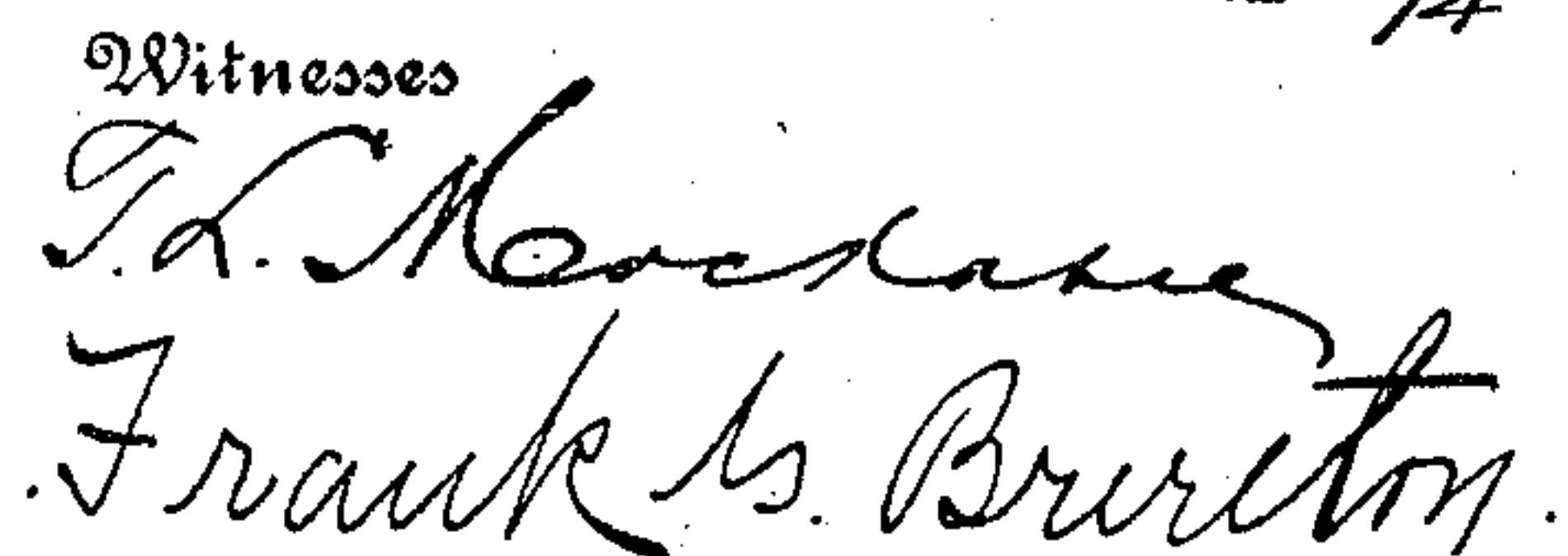


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UNITED STATES PATENT OFFICE.

BRUCE WORTHINGTON, OF BALTIMORE, MARYLAND.

WINDOW-SCREEN.

956,017.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BRUCE WORTHINGTON, a citizen of the United States, residing at Baltimore city and State of Maryland, have
5 invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

This invention relates to improvements in extensible window screens.

10 The primary object of the invention is to provide a screen which, while permitting of lateral adjustment to fit windows of different widths, will present a solid screen portion. In screens of this character now in
15 use, two overlapping screen portions are provided between which screen portions, a space is left through which insects can pass.

The invention contemplates a novel means for adjustably attaching the end piece of the screen frame to the top and bottom pieces of the frame and a novel means for taking
20 up the slack of the screen material, so that when the frame is adjusted to a desired width, the screen material will be smooth and taut. I employ a linen mesh as the
25 screen material, as this is easily wound upon the winding or tightening rod.

The invention further contemplates a novel means of winding the tightening rod
30 to hold the screen material perfectly flat and to lock the winding rod in position when the screen is adjusted.

The end pieces of the frame are provided with vertical grooves for the reception of
35 tongues which are attached to the window frame as is usual in screens, so that the screen need not be removed when the sash is raised or lowered.

In the drawings illustrating the invention:
40 Figure 1 is a perspective view of the screen complete, showing it extended to the limit of its lateral movement, there being shown in juxtaposition to the winding rod, in perspective view, a key that may be employed
45 in winding and locking the rod; Fig. 2 is a view with one of the pieces of the movable end of the frame removed, showing the manner of mounting the winding or tightening rod in said piece; Fig. 3 is a transverse section of the movable end piece, taken on line
50 *a—*a** of Fig. 1; Fig. 4 is a top plan view of the upper metallic casing and a portion of the movable end piece, showing more clearly the holes in said casing for the reception of
55 a lug carried by the winding key, to lock the rod after the screen has been wound; Fig. 5

is a sectional view of the upper part of the frame on line *b—b* of Fig. 1; and Fig. 6 is a transverse sectional view of the lower
60 frame piece, taken on line *c—c* of Fig. 1.

Referring to the drawings, the numerals 1 and 2 represent respectively the top and bottom pieces of the frame.

The numeral 3 designates the fixed side piece, while 4 designates the movable side
65 piece of the frame. Secured to the piece 4 preferably by screws 5 is a metallic box or guiding casing 6 which is closed at its lower side, but is provided with an elongated slot 7, which is between two laterally extending
70 flanges 8 and 9. This slot is for the purpose of permitting the passage of the screen material through the casing.

The numeral 10 designates a metallic guiding casing very similar to the casing
75 6. This casing, like the casing 6 is rigidly attached to the upper end of the movable end piece of the frame 4, by screws 11. The casing 10 is also formed with flanges 12 and 13, which underhang the upper piece 1 of
80 the frame, leaving a slot 14 for the passage of the screen material. Each casing is provided on one side with an elongated slot 15 for the passage of clamping screws 16, which
85 pass into the top and bottom pieces of the frame. When the frame is extended, for the proper width, these screws are tightened maintaining the frame in rigid condition.

The side piece 4 is made of two sections *a* and *b*, more clearly shown in Fig. 3 of the
90 drawing. The section *a* is recessed for its entire length as indicated at 17 and when the piece *b* is attached thereto, a groove 18 is formed for the reception of the tongue on the window frame. The piece *a* is provided
95 with a recess 19. Near the bottom of this recess, I provide a metallic angle piece 20, which is wedged into the groove or recess, so that it will remain stationary. This angle piece is provided with a central aperture 21,
100 for the reception of the lower end of the winding rod 22. This rod 22 is split for almost its entire length as shown best in Fig. 2 and its upper end is squared as indicated
105 at 23 and thereby adapted to be embraced by the squared opening 24 in a key 25. This key 25 has a depending lug 26 which is adapted to be inserted into one of the holes
110 27 in the upper metallic casing 10. The edge of the screen 9 is lapped over and hemmed and through the hem, one of the arms of the split rod is inserted. This fea-

ture of construction is best shown in Fig. 3. This mode of attaching the screen 9 to the rod, precludes the possibility of the screen slipping when it is being wound, and provides an easy way for the removal of an old mesh and the replacing of a new one.

The stationary part of the screen material 9 may be attached to the top and bottom pieces of the frame and to the fixed side piece of the frame, by any convenient means, but I preferably recess these fixed parts of the frame and tack molding strips upon the linen mesh. It will be understood, however, that the screen proper may be attached to the frame in any suitable and well known manner.

In adjusting the frame, say to narrower dimensions than those shown in Fig. 1, the clamping screws 16 are loosened and the movable end piece 4 and casings 6 and 10 carried thereby are pushed toward the end piece 3, until the desired width is reached. The slack in the mesh 9 which has been occasioned by this movement is wound upon the winding rod by the key 25, and when the slack is entirely taken up and the mesh is perfectly smooth, the lug 26 of the key is pushed in to an appropriate hole 27 in the upper casing, when the screen will be set and in condition for use.

Claims.

1. An extensible window screen, comprising top and bottom rails joined together, at one end, by a fixed side or end rail, a movable side or end rail, composed of two sections, one of which is provided with a

groove in its inner face, a box or casing secured to each end of the movable rail and adapted to slide upon the free ends of the top and bottom rails, each box or casing being provided with means for holding the movable rail in any desired position, and a mesh attached to the fixed rails and having its free end attached to a roller, said roller being rotatably mounted in the grooved section of the movable rail, said roller being inclosed within said groove by the other section of the movable rail.

2. An extensible window screen, comprising top and bottom rails joined together, at one end, by a fixed rail, a movable rail composed of two sections, one of said sections having a groove in its inner face, a rotatable split-roller mounted in said groove and provided with a projecting head, said roller being inclosed within the groove by the other section of the movable rail, a box or casing secured to each end of the movable rail and adapted to slide upon the free ends of the top and bottom rails, each box or casing being provided with means for holding the movable rail in any desired position, a mesh attached to the fixed rails and having its free end detachably-secured to the rotatable roller, and means for locking said roller against accidental movement.

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

BRUCE WORTHINGTON.

Witnesses:

HOWARD D. ADAMS,
ROLAND H. BRADY.