W. W. PAYNTAR.

WINDOW SCREEN.

APPLICATION FILED APR. 14, 1909.

953,758. Patented Apr. 5, 1910.

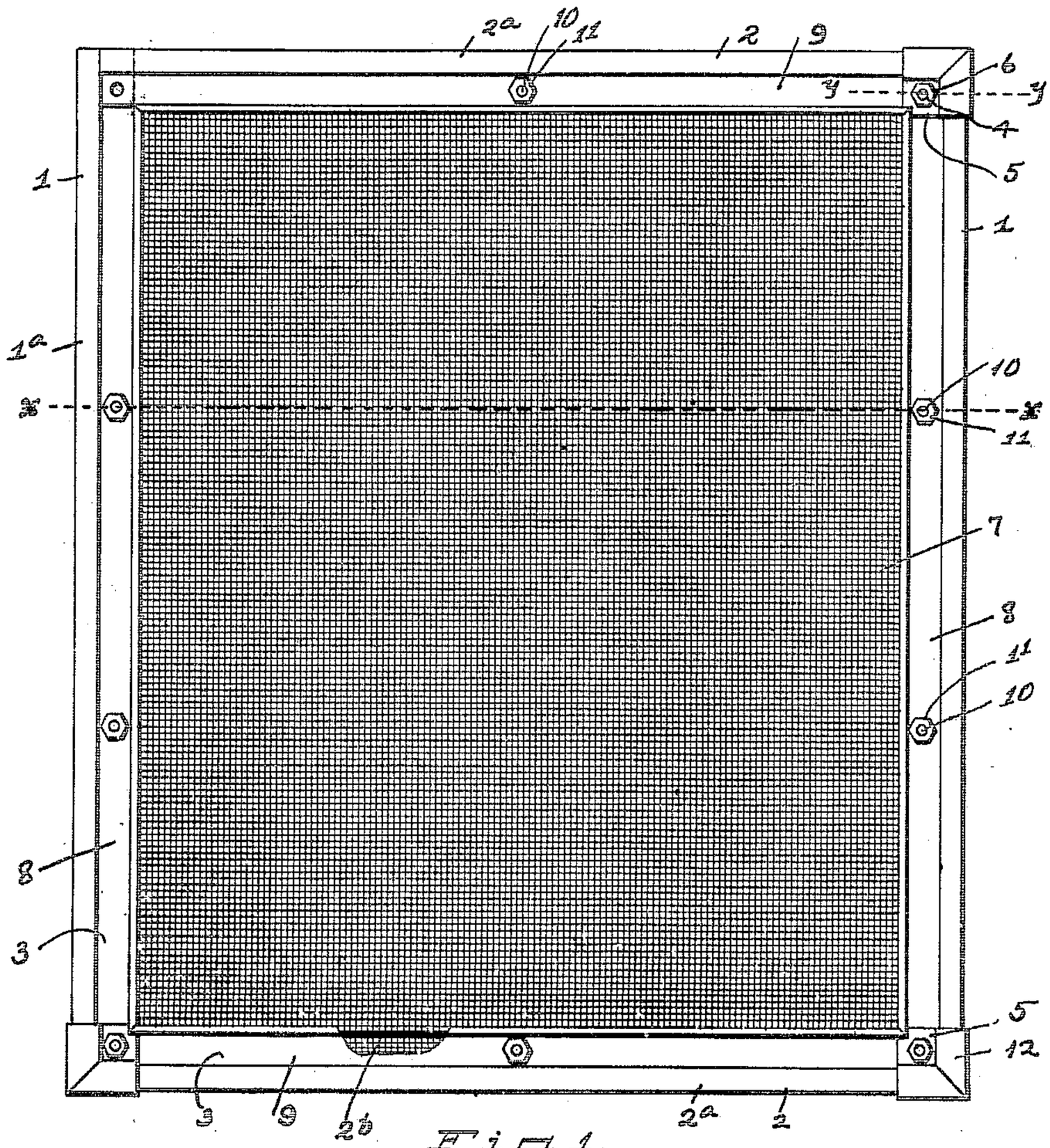

Fig. 1.

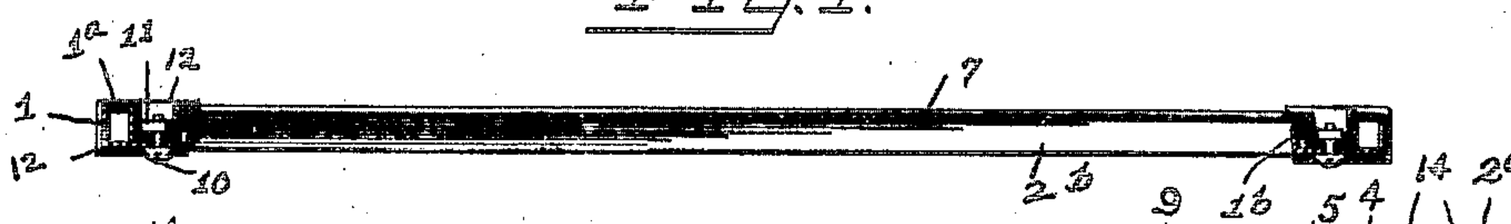

Fig. 2.

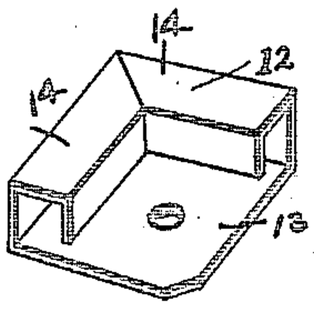

Fig. 5.

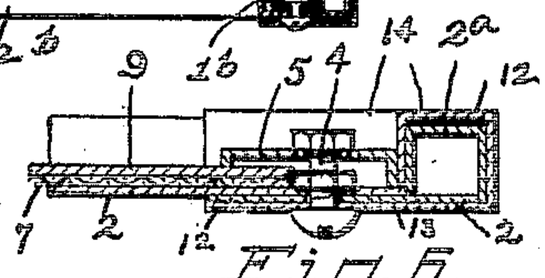

Fig. 6.

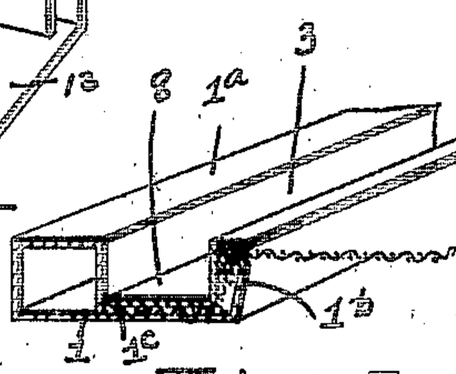

Fig. 3.

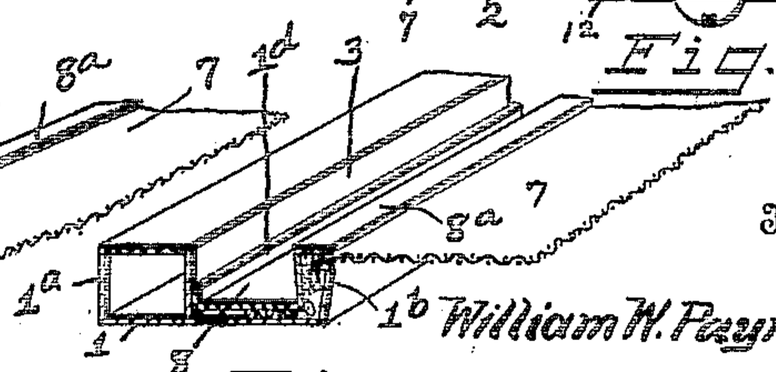

Fig. 4.

Witnesses

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WINDOW-SCREEN.

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To all whom it may concern:

Be it known that I, WILLIAM W. PAYNTAR, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My invention relates to the improvement of window screens of that class in which metallic screen frames are employed.

The objects of my invention are to provide a screen of this class comprising an improved metallic frame construction and means for uniting the screen cloth therewith; to so construct my improved screen and frame as to admit of the various parts thereof being readily separated or assembled; to construct said screen frame of such parts or sections as to admit of the screen and frame being shipped in a comparatively compact form; to provide a screen holding construction which will permit of a new screen being readily substituted for an injured or worn screen; to so construct my improved screen as to admit of its being easily raised or lowered in a window frame and to otherwise produce a simple and reliable window screen construction. These objects I accomplish in the manner illustrated in the accompanying drawing, in which:

Figure 1 is a face view of one of my improved screens, Fig. 2 is a transverse section on line *x*—*x* of Fig. 1, Fig. 3 is a detail view in perspective of a section of my improved screen frame, Fig. 4 is a similar view showing a slightly modified form of screen binding section, Fig. 5 is a perspective view of one of the corner clips, and, Fig. 6 is an enlarged transverse section on line *y*—*y* of Fig. 1.

Similar numerals refer to similar parts throughout the several views.

In producing my improved screen, I form separately the frame bars or side and end frame members 1 and 2, each of these members being in the nature of a channel bar, which has its outer side portion formed with inwardly projecting casings, these casings being indicated at 1^a and 2^a on the side and end bars, the remaining inturned flanges 1^b and 2^b of these bars being beaded at their outer edges, as shown.

In order that the end of the casing 2^a of an end member, may abut against the inner side of the end portion of the corresponding casing of the side member at each corner of the frame and that the end of each of said end frames, may bear against the inner face of the side frame member, I cut away the frame flanges 2^b and 2^a near the ends of said frame members, this being shown more clearly by reference to the upper left-hand corner of Fig. 1, in which view the corner cap has been omitted for the sake of clearness in illustration. By thus joining the ends of the frame members 1 and 2, it will be observed that a square frame channel or frame depression is provided between the inner walls of the casings 1^a and 1^b and 2^a and 2^b, this depression being indicated in Figs. 3 and 4 of the drawing at 3.

It will be understood that the ends of the side and end frame members, are united at the corners of the frame by suitable bolts 4 which pass through openings formed in the overlapping portions of said frame members, each of said bolts also passing through a central opening in a corner filling plate 5 which fits within the angle formed by the junction of the side and end frame members. The threaded ends of these bolts are adapted, as shown, to receive nuts 6.

7 represents the screen or wire cloth body, which is of such size as to admit of its end and side marginal portions extending over or beyond the ribbed edges of the frame member flanges 1^b and 2^b. These screen marginal portions are clamped within the channels 3 and bound in contact with the faces of said channels and with the inner sides of the flanges 1^b and 2^b by side and end metallic filling or binding strips 8 and 9, these strips being of equal lengths with the frame member flanges 1^b and 2^b.

As indicated in the drawing, each of the strips 8 or 9, is angular in form, its outwardly projecting flange portion extending on the inner side of the adjacent flange 1^b or 2^b, while said binding strip flange terminates in an inwardly bent lip 8^a between which and the outer beaded edge of the members 1^b and 2^b passes the marginal portion of the screen. The wider member of each of the binding strips 8 and 9 which lies within the channel 3 and serves to bind the margin of the screen therein, is preferably strengthened at its outer edge by being turned or bent inward upon itself as indicated at 1^c in Fig. 3. It is obvious, however, that the outer edge of the binding strip may, as indicated at 1^d in Fig. 4, be turned up-

ward. These binding strips which are of such size as to fit closely within the channels 3, are secured in their positions by detachable bolts 10 which at intervals pass through said binding strips, through the marginal portion of the screen and the body of the frame member. These bolts carry small nuts 11 on their inner threaded ends.

To cover the connection of the end and side frame members at the corners of the frame, I provide corner pieces or caps such as are indicated at 12, each of which is in the nature of a flat plate 13 which has two of its adjoining sides bent to form projecting hooks or casings 14. These hollow or hook-like casings which are substantially square in cross section receive respectively the adjoining end portions of the side and end frame casings 1 and 2, while the flat portion of the plate 13 embraces the underside of the frame corner and is provided with an opening for the passage therethrough of the bolt 4.

From the construction described, it will be seen that a comparatively simple and inexpensively constructed screen frame is provided, in which the main frame members, binding strips, corner pieces etc., are formed separately and of such construction as to admit of the same being readily assembled or disconnected by persons unskilled in the art.

It will be understood that my improved screen frame is intended to be slidably mounted in a window frame in the usual manner and that the channels 3 which are formed on the inner face of said frame, will facilitate the engagement of the fingers with the frame, for the purpose of raising and lowering the same.

What I claim, is:

In a window screen, the combination with a metallic frame comprising detachably connected side and end frame members, each of said members being formed with a longitudinal channel on one face, and a screen body overlapping said frame channels, of angular binding strips fitting in said frame channels and adapted to be detachably secured therein, said binding strips being formed with inner terminal flanges which extend above the outer edges of the inner walls of said channeled frame members.

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

WILLIAM W. PAYNTAR.

Witnesses:
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A. L. PHELPS.