C. A. JOHNSON.

WINDOW.

APPLICATION FILED DEC. 16, 1912.

1,076,767.

Patented Oct. 28, 1913.

2 SHEETS—SHEET 1.

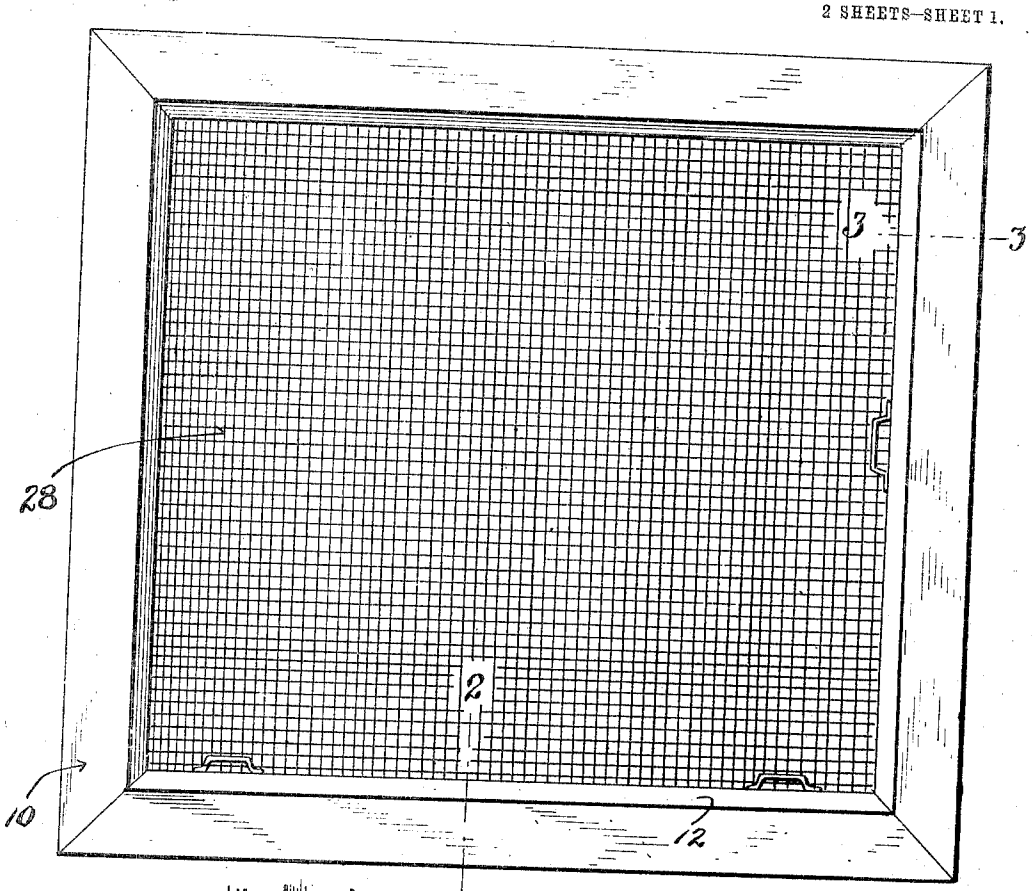


Fig. 1.

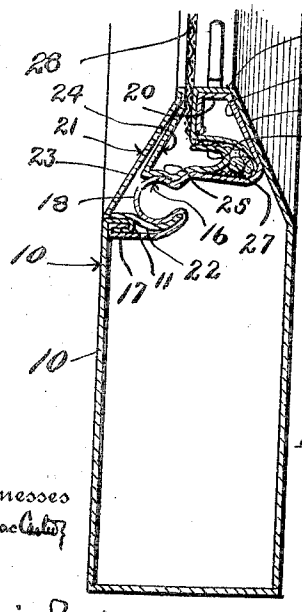


Fig. 2.

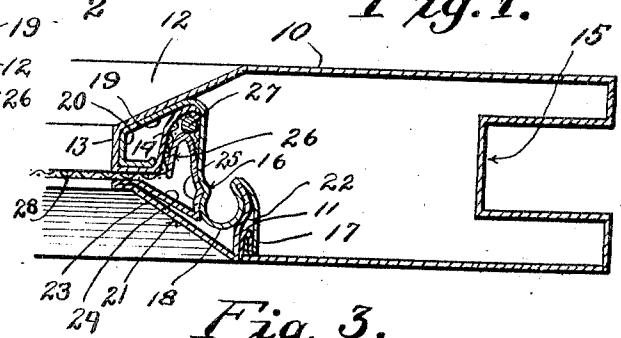


Fig. 3.

Witnesses

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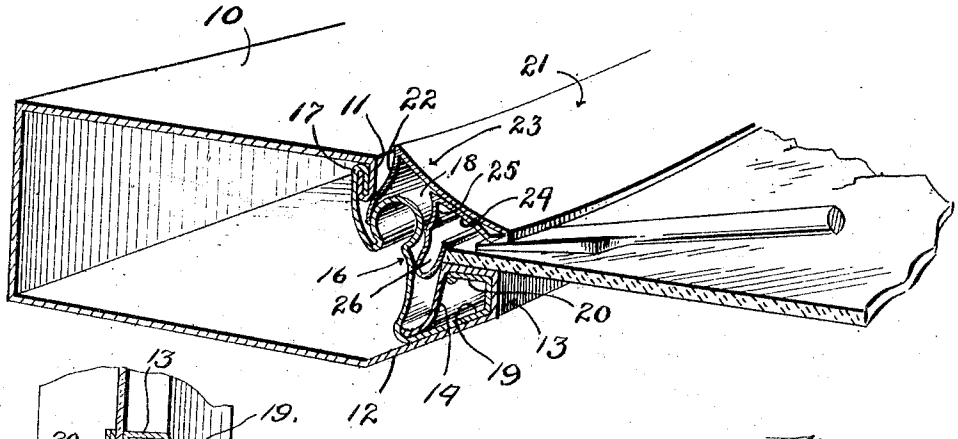
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2 SHEETS—SHEET 2.

Fig. 8.



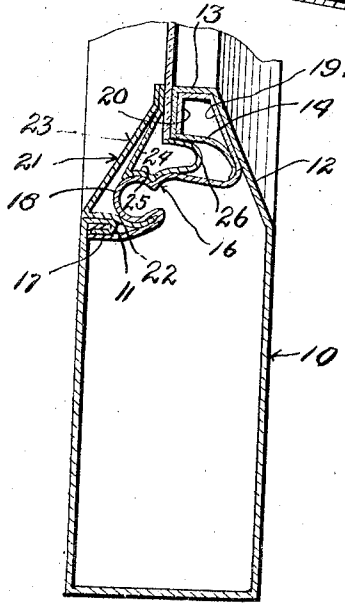


Fig. 7.

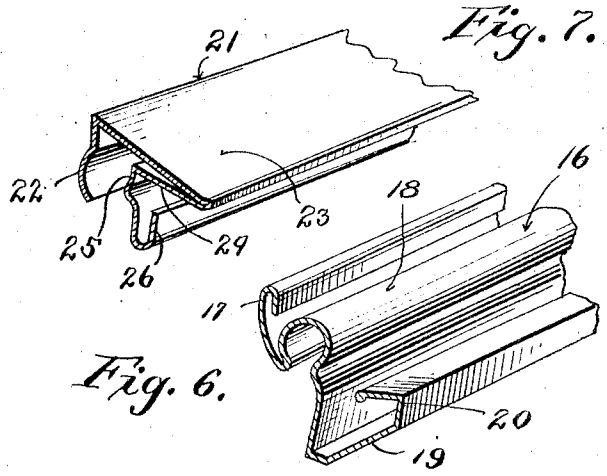
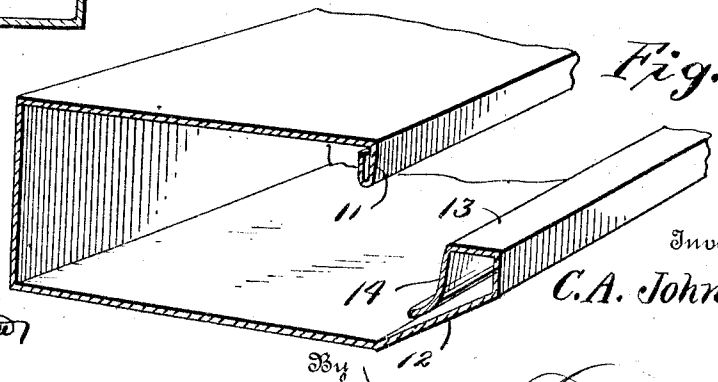


Fig. 6.

Fig. 4.

Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

CONRAD A. JOHNSON, OF JAMESTOWN, NEW YORK.

WINDOW.

1,076,767. Specification of Letters Patent. Patented Oct. 28, 1913.

Application filed December 16, 1912. Serial No. 737,115. REISSUED

To all whom it may concern:

Be it known that I, CONRAD A. JOHNSON, a citizen of the United States, residing at Jamestown, in the county of Chautauqua, State of New York, have invented certain new and useful Improvements in Windows; 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.

This invention relates to windows and has for an object to provide a sheet metal window sash having novel means for securing a screen or a window pane without the use of screws, nails, putty or similar devices.

A further object of the invention is to provide a sash having a spring locking strip which when applied will secure the screen or window pane tightly in place, and which may be easily manually removed to permit withdrawal of the screen or pane.

With the above objects in view the invention consists of certain novel details of construction and combination of parts hereinafter fully described and claimed, it being understood that various modifications may be made in the minor details of construction within the scope of the appended claims.

In the accompanying drawings forming part of this specification:—Figure 1 is a front elevation of a screen embodying my improvements. Fig. 2 is a cross sectional view taken on the line 2—2 Fig. 1. Fig. 3 is a cross sectional view taken on the line 3—3 Fig. 1. Fig. 4 is a view similar to Fig. 3 showing a pane of glass substituted for the screen. Fig. 5 is a fragmentary perspective view of one rail of the sash. Fig. 6 is a fragmentary perspective view of the abutment rib. Fig. 7 is a fragmentary perspective view of the locking rib. Fig. 8 is a fragmentary perspective view showing the manner of releasing the locking rib.

Referring now to the drawings in which like characters of reference designate similar parts, 10 designates the sash which is preferably formed of sheet metal. In constructing each rail of the sash, the sheet metal is bent in the form of a U as shown, one leg being terminally formed with an inwardly directed hook flange 11, and the other leg being terminally bent obliquely inwardly beyond the flange 11 as shown at 12, thence bent inwardly and backwardly upon itself in the form of a rightangle as shown at 13, the extreme end being bent back toward the inclined portion 12 to form a spring leaf 14. Both side rails of the sash are formed with guide strip receiving depressions 15.

The abutment rib 16 is formed from a single length of sheet metal one edge of which is bent to form a hook flange 17 adapted to interlock with the hook flange 11 of the rail, the material thence being bent to form a longitudinal rib 18 of substantially circular cross section, and the other edge of the material being bent obliquely toward the rib as shown at 19, thence being terminally bent inwardly and backwardly in the form of a rightangle as shown at 20 which is adapted to fit within and snugly conform to the contour of the rightangular extremity 13 of the rail. The abutment rib thus bridges and secures together the legs of the rail.

The locking rib 21 is bent longitudinally at one edge to form a jaw 22 adapted to conform to the contour of one side of the rib 18, and is extended from this jaw in a straight portion 23 adapted to extend toward and contact with the rightangular portion 13 of the rail, and is thence bent back upon itself as shown at 24 to stiffen the portion 23, the stiffening portion being terminally bent to form a curved spring jaw 25 which is adapted to conform to the contour of the opposite side of the rib 18 from the jaw 22, the jaw 25 being thence bent terminally to form a hook-like flange 26 adapted to enter the space between the spring leaf 14 of the rail and adjacent portion of the abutment rib and to bear against and clamp into this space a rod 27.

When it is desired to secure a screen 28 in the sash, the marginal edges of the screen are inserted in the space between the spring leaf 14 of each rail and adjacent portion of the abutment rib 16 and the rod 27 then placed upon the screen as clearly shown in Fig. 2. The locking rib 21 is then applied by pressing the spring jaws 22 and 25 over the rib 18 whereupon the straight portion 23 of the locking rib bears upon and binds the screen against the rightangular portion 13 of the rail and the hook flange 26 of the locking rib bears against the rod 27 and prevents withdrawal of the screen.

When it is desired to apply a window pane 29 to the sash the rods 27 are dispensed with, and the marginal edges of the pane are placed upon the rightangular portions 13 of each rail. The locking rib 16 is then

applied by pressing the spring jaws over the rib 18, whereupon the straight portion 23 of the locking rib bears upon and binds the marginal edges of the pane against the rightangular portion 13 of the rail.

To detach the locking rib in order to substitute the screen for the window pane or vice versa, it is simply necessary to insert the point of a screw-driver or other tool between the straight portion 13 of the rib and window pane or screen as the case may be, then pry the straight portion outwardly, whereby the spring jaws expand and facilitate the locking rib being withdrawn bodily outwardly.

What is claimed is:—

1. A sash comprising channel metal rails connected together, a bridge member connecting the legs of each channel metal rail and having a longitudinal bead of substantially circular cross section, and a locking member having a straight portion adapted to clamp the marginal edge of a screen against one of said legs and terminating in spring jaws adapted to engage with said bead.

2. A sash comprising channel metal rails connected together, each rail having one leg terminating in a substantially rightangular abutment portion, a bridge member connecting said legs and having a longitudinal bead, and a locking member having curved spring jaws adapted to engage with said bead, and having a straight portion connecting said jaws and extending obliquely along said jaws, said straight portion adapted to clamp the marginal edge of a screen against said abutment portion.

3. A sash comprising channel metal rails connected together, each rail having one leg terminating in a substantially rightangular abutment portion, a bridge member connecting said legs and having a longitudinal bead, a screen member having a marginal edge bearing against said abutment portion, a rod carried by said marginal edge and bearing against said bridge member, and a locking member having spring jaws engaging said longitudinal rib and having a portion bearing against said rod and clamping the same against said bridge member, and having a portion between said clamping portion and said jaws bearing against said screen and clamping the same to said abutment portion.

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

CONRAD A. JOHNSON.

Witnesses:
JOHN A. JOHNSON,
PETER G. NELSON

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."