C. J. WALLEN.

WINDOW-SCREEN.

APPLICATION FILED FEB. 6, 1907. RENEWED JUNE 3, 1910.

966,065. Patented Aug. 2, 1910.

Fig. 1.

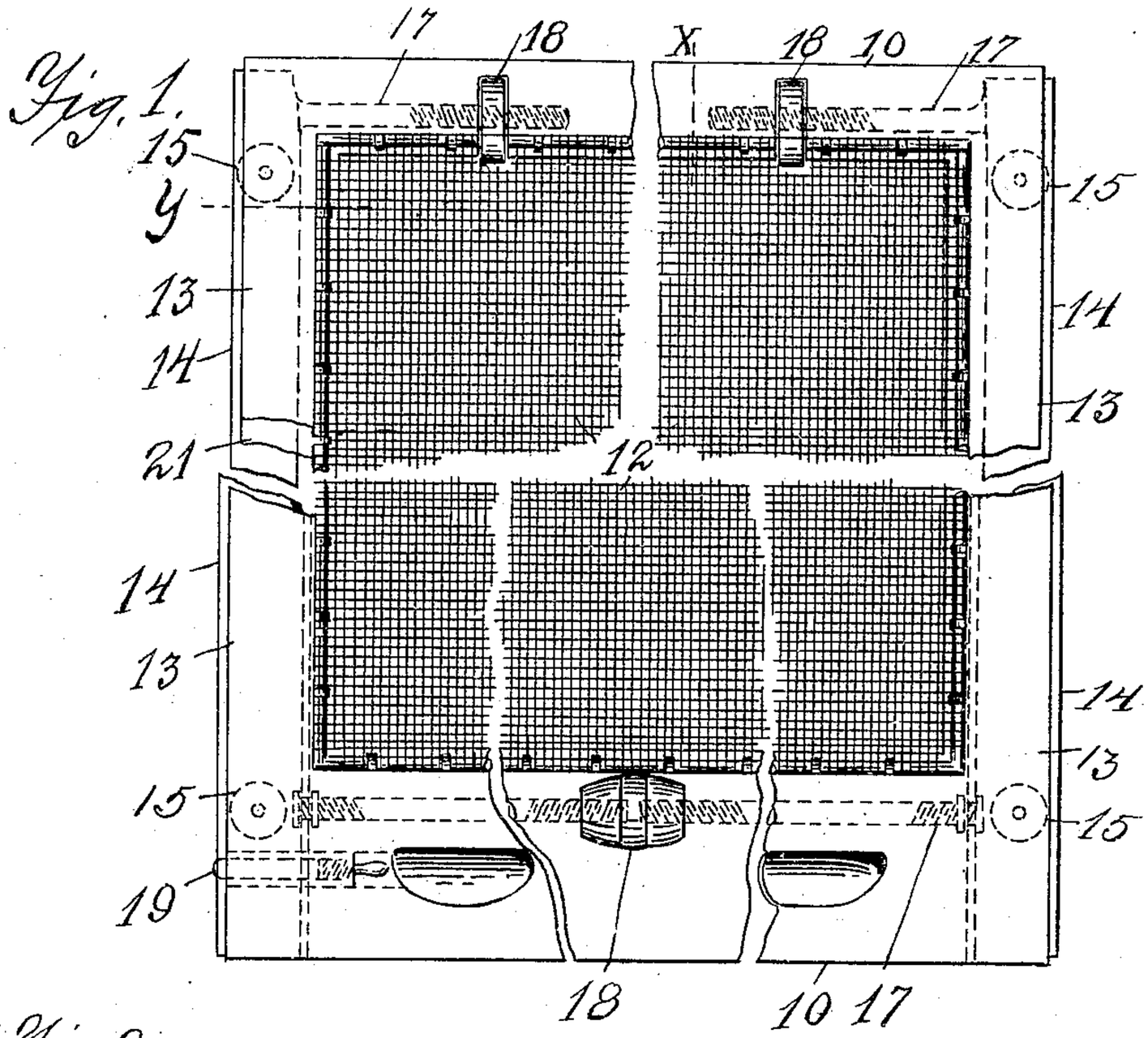


Fig. 2.

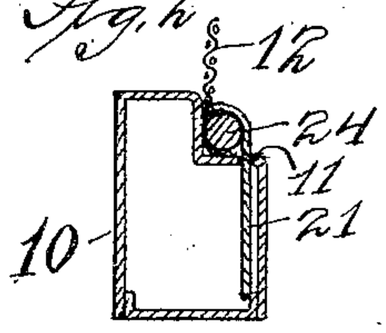


Fig. 3.

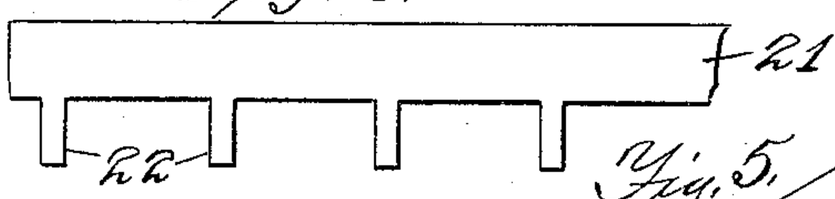


Fig. 5.

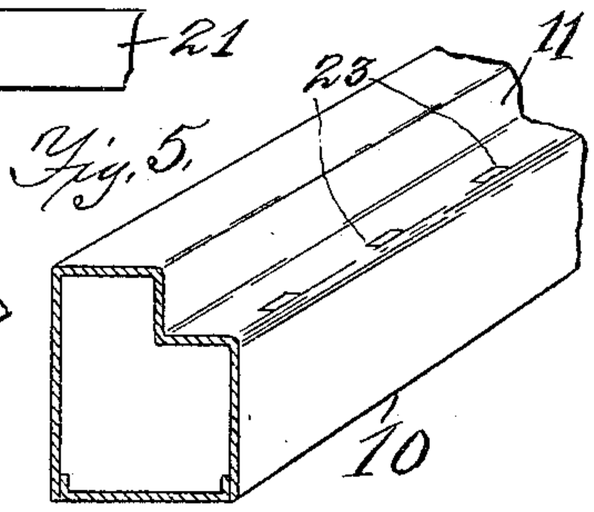


Fig. 4.

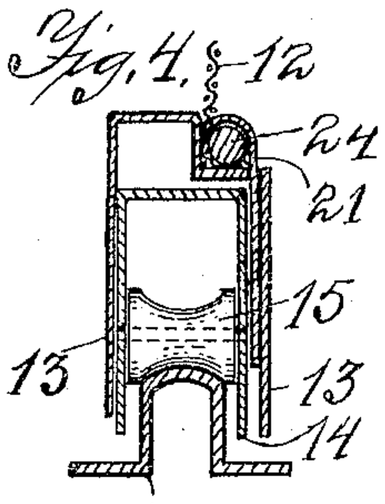


Fig. 6

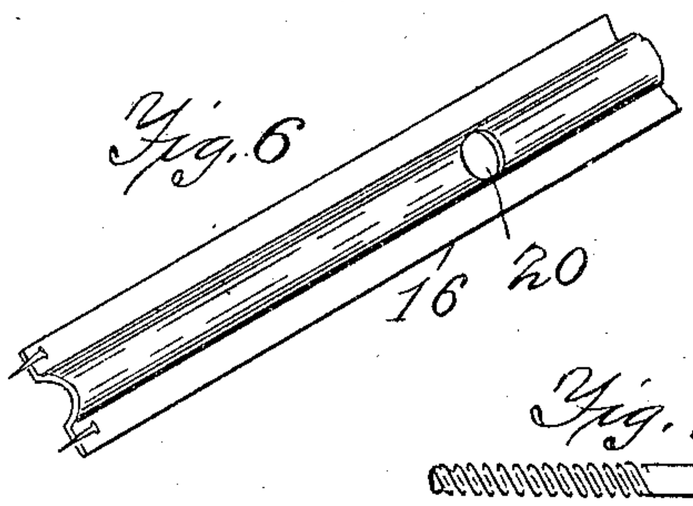
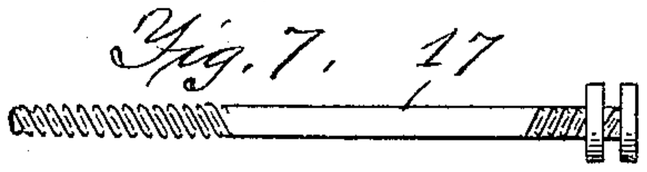


Fig. 7.



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Witnesses

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UNITED STATES PATENT OFFICE.

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WINDOW-SCREEN.

966,065. Specification of Letters Patent. **Patented Aug. 2, 1910.**

Application filed February 6, 1907, Serial No. 356,012. Renewed June 3, 1910. Serial No. 564,856.

To all whom it may concern:

Be it known that I, CARL J. WALLEN, a citizen of the United States, residing at Jamestown, county of Chautauqua, and State of New York, have invented new and useful Improvements in Window-Screens, of which the following, taken in connection with the accompanying drawing, is a full, clear, and exact description.

The invention relates to metal screen construction; and the objects of my invention are, first, to provide a simple metal screen construction by which the lateral edges may be adjusted to the window frame, and to changes in the same, either from swelling or shrinking or from the settling of the building; and second, to provide roller bearings in said lateral edges so that the screen when thus adjusted will run easily upon the guide strips; and third, to provide a simple and novel method of attaching the screen cloth to the frame sides.

In the drawings, Figure 1 is a plan view of the screen showing my construction, the central portion being broken away and the lower portion adjusted slightly broader than the upper portion. Fig. 2 is a sectional view at line X in Fig. 1. Fig. 3 is a detail of the tongued lock strip for the screen cloth. Fig. 4 is a sectional view at line Y in Fig. 1 and the guide strip on the window frame. Fig. 5 is a perspective view of the screen side with the end in section, showing the channel for attaching the screen cloth and the openings for the lock strip. Fig. 6 is a perspective view of the guide strip for the screen. Fig. 7 is a detail of one of the adjusting rods for the channeled side pieces.

Similar numerals refer to corresponding parts in the several views.

The numeral 10 indicates the tubular top and bottom rails which are preferably formed with a rectangular recess or rabbet 11 in one corner for attaching the screen cloth 12. The lateral sides 13 are formed with a like recess 11 for the attachment of the screen cloth and are open on their outer edges, being made in the form of a channel strip. A second channel strip 14 fits within outer channel strip 13.

Inner channel strip 14 carries the rollers 15, revolubly mounted therein, which bear on the guide strips 16 on the window casing, guide strips 16 being formed with the rounded raised lengthwise portion to bear on rollers 15. An adjusting rod 17 is provided with screw nut 18 which is held against sidewise movement in a slot on the frame 10 yet which allows it to freely revolve on the threaded rod 17. Rod 17 is attached to inner channel piece 14 at top and bottom of the screen. Rod 17 may extend across the window frame, as shown at the bottom of the frame in Fig. 1, and use only one adjusting nut 18 near the center of the frame, or, two short rods 17 may be provided, as shown at the top of the screen frame in Fig. 1, having separate adjusting nuts. It is apparent that nuts 18 may be easily turned by the finger and adjust the channel strip 14 and roller 15 to the guide strip 16 so that the screen frame will always fit perfectly to the guide strips and will roll easily up and down the same. A spring bolt 19 is provided at one side in the screen frame and a suitable opening 20 is provided in guide strip 16 for bolts 19 whereby the screen may be locked in position when desired.

The screen cloth 12 is preferably attached to the screen frame by means of strip 21 and rod 24 with extensions or fingers 22 on said strip. Openings 23 are provided in the edge of the angular recess 11 of the screen frame to receive fingers 22. As the screen frame is set up the fingers 22 are projected outwardly through openings 23 from the inner side, thereby placing the main portion of the strip 21 within the frame, as shown in Fig. 1. A rod 24 is provided to bear upon the screen cloth and the fingers 22 are bent down over the edge of the screen cloth 12 as held in place by rod 24, thereby locking the screen cloth firmly in place and stretching the same as the fingers 22 are pressed up against the rod 24.

The fingers 22 on strip 21 are sufficiently near together and also made of sufficiently strong material and long enough to lap entirely over the binding rod 24 so that any sudden pull on the wire fabric 12 cannot in any wise release the fabric from the holding power of the fingers 22. The wire netting, however, has almost no pull when once placed in the frame. Consequently the fingers 22 hold the rod and wire netting firmly in place upon the frame.

It would not depart from my invention to attach part 21 to the adjacent wall of frame 10 by solder or other attaching means and thus prevent said part 21 from swinging

away from wall frame 10. It has been found, however, that when properly made as above described, there is little danger of such swinging away of part 21 from the frame 10 and the parts may be assembled without such attachment.

I claim as new:—

1. In a screen, a frame, lateral frame sides formed in a channel, a channel strip within said frame sides, rollers in said inner channel strip to bear on the casing, and means for adjusting said inner channel strip.

2. In a screen, a hollow frame having crosswise slots, the lateral frame sides formed in a channel, a channel strip within said lateral frame sides, screw rods on said inner channel strip and within said hollow frame, rollers in said inner channel strip, and thumb nuts on said screw rods in slots in said hollow frame.

3. In a screen, a hollow sheet metal frame having a rectangular recess on its inner edge and spaced openings along said recess, screen wire, a tie rod, and a lock strip having spaced fingers corresponding to said spaced openings to hold said rod and screen wire in said recess.

4. In a screen, a hollow sheet metal frame having a rectangular recess on its inner edge and spaced openings along said recess, screen wire, a tie rod, and a lock strip having spaced fingers to extend through said spaced openings and lock said tie rod and screen wire in said recess, substantially as and for the purpose specified.

5. In a screen, a hollow frame 10, the lateral frame sides 13 open on their outer edges, movable channel strips 14 fitting within said open edges, rollers 15 in said movable channel strips, adjusting rods 17 attached to said inner channel strips, thumb nuts 18 on said rods in slots in said frame, screen wire 12, tie rod 24, said frame having a rectangular recess 11 along the inner edges, said frame side having spaced openings 23 along said recess, and a tie strip 21 having fingers 22 to engage said openings and hold said screen wire and tie rod, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL J. WALLEN.

Witnesses:

I. A. ELSWORTH,

A. W. KETTLE.