W. N. CROPPER.

SCREEN CONSTRUCTION.

APPLICATION FILED MAR. 31, 1919.

1,307,726. Patented June 24, 1919.

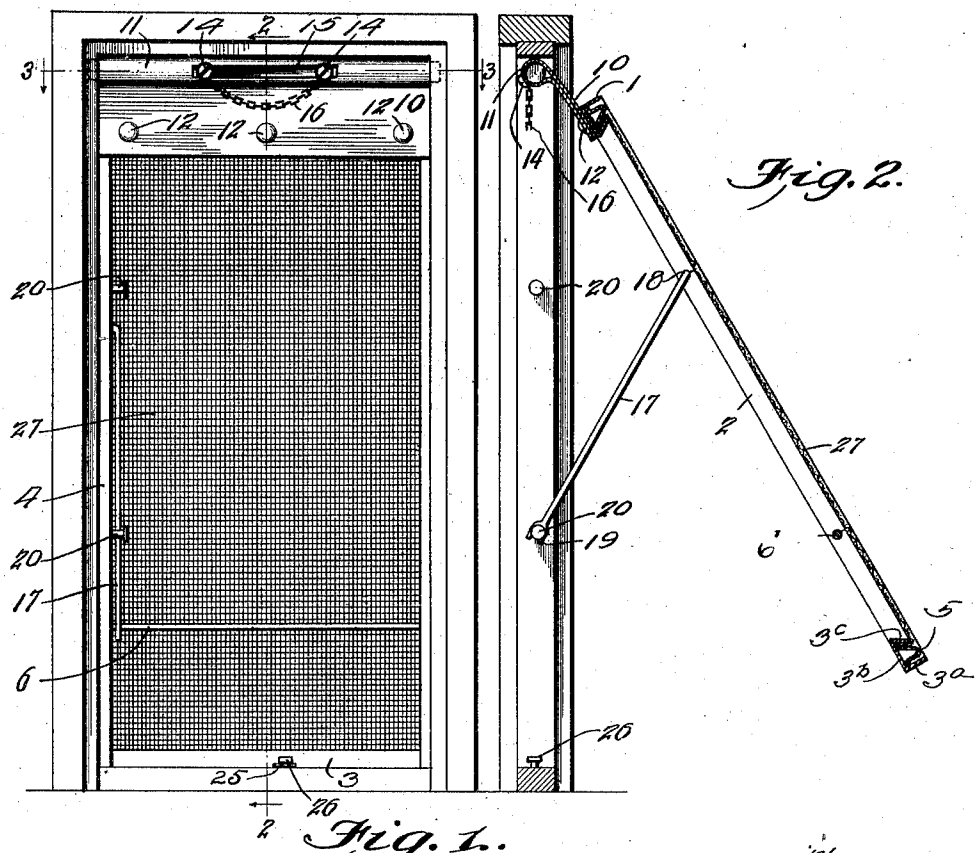


Fig. 2.

Fig. 1.

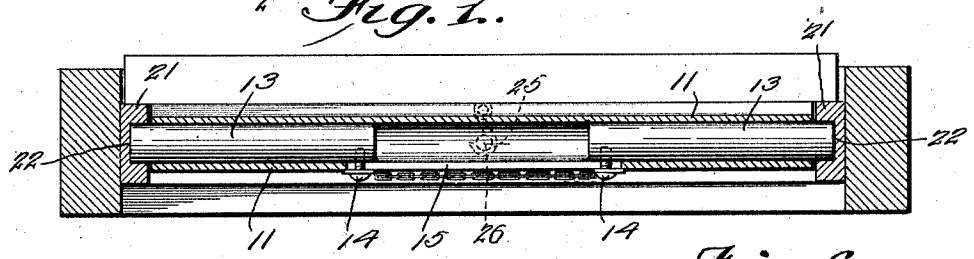


Fig. 3.

Fig. 4

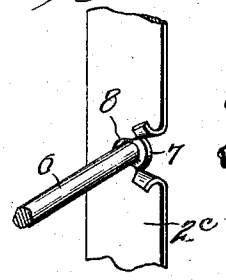
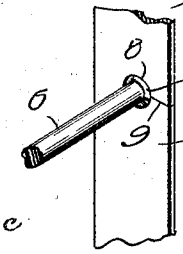


Fig. 5.



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UNITED STATES PATENT OFFICE.

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SCREEN CONSTRUCTION.

1,307,726. Specification of Letters Patent. Patented June 24, 1919.

Application filed March 31, 1919. Serial No. 286,337.

To all whom it may concern:

Be it known that I, WILLIAM N. CROPPER, a citizen of the United States, residing at Lexington, in the county of Fayette and State of Kentucky, have invented certain new and useful Improvements in Screen Constructions, of which the following is a specification.

My invention relates to improvements in screen construction, particularly as applied to window frames, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a screen construction which may be readily attached to a window frame, and which, when so attached, may be swung to an open position and retained in said open position.

A further object of my invention is to provide a simple means of suspending the screen frame pivotally at the top so as to require only a few moments work in hanging the frame.

A further object of my invention is to provide a device of the type described in which a portion of the suspension means also serves as an attachment for hanging the screen frame on a suitable support when the screen is put away, as for instance, during the winter.

A further object of my invention is to provide a means for pivotally securing the screen frame to the window frame which is relatively simple in construction, has few parts, and is not liable to easily get out of order.

Other objects and advantages will apear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, forming part of this application, in which—

Figure 1 is a face view of a window frame with my improved screen construction applied thereto;

Fig. 2 is a section along the line 2—2 of Fig. 1, the screen being shown in its open position;

Fig. 3 is an enlarged section along the line 3—3 of Fig. 1; and

Figs. 4 and 5 are perspective views of a portion of the screen frame showing the means for bracing the same.

The present application is designed to be an improvement on the screen frame construction disclosed in the Patent No. 1243715, granted October 23d, 1917, to W. N. Cropper and S. L. Lancaster, the present invention relating more particularly to the manner of attaching the screen frame to the window frame or casing.

Referring now particularly to Fig. 2 it will be seen that the screen frame proper consists of a set of four channel strips 1, 2, 3 and 4, these channel strips having straight outer faces, a flat central portion and an inner portion bent at an angle of approximately 45° from the central or base portion. In Fig. 2, the outer face is shown at 3^a, the central portion at 3^b, and the inner face at 3^c. A keeper 5, which is substantially V shaped in cross section, is disposed within the channel strip and the wire screen has its edges held between the keeper 5 and the inner face of the channel strip. Toward the bottom of the screen I provide a base member which consists of a rod 6 having a head 7 at each end thereof. The inner inclined face of the channel strip, for instance the channel strip 2 (see Figs. 4 and 5) is provided with an opening 8 which is large enough to receive the body portion of the brace rod 6 but not the head 7. A slit 9 is cut from one edge of the strip to the opening 8, the portions adjacent the strip are bent back as shown in Fig. 4, the brace rod is inserted in place and then these bent back portions are again straightened out in the manner shown in Fig. 5. This leaves the head of the brace rod firmly secured between the inner filler 5 and the inclined inner face, as for instance the face 3^b.

At the upper part of the screen I provide a plate 10 which is bent around at its center to form a tube 11, the ends of the plate being brought together and being riveted to the screen frame at 12. Within the tube 11 at each end thereof is a slidable cylindrical rod 13. The inner ends of the rod 13 are provided with set screws 14 which project through a slot 15 in the tube 11. A chain 16 is secured to the set screws 14. A bar 17 is pivotally connected to the frame at 18 and has a bifurcated end 19 arranged to straddle pins or stops such as those shown at 20.

From the foregoing description of the

various parts of the device, the operation thereof may be readily understood. The window casing portion 21 is provided with cylindrical bores 22 (see Fig. 3) which form sockets arranged to receive the ends of the cylindrical members 13. In hanging the screen frame it is only necessary to loosen the set screws 14, slide the members 13 inwardly, bring them into registration with the openings 22, then push them outwardly until they enter the openings and secure the set screws in position. The screen frame will then swing on the pivot members 13 so that the screen may be opened and held in the position shown in Fig. 2 by means of the rod 17 and stop 20. When it is desired to remove the screen, the set screws 14 are loosened, the pivot members 13 are withdrawn and the screen frame may be immediately detached. The chain 16 will serve as a means for suspending the detached screen frame, thereby obviating the necessity of resting the screen on the floor where it may become broken. When the screen is suspended from the top in the manner described it may be locked at the bottom by any suitable device such as a hook 25 and pin 26, thus holding the frame securely in place, but permitting it to be instantly opened in the manner described.

I claim:

1. In a screen construction, a frame, a screen carried thereby, a plate bent at its center to form a tube and having its ends brought together and riveted to the frame, said tube having a central slot on one side thereof, a slidable cylindrical pivot rod disposed in each end of said tube, and a set screw carried by the inner end of each of the pivot rods and arranged to project through the central slot in said tube for clamping the rods to the tube.

2. The combination with an outer frame having sockets, of a screen frame comprising a suspension plate bent at its center to form a tube, and having its ends brought together and secured to the screen bearing portion, a slidable cylindrical rod disposed at each end of said tube, the ends of the rod being arranged to enter the socket, and a set screw carried by the inner end of each rod for clamping the rod to the tube.

3. The combination with a frame having sockets, of a screen construction comprising a frame, a screen carried by the frame, a plate bent at its center to form a cylindrical tube, and having its ends brought together and riveted to said frame, said tube having a longitudinal slot, a cylindrical rod disposed in each end of said tube, and slidable therein, the outer ends of said rod being arranged to enter said sockets, a set screw secured to the inner end of each of said rods and arranged to project through said slot for securing the rod to the tube, and a chain attached to said set screws.

4. The combination with an outer frame having sockets, of a screen frame, a plate secured to the upper end of said screen frame and being looped to form a tube having a central slot at one side thereof, a slidable rod in each end of said tube, a set screw secured to each rod and arranged to slide in said slot for clamping the rod to the tube, the end of each rod being arranged to enter one of the sockets for pivotally suspending the screen, and a pivoted arm secured to the frame at one end and arranged to engage a portion of the outer frame at the other end for holding the screen frame in an open position.

5. The combination with an outer frame having sockets, of a screen frame, a plate secured to the upper end of said screen frame and being looped to form a tube having a central slot at one side thereof, a slidable rod in each end of said tube, a set screw secured to each rod and arranged to slide in said slot for clamping the rod to the tube, the end of each rod being arranged to enter one of the sockets for pivotally suspending the screen, a pivoted arm secured to the frame at one end and arranged to engage a portion of the outer frame at the other end for holding the screen frame in an open position, and means at the bottom of the frame for locking the latter to the outer frame.

In testimony whereof I affix my signature.

WILLIAM N. CROPPER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."