

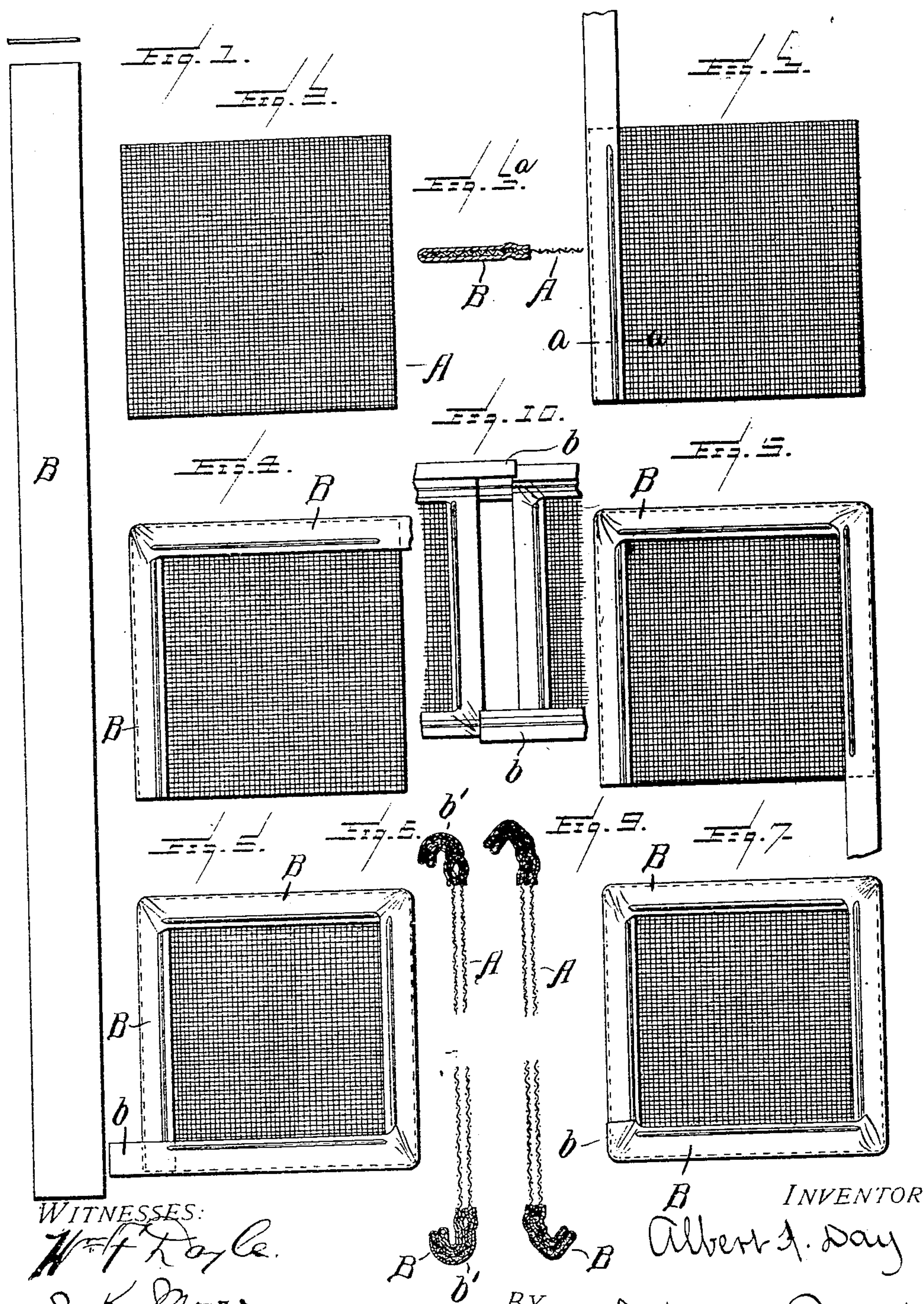
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No. 862,813.

PATENTED AUG. 6, 1907.

A. A. DAY.
METAL FRAME WINDOW SCREEN.

APPLICATION FILED AUG. 22, 1906.



UNITED STATES PATENT OFFICE.

ALBERT A. DAY, OF NEW YORK, N. Y.

METAL-FRAME WINDOW-SCREEN.

No. 862,813.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed August 22, 1906. Serial No. 331,645.

To all whom it may concern:

Be it known that I, ALBERT A. DAY, a citizen of the United States, residing at borough of Brooklyn, in the county of Kings and city and State of New York, have
5 invented certain new and useful Improvements in Metal-Frame Window-Screens; 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
10 use the same.

My present invention relates to window screens and more particularly to that class of screens that are provided with metal frames.

The best form in which I have contemplated embodying my said invention is illustrated in the accompanying drawings and disclosed in the following description and claims.
15

In the said drawings, Figure 1 is a sectional and plan view of a sheet of metal from which my frame is made.
20 Fig. 2 is a view of the wire cloth composing the screen. Fig. 3 is a view with the frame secured to one side of the wire cloth. Fig. 3^a is a sectional view on line *a-a*, Fig. 3. Fig. 4 is a view in elevation of the screen with the frame secured to two sides. Fig. 5 is a view
25 of a screen with the frame affixed to three sides. Fig. 6 is a view of the screen with the frame secured to four sides of the same. Fig. 7 is a view of the completed screen. Fig. 8 is a transverse sectional view of one way of overlapping the sections. Fig. 9 is a like view
30 of the telescoping sections; and Fig. 10 is a partial view of the adjoining ends of two screens illustrating the use of the extension of the frame strip.

In the said drawings, A is a section of wire cloth of the size desired.

35 B is a strip of sheet metal preferably a little longer than is required to go once around the wire cloth A. This metal strip is folded in the middle or near it longitudinally. One side of the wire cloth is inserted in the fold or between the two parts of the folded strip and
40 the two folds are pressed upon the wire cloth and crimped after the manner shown in Figs. 3 and 3^a. The corner is then turned by folding or crimping the metal on the inner side, after the manner shown at the left hand upper corner in Fig. 4. The second side of the wire
45 cloth section is then secured within the sheet metal fold, in the same manner as the first, that is by a crimping of the metal strip and wire cloth together. The second corner is then turned in the same manner as the first. The screen will then present somewhat the appearance shown in Fig. 5. The third side is then
50 crimped in the fold of the strip and the third corner turned as before. The doubled strip will then be placed to the fourth side in the same manner as the other sides, the last corner being secured by suitably
55 bending, stamping or crimping. It will be seen that in bending the metal strip at the corners, no part of the

metal is cut, the lateral portions which would tend to flare outwardly in bending the folded or V-d strip, being flattened down to the plane of the screen frame on both sides by the bending, stamping or crimping and forming
60 the reinforcement for the corners, so that strong and rigid corners are formed without the use of solder, rivets, braces or any other of the means usually employed. As the corners are the weak points in any screen construction, the integral frame herein shown and described, in which all the corners are formed and reinforced from a single piece of metal presents not only a
65 cheap but a highly efficient, strong and durable article. It will also be seen that by making the entire frame of each screen or screen section of one piece, the corners of
70 the frame can never become loose or separated unless the metal of the frame becomes broken, hence the corners are much stronger than those of a frame made up of several pieces, connected at the corners by any extraneous means. When the strip is no longer than the distance around the wire cloth section, the screen will now
75 be complete for some purposes. But where it is desired to form overlapping screens to adapt them to various widths of windows, the outer edge of the sides of the frame are curved over after the manner shown at *b'* in
80 Fig. 9. In such case one of the two frames will be made smaller than the other, so that one may be inserted between the curved sides of the other. I prefer to have the frame B made wide enough to enable me to make both sizes of the telescoping frame from the same
85 plain frame. I prefer to add the curving or shaping of the edges for this purpose after the plain frame has been completed.

When the doubled strip for the frame is longer than the distance around the wire cloth section, if desired, it
90 may be used to assist in forming the last corner as shown in Fig. 7, but I prefer to leave it extending beyond the frame as at *b* so that when the top and bottom or the second and fourth sides are bent or curved to enable the frames to be overlapped to adjust them to the width of
95 the window to which they are applied, this extension will extend along the upper or lower side of the companion frame and form a guide or support for the same, thereby making the union of the two better and stronger. In telescoping and like constructions this extension will
100 be placed on the upper side of one frame and the lower side of the other, insuring the best possible action of the overlapping parts.

In some cases instead of forming the screens to telescope I may prefer to effect the overlapping by bending
105 the top and bottom sides in opposite directions as shown in Fig. 9. The frames can then be made of the same size and any two or more can be utilized to form a screen of the proper width for the window to which they are applied. In this case, if the frame strip is allowed to
110 project on one side, I should prefer to bend the sides of the frames so that the projecting parts will extend to-

wards the companion frame when two are required for a single window.

By making a frame in the manner here described, I am able to produce a window screen having its frame composed of a single strip of sheet metal in a cheap and efficient manner and with little additional expense provide for all such adjustments as may be required.

What I claim and desire to secure by Letters Patent is:—

10 1. A window screen comprising a section of screen material, and a metallic frame surrounding the same, formed of a single uncut piece of metal folded longitudinally upon itself and bent angularly at the corners of the frame, the surplus metal caused by such bending being flattened down into substantially the same plane as other portions of the frame, and serving to reinforce the corners thereof, substantially as described.

20 2. A window screen comprising a section of screen material and a metallic frame surrounding the same, consisting of a single piece of metal uncut throughout its length folded longitudinally upon itself and inclosing marginal portions of the screen material, said piece of metal forming the frame being bent angularly at the corners of the frame, the surplus metal caused by such bending being flattened down into substantially the same plane as other portions of the frame, and serving to reinforce the corners thereof, portions of the metal frame inclosing the screen material being bent out of the plane of the frame to permanently secure the frame and screen material together, substantially as described.

30 3. A window screen comprising a section of screen material and a metallic frame inclosing the marginal portions thereof and consisting of a single uncut piece of sheet metal folded longitudinally upon itself and bent angularly at the corners of the frame, the surplus metal formed by such bending being flattened upon and reinforcing the corners of the frame, the frame bars being beaded longitudinally where they inclose the screen material to permanently secure the frame and screen material together, substantially as described.

tions thereof and consisting of a single uncut piece of sheet metal folded longitudinally upon itself and bent angularly at the corners of the frame, the surplus metal formed by such bending being flattened upon and reinforcing the corners of the frame, the frame bars being beaded longitudinally where they inclose the screen material to permanently secure the frame and screen material together, substantially as described.

4. A window screen comprising a section of screen material and a metallic frame surrounding the same and formed of a single uncut piece of sheet metal, folded longitudinally upon itself, and bent angularly at the corners of the frame, the surplus metal formed by such bending being flattened to reinforce the corners, one end of said piece of metal extending beyond the outline of the frame to form a guiding portion to engage another screen section, substantially as described.

5. A window screen comprising a section of screen material and a metallic frame surrounding the same and formed of a single uncut piece of sheet metal, folded longitudinally upon itself and bent angularly at the corners of the frame, the surplus metal formed by such bending being flattened to reinforce the corners, one end of said piece of metal extending beyond the outline of the frame to form a guiding portion to engage another screen section, two opposite and parallel bars of said frame being bent longitudinally to form guiding portions for engaging another screen section, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses, Aug. 17, 1906.

ALBERT A. DAY.

Witnesses:

JOHN W. DIXON,
 WALTER M. HADDOCK.