

E. J. LUND.

METALLIC WINDOW OR SCREEN FRAME.

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1,059,677.

Patented Apr. 22, 1913

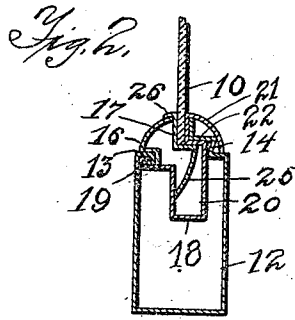
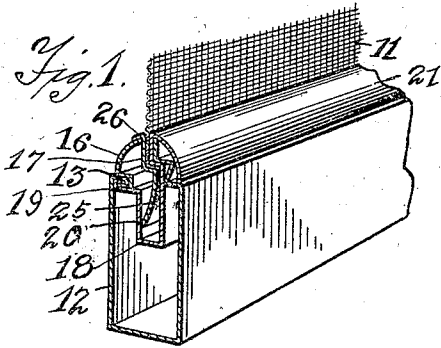


Fig. 3.

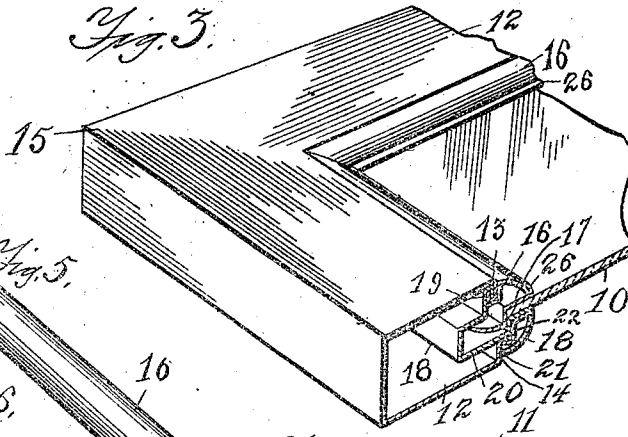


Fig. 5.

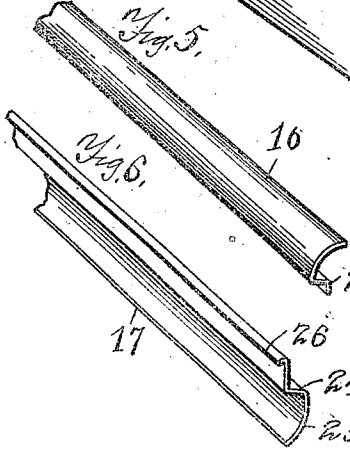
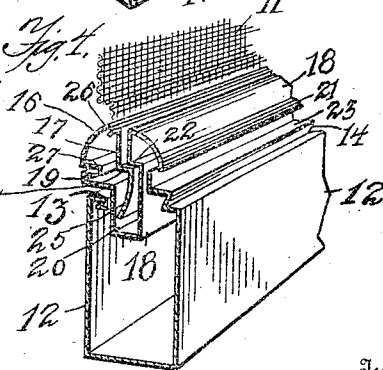


Fig. 6.



Witnesses

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METALLIC WINDOW OR SCREEN FRAME.

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To all whom it may concern:

Be it known that I, EBBERT J. LUND, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Metallic Window or Screen Frames, of which the following, taken in connection with the accompanying drawings, is a specification.

The invention relates to improvements in metal window and screen frames, and the object of my improvement is to provide a sheet metal frame construction which is adapted to holding either window glass or screen fabric between parallel angular spring plates which resiliently hold the glass or screen fabric in such a manner that they may be quickly removed and replaced, and in which the angular construction and the spring of the parts add greatly to the rigidity or stiffness of the frame; and the invention consists in the construction and arrangement of the parts as shown in this specification and the accompanying drawings and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a portion of a screen frame with the screen fabric secured therein. Fig. 2 is a sectional view of the sash with a portion of the window glass securely held therein. Fig. 3 is a perspective view of the top or bottom corner of a sash frame showing one of the sides in section and the portion of glass secured therein. Fig. 4 is a detail perspective view of the parts forming one of the sides of the frame and showing the disconnected parts in the position they would assume in assembling the same. Fig. 5 is a detail perspective view of one of the locking strips for one of the window glass or screen fabrics; and Fig. 6 is a similar view of another of the locking strips.

Like numerals of reference refer to corresponding parts in the several views.

The numeral 10 designates the window glass and the numeral 11 the screen fabric. The frame for holding the screen fabric or window glass is made of sheet metal side pieces 12 in the tubular form with one inner edge 13 turned inwardly and given a return bend. The other edge 14 is given a plurality of angular lengthwise bends, as shown, for a purpose hereinafter set forth. The corners 15 are preferably united with mitered joints by acetylene or electric welding or soldering.

Two spring holding strips 16 and 17 are provided for the glass 10 or screen 11. A third holding strip 18 is provided and bent in the form of a lengthwise channel 20 which extends within the tubular frame side 12. The edge 19 of holding strip 18 is given an opposite return bend to the flanged edge 13 of the tubular frame side 12, so that it engages within the same forming a return bend joint close to the flat side of the frame. The channel strip 20 extends down within the tubular portion 12, as stated, and one edge extends up over the angular edge 14 of the tubular frame side 12, the outer part 21 being given an outward curve which fits closely upon the angular edges 14 so that said angular edges fit closely within the downwardly turned flange 21 and that said flange holds against said angular edges. An angle 22 is provided in the grooved side of the channel strip 18 and the angle 23 in edge 14 fits upon the angle 22 thereby holding firmly against the same. The spring holding strip 17 also has an angle 24 which fits beneath the angle 22 and the lower edge 25 of holding strip 17 is given a curve which rests against the side of the groove 20. The upper edge 26 of holding strip 17 is turned slightly downward in a curved flange beneath which the upwardly curved portion of the spring locking strip 16 engages. The lower edge 27 of the spring locking strip 16 is given an inward and downward angular turn to fit over the interlocking joint formed by edges 13 and 19.

In order to insert either the glass or the screen fabric, the inner portion 20 is inserted with the part 18 resting on the outer shoulder of the angular portion 14 and against said portion, as shown in section in Figs. 1, 2 and 3. The locking strip 17 is then placed against the screen fabric or glass as shown in Figs. 1 and 2. The angular flange 27 is then placed inside of the return bend joint formed by the parts 13 and 19 and the upper edge of the curved portion 16 is then sprung beneath the edge 26. The width of the curved portion of the strip 16 is sufficient to press the upper part of the strip 17 firmly against the screen fabric or glass and to spring the curved portion 25 of strip 17 as it presses against the inner side of the groove 20, so that the screen wire or glass is resiliently held by means of the two curved or spring portions of the two strips 16 and 17. It is obvious that in thin sheet

metal these two parts will adapt themselves to differences in thickness and will at the same time resiliently and firmly hold either the screen wire or the window glass down the center of the frame or sash side the curved portion of the strip 16 on one side and the curved portion 18 on the other, making a smooth and pleasing finish for the window sash or screen frame. All that is necessary to remove the screen wire or window glass is to enter an instrument beneath the end of the strip 16 springing it out from beneath the projecting flange 26, after which the strip 17 may be easily removed with the screen wire or window glass.

It is obvious that all of these parts may be drawn by means of suitable dies on a sheet metal draw bench in the manner common for sheet metal molding.

I claim as new:—

1. In a window or screen frame, tubular sheet metal frame sides having lengthwise angular bends on one edge, a lengthwise grooved strip attached to one edge of said frame side and extending over said angular bends in the other edge of said frame side, an angular strip having a spring edge to hold within said grooved strip at one edge and the other edge having a lengthwise downwardly turned flange, and a second

angular strip to engage beneath said lengthwise flange and within said return bend joint, substantially as and for the purpose specified.

2. In a window or screen frame, a sheet metal tubular frame side having an intumed return bend on one inner edge and the other inner edge bent in lengthwise angles, a channel strip extending to one side with a side-wise angular bend and attaching at one edge to said tubular frame side and the other edge an outwardly curved portion extending over said lengthwise angularly bent edge of said frame side, an attaching strip having a curved spring edge and a side-wise bend to fit beneath the sidewise bend in said channel strip to receive the screen wire or glass therebetween, said attaching strip having an outwardly turned flanged edge, a second attaching strip engaging at one edge on said frame side and springing beneath said flanged edge of the first attaching strip, substantially as and for the purpose specified.

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

EBBERT J. LUND.

Witnesses:

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