

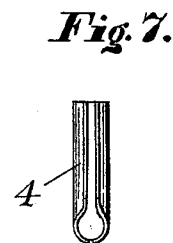
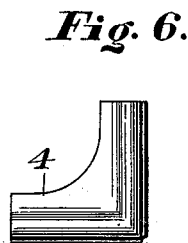
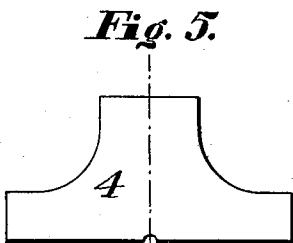
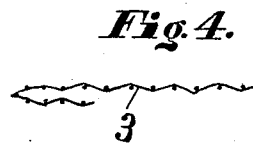
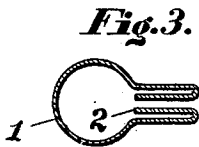
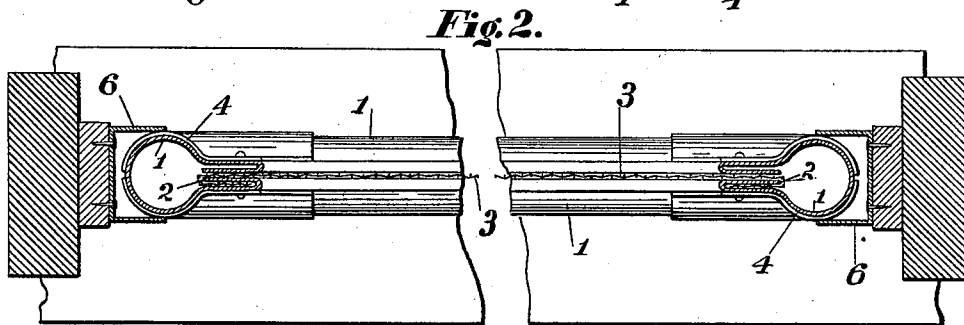
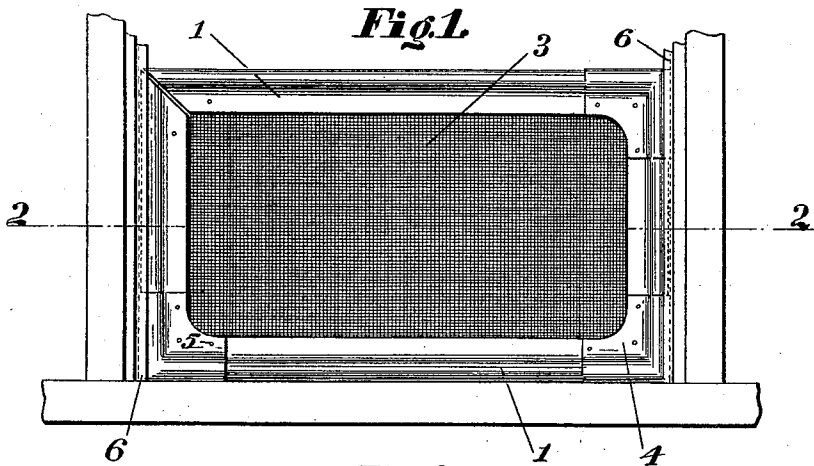
(No Model.)

2 Sheets—Sheet 1.

A. J. BRADLEY.
METALLIC WINDOW SCREEN.

No. 594,518.

Patented Nov. 30, 1897.



Attest:

A. J. Bradley
Frank H. Haskins

Inventor:

A. J. Bradley, by
Carroll Carr, Atty.

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Fig. 8.

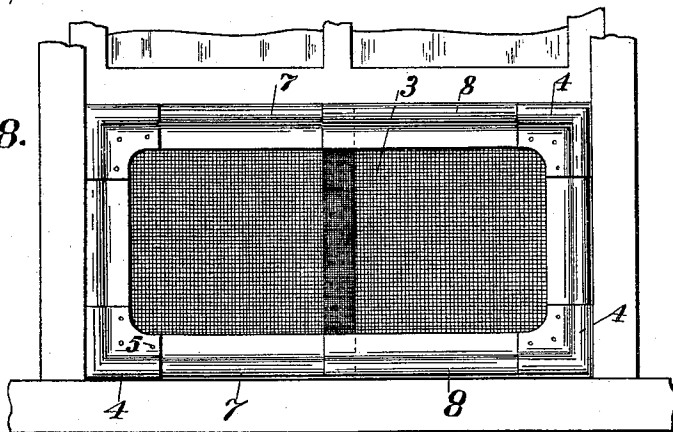
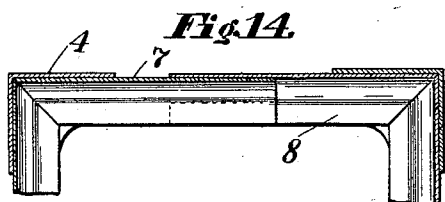
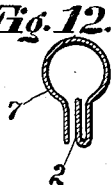
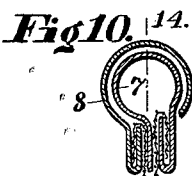
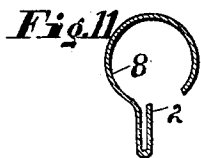
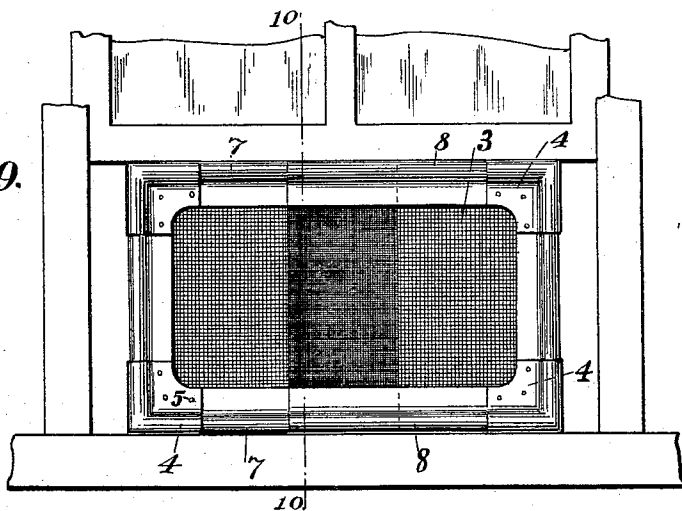


Fig. 9.



Attest:

W. H. Paxon
Frank N. Haskins

Inventor:

A. J. Bradley, by
Camden Carr, Atty.

UNITED STATES PATENT OFFICE.

ANDREW J. BRADLEY, OF ST. LOUIS, MISSOURI.

METALLIC WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 594,518, dated November 30, 1897.

Application filed February 15, 1897. Serial No. 623,507. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. BRADLEY, a citizen of the United States, and a resident of the city of St. Louis, in the State of Missouri, have invented a new and useful Improvement in Metallic Window-Screens, of which the following is a specification.

My invention relates to metallic window-screens, and has for its objects to improve the construction thereof and to lessen the cost of manufacture.

It consists in a metallic frame made of sheets of metal folded into shape to firmly hold the wire-cloth.

It also consists in a metallic frame interlocked with the wire-cloth.

It also consists in a frame whose top and bottom are made of telescoping tubes, whereby the screen is adjustable.

It also consists in the combinations and in the details of construction hereinafter described and claimed.

In the accompanying drawings, which form part of this specification, Figure 1 is a front view of my window-screen. Fig. 2 is a sectional view thereof on the line 2 2 of Fig. 1. Fig. 3 is a sectional detail of the side strip. Fig. 4 is a sectional detail of the wire-cloth. Fig. 5 is a view of the blank which is bent to form the corner-pieces. Fig. 6 is a view of the corner-piece after it is bent. Fig. 7 is an edge view of the corner-piece formed by bending and swaging the blank of Fig. 5. Figs. 8 and 9 are front views of my adjustable window-screen. Fig. 10 is a section thereof on the line 10 10 of Fig. 9. Figs. 11 and 12 are cross-sections of the two telescoping side tubes of the frame separately. Fig. 13 is a cross-section of said tubes as assembled in the screen, and Fig. 14 is a longitudinal section on the line 14 14 of Fig. 10.

My screen-frame is composed of sheet-metal strips 1, bent, preferably, into circular form and having their edges turned radially outward, one of said edges being folded back longitudinally to form a loop. The other edge is preferably folded back likewise in order to strengthen and give rigidity to the frame. The loop portion 2 of the radial flange is between the body of its flange and the other radial flange, as shown in Fig. 3. The space on each side of this folded portion is wide

enough to admit a wire cloth or screen 3. The margin of the wire-cloth is doubled back to correspond with the loop. Then the side strips 1 are interlocked with the wire-cloth by inserting the turned margin of the wire-cloth endwise into the loop formed by doubling back the radial flange of said strip. In this position the edge of the straight body portion of the wire-cloth is between the second flange and the turned portion of the first flange. The side strip and the wire-cloth thus interlocked may slide longitudinally on each other, but when adjusted in the desired position the radial flanges are swaged or compressed together, thereby clamping the wire-cloth and holding it permanently. The radial flanges may be held more securely together by rivets 5 passing through them. Obviously the wire-cloth may be inserted sideways between the two flanges of the side strip, and by raising it slightly and drawing it backward the margin of the cloth will be made to interlock with the loop of the flange.

In order to permit the fourth strip of the frame to be interlocked with the corresponding margin of the wire-cloth, the unbent flange at the adjacent end of one of the other strips may be cut away. The wire-cloth at this corner may then be bent down far enough to allow the fourth strip to be interlocked and slid along in the manner above described. The same result may be accomplished by divers other mechanical expedients.

The several parts of the screen are reinforced and held together by corner-pieces 4, which are preferably of the shape shown in Figs. 5 and 6. This shape has the advantage of doubling over the side strips, thereby reinforcing them and at the same time making the two corresponding corner-pieces integral. Guide-bars 6 are secured to the sides of the window-frame and are formed with grooves or channels of a shape to allow the screen-frame to slide therein.

One very important advantage of my construction is its adaptability for making frames adjustable, so as to fit windows of various widths and so as to be more easily set therein. The adjustable screen is illustrated in Figs. 8 to 14, inclusive, and consists of two screens each mounted in a three-sided frame. The two frames are similar to that hereinbefore

described and are arranged to telescope one within the other, the unframed edges of the two screens overlapping.

In the adjustable screen the tubular or cylindrical body portion of the top and bottom strips 7 of one frame should be small enough to enter the like portions of the top and bottom strips 8 of the other frame. In this case the radially-outturned flange of the larger cylinder 8 is unnecessary and may be dispensed with, as shown in Fig. 11, so as to leave a gap or are through which the looped or flanged parts of the inner cylinder 7 may extend. So, also, it is sufficient to double back only one flange of the inner tube, in which case the overlapping portions of the screens are separated by only a single thickness of metal.

The operation of this device is as follows:
 20 The two screens are assembled by inserting the free ends of the smaller cylindrical strips 7 into the larger cylinders 8 of the other frame. The wire-cloth and edge strips of the inside frame extend out through the gap in the larger cylinder, and the two frames constitute in effect a single frame whose parts telescope or slide on each other and are thus adjustable to various widths, according as the parts are made to overlap more or less. Thus to
 30 insert the frame in a window-groove the parts are first pushed together till the frame is narrow enough to clear the inside stop or the blind-stop and are then pushed apart till they strike against the window-frame.

35 The guides 6 for the frame may be made of wood or metal, or the screen may be mounted in the window-grooves. It is preferable to make them of resilient sheet metal whose outer ends are slightly less than the width of the side strips of the frame apart. The curved surface of the side strips renders their insertion in the guides easy and the resilience of the metal of the guides clamps the sides of the screen-frame automatically and holds the
 45 screen at any height at which it is adjusted.

Divers changes may be made in the details of construction, and I do not wish to restrict myself to the details hereinbefore described. For instance, the edges of the sheet-metal strip
 50 may be clamped and riveted on the margin of the wire-cloth without being interlocked. So, also, the shape of the strip in section may be changed as desired—as, for instance, the strip

may be made T-shaped in section, whereby its back constitutes a flat sliding surface. 55

What I claim is—

1. A window-screen consisting of a frame composed of sheet-metal strips bent to have their edges turned outwardly and having one of said edges folded back on the side toward the opposite edge, and a wire-cloth having its margins folded back and interlocked with said folded edges and clamped between the out-turned edges of the respective strips, and corner-pieces overlapping and reinforcing said strips, substantially as described. 60 65

2. A window-screen consisting of sheet-metal strips and corner-pieces therefor, said strips being bent into cylindrical form with radially-outturned edges and having one of said edges folded back on the side toward the opposite edge, and a wire-cloth having its margins folded back and interlocked with said folded edges and clamped between the out-turned edges of the respective strips, substantially as described. 70 75

3. A window-screen consisting of sheet-metal strips bent into cylindrical form with radially-outturned edges and having one of said edges folded back, and a wire-cloth having its margins folded back and interlocked with said folded edges and clamped between the outturned edges of the respective strips, in combination with guides secured to the window-frame and having grooves in which the side strips are adapted to slide, substantially as described. 80 85

4. An adjustable window-screen comprising two three-sided frames composed of strips of sheet metal bent into tubular form with out-turned edges, one edge of each tube being looped back on the side toward the opposite edge of said strip, and a wire-cloth for each frame whose margins are folded back and interlocked with the looped edges of the strips of its frame, the top and bottom tubes of one frame telescoping with the corresponding tubes of the other frame and the unlooped edge of each inner tube being between the loops of the two tubes when assembled, substantially as and for the purpose set forth. 90 95 100

ANDREW J. BRADLEY.

Witnesses:

FRANK H. HASKINS,
 JAMES A. CARR.