J. C. SCOTT.

WINDOW SCREEN.

APPLICATION FILED AUG. 17, 1915.

1,245,044. Patented Oct. 30, 1917.

Fig. 3.

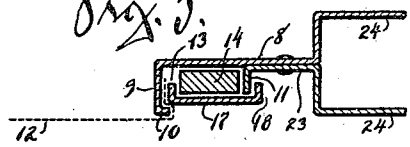


Fig. 2.

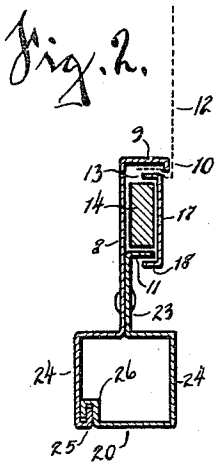


Fig. 1.

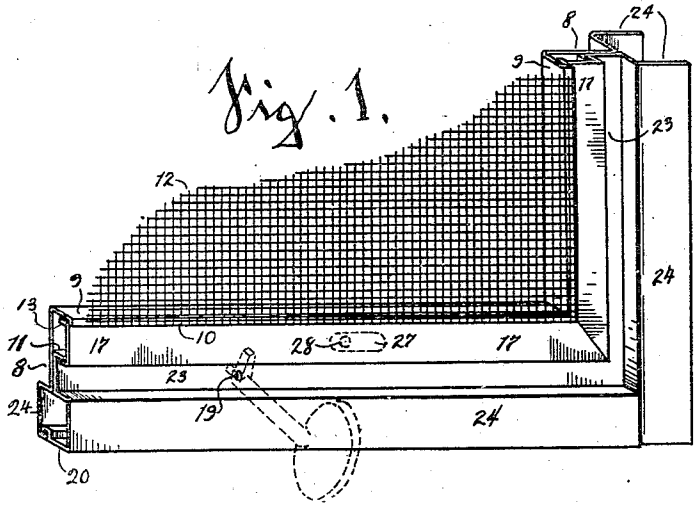


Fig. 4.

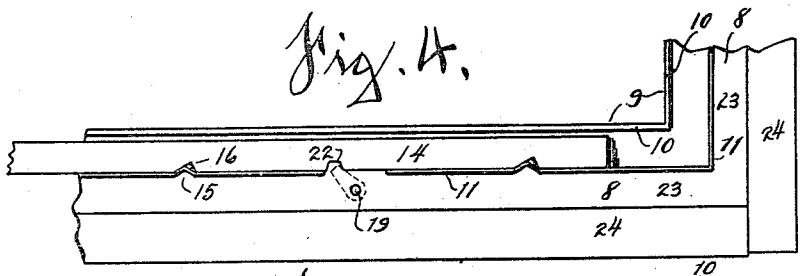


Fig. 5.

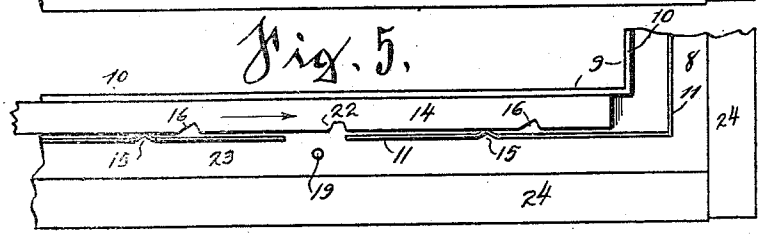
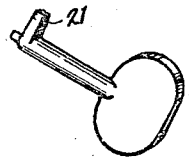


Fig. 6



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UNITED STATES PATENT OFFICE.

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WINDOW-SCREEN.

1,245,044. Specification of Letters Patent. Patented Oct. 30, 1917.

Application filed August 17, 1915. Serial No. 45,975.

To all whom it may concern:

Be it known that I, JOHN C. SCOTT, residing on Lexington Pike, Kenton county, State of Kentucky, have invented certain new and useful Improvements in Window-Screens, of which the following is a clear, full, and exact description, attention being called to the drawing which accompanies this application and forms a part thereof.

This invention relates to screens used to close openings like doors and windows against ingress of insects. Such screens consist substantially of a frame fitted to the opening, which is to be screened, of screen-cloth stretched across this frame and of means to hold the cloth to the frame. As to these holding means there are screens in which these means are permanently attached. In other screens these means are detachable so that they may be removed, permitting also the removal of the cloth in case renewal of the same becomes desirable.

The invention concerns screens provided with detachable means to permit renewal of the screen-cloth and consists of the construction of such screens as hereinafter described and claimed and illustrated in the accompanying drawing, in which:

Figure 1, shows in perspective view, one of the lower corners of the screen and part of one of the horizontal and of the upright frame-members thereof which meet at said corners.

Fig. 2, is an enlarged cross-section of one of the horizontal frame-members.

Fig. 3, is a similar view of one of the vertical frame-members.

Fig. 4, is an elevation of the screen corner shown in Fig. 1, but with parts omitted and illustrating also one of the devices for holding the screen cloth.

Fig. 5, in a similar view shows the holding device in operative position.

Fig. 6, shows a key used in the manipulation of the holding device.

The essential part of the screen frame consists substantially of four flat members 8 which meet at the corners of the frame where they are connected in a suitable manner, preferably by a flat lap-joint. At their inner edges these frame-members are provided with a flange 9, which flange is continuous and substantially at right angles to the plane of the screen. The free edge of this flange is turned over (outwardly with reference to the screen), to form a lip 10. Spaced from flange 9 there is another flange 11, parallel to the former flange and arranged at right angle to the frame. Numeral 12 indicates the screen-cloth which is cut to cover the opening formed by the frame-members and the edges of which are turned down over lips 10 and against flange 9 as shown in Figs. 2 and 3, where dotted lines indicate the screen-cloth. The screen-cloth is held in place by being clamped at its down-turned edges against the side of flange 9. This is done by clamping-strips 13 when they are forced against the said edges of the screen-cloth by means of wedge-bars 14 which co-act with flanges 11 against which they rest. This co-action is obtained by notches in one of these co-acting members and by projections on the other. As shown, inclined projections 15 are provided on flange 11 and conforming notches 16 are placed in the edges of bars 14 opposite said flange.

Fig. 4 shows the inactive position of the wedge bar. If it is moved lengthwise or in the direction of the arrow as shown in Fig. 5, it will ride up on projections 15 whereby it is also caused to move toward flange 9. With the spaces, dimensions and movements properly adjusted, it will clamp clamping strip 13 between its upper edge and flange 9. It being desirable for reasons of appearance to close the space between flanges 9 and 11 and to cover the wedge-bars, the means used for doing this may form part of these clamping-strips 13 and may thus be secured in place with the positioning of said clamping-strips. For such purpose these latter are shaped to form cap-strips 17 which extend over the wedge-bars and each of which has a flange 18 which extends around flanges 11, as shown. In other words cap-strips 17 have flanges 13 and 18 and of which flange 13 constitutes the clamping-strip.

A clamping-strip being used, projections 15 might also be on it and co-act with notches 16 in wedge-bar 14 which latter is reversed in position in this case, so that its notched edge is uppermost. For the purpose of adjusting a wedge-bar, a key is used which is supported in a turning center formed by an opening 19 which receives the end of the key. (See it in dotted lines in Fig. 1.) This opening is properly located so that the bit 21 on the key may co-act with a notch 22 in the wedge-bar for moving the same, (see dotted lines in Fig. 4). To admit the key bit, part of flange 11 and of the

cap-strip is cut out. The wedge-bar might also be moved by means of a pin engaging an opening in it as shown at 28 and accessible through a slot 27 in the cap-strip, observe dotted lines in Fig. 1. These wedge-bar adjusting-devices may be applied on either side of the frame. Wedge-bars 14 may be of a length substantially equal to the length of the frame-members on their inner edges or they may be shorter and may be used on the corners only.

In the practical construction of the screen, flange 11 may be provided in any suitable way. It may form part of a web 23 which web is connected to frame-member 8 by spot-welding, rivets or solder.

The rigidity of the frame, which is of suitable sheet-metal, may be increased by extending members 8 and 23 to form parallel flanges 24 as shown in Fig. 3. These flanges may also serve to receive customary means for holding and guiding the screen which means may be in form of strips and attached to the window frame. The free, outer edges of these flanges may be as shown, or crimped to render them smooth and stiff. This extension may be provided on all the frame parts and sufficient metal may be provided to permit also closing of the open space between flanges 24, as shown at 20 in Fig. 2, to produce a tubular, box-shaped rim at the outer edge of the frame-members. This rim is closed by a lock-seam produced by interlocking the free edge 25 of one member with the free edge 26 of the other member.

Having described my invention, I claim as new:

1. In a screen, the combination of a frame which on its inner edge is provided with a continuous flange arranged at right angle to the plane of the frame, screen-cloth extending across this frame and over the edge of this flange and turned down on this flange and against the side of the same, a second flange spaced from the first flange and parallel thereto, wedge-bars positioned between the two flanges and means operating to cause said bars, when moved lengthwise, to be shifted toward the down-turned edges of the screen-cloth to cause them to be clamped against the first named flange.

2. In a screen, the combination of a frame which on its inner edge is provided with a continuous flange arranged at right angle to the plane of the frame, screen-cloth extending across this frame and over the edge of this flange and turned down on and against the side of the same, a second flange spaced from the first one and parallel thereto, strips to clamp the down-turned edges of the screen-cloth against the flange first mentioned, wedge-bars positioned between these strips and the other flange and means operating so that said bars, when moved lengthwise, shift against the clamping strips and cause them to engage the edges of the screen-cloth.

3. In a screen, the combination of a frame which on its inner edge is provided with a continuous flange arranged at right angle to the plane of the frame, screen-cloth extending across this frame and over the edge of this flange and turned down on the same and against the side thereof, a second flange spaced from the first flange and parallel thereto, strips to clamp the down-turned edges of the screen-cloth against the first flange, wedge-bars positioned between these strips and the second flange, complementary projections and notches, one on one edge of the wedge-bars and the other in the member opposite it, whereby said bars, when moved lengthwise, are shifted against the clamping-strips and cause them to engage the edges of the screen-cloth.

4. In a screen, the combination of a frame which on its inner edge is provided with a continuous flange arranged at right angle to the plane of the frame, screen-cloth extending across the frame and over the edge of the flange and turned down on it and against the side of the same, a second flange spaced from the first flange and parallel thereto, means positioned between these two flanges to clamp the down-turned edges of the screen-cloth against the flange first mentioned and cap-strips to cover these means.

5. In a screen, the combination of frame-members consisting of two connected parts which comprises spaced parallel flanges arranged at right angle to plane of the frame and are extended parallel to the plane of the frame to form two spaced flanges adapted to receive between them means for holding its screen-frame in position, screen-cloth extending with its edges into the space between the flanges first mentioned and means to hold these edges in this space.

6. In a screen, the combination of frame-members consisting of two connected parts which comprise spaced parallel flanges arranged at right angle to the plane of the frame and are extended and shaped to form a tubular box-shaped rim around the outer edge of the frame-members and outside of the flanges on these members mentioned.

7. In a screen, the combination of frame-members comprising two spaced parallel flanges arranged at right angle to the plane of the screen, screen-cloth extending across the frame and with its edges into the space between these flanges, means to secure these edges in this space and cap-strips to cover these means.

8. In a screen, the combination of a frame which on its inner edge is provided with a continuous flange arranged at right angle to the plane of the frame, screen-cloth extending across this frame and over the edge

of this flange and turned down on this flange and against the side thereof, another flange spaced from the first flange and parallel thereto, wedge-bars positioned between the flanges, cap-strips to cover these wedge-bars and provided with a flange extending into the space between these bars and the down-turned edges of the screen-cloth and means operating to cause said bars, when moved lenthwise, to shift against said flange on the cap strip so as to cause this flange to clamp the edge of the screen-cloth against the flange on the frame.

In testimony whereof, I hereunto affix my signature this 14th day of August, 1915, in the presence of two witnesses.

JOHN C. SCOTT.

Witnesses:
C. SPENGEL,
A. JOHNSON.

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