entire width of the casing the vertical strips or slides are preferably made each in two sections which correspond to the height of the window-sashes, such arrangement facilitating the removal of the slides and window-sashes when necessary. Each of the window-sashes, and the screen-frames also, where such are used, is formed with longitudinal grooves in the outer edges of its side, top, and bottom rails, the said grooves corresponding to and adapted to fit

over and slide upon the ribs 3, or the said grooves are made slightly larger, so as to receive the U-shaped or hollow rib 11 of a strip 12, secured to each of the side edges of the sashes and to the top and bottom edges thereof, according as the sash is the upper or lower one. The use of the strip 12 prevents the wetting of the edges of the sash and the consequent swelling of the same and the binding of the sashes within the frame. This enables the sashes to be moved easily up and down and renders it possible to make such a close-fitting engagement between the sashes and the window-frame that the weather will be effectively excluded and all rattling of the sashes obviated.

When it is desired to remove the sashes for any reason, they may be moved upward, so as to expose the lower retaining-screws passing through the perforations 5 of the slides. Such screws are then removed, after which the positions of the sashes are reversed and the upper corresponding screws removed. This will allow the sashes to be drawn inward, and the slides 2 will be drawn out of engagement with the outer retaining-screws, which have their heads in engagement with the open slots 6 described. The sashes may be replaced by reversing this operation.

In Fig. 5 I have shown how the slides may be made in a slightly-different form, in this case the longitudinal rib 3 being hollow and of rectangular cross-sectional shape. In this case also, in lieu of the perforations 7, notches 13 may be formed in the rib for the reception of the lock-pin 8.

Figs. 6 and 7 show, respectively, the rib 3, made in V shape and in U shape in cross-section. It will be understood that in the employment of either of the modified forms of ribs the strip 12 will be correspondingly altered as to the shape of its hollow rib, so as to adapt it to fit over and slide upon the rib 3.

If desired, instead of providing a separate and independent set of slides for each sash a single set may be employed, the same being provided with two or three or more ribs, as indicated in Fig. 8, according to the number of sashes or screen-frames employed.

It will thus be seen that a very simple, inexpensive, and efficient strip is obtained, which will effectively exclude wind, rain, &c., which will admit of the ready removal of the sashes, and which will, in connection with the spring-catch on each of the window-sashes or screen-frames, enable the latter to be held at any desired height. It will be apparent that the positions of the strip 12 and slide 2 may be reversed, the strip 12 being applied to the window-frame and the slide 2 to the sash; also, that any form of sash-lock may be employed in connection with the improved strips or slides.

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. A slide for window-sashes, &c., consisting of a metal strip creased lengthwise and folded upon itself to form a longitudinal and laterally-expansive rib, one of the edge portions of the strip being extended substantially at a right angle to such rib and provided at intervals with slots running at right angles to the rib and opening out at the edge of the strip, whereby the slide is made removable and the rib allowed to expand and contract, substantially as described.

2. The herein-described slide, consisting of a strip of sheet metal creased lengthwise at different intervals between its side edges to form a series of longitudinal ribs for engaging the window-sashes and also a screen-frame or blind, the edge portions of the strip being located in the same plane and one of said portions having inclosed perforations while the remaining portion is provided with open slots extending at right angles to said ribs, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM ZUPPANN.

Witnesses:
JOHN H. FINLAY,
CHAS. ALBERS.