E. T. BURROWES.

METAL SCREEN GUIDE.

APPLICATION FILED AUG. 3, 1914.

1,152,074.

Patented Aug. 31, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

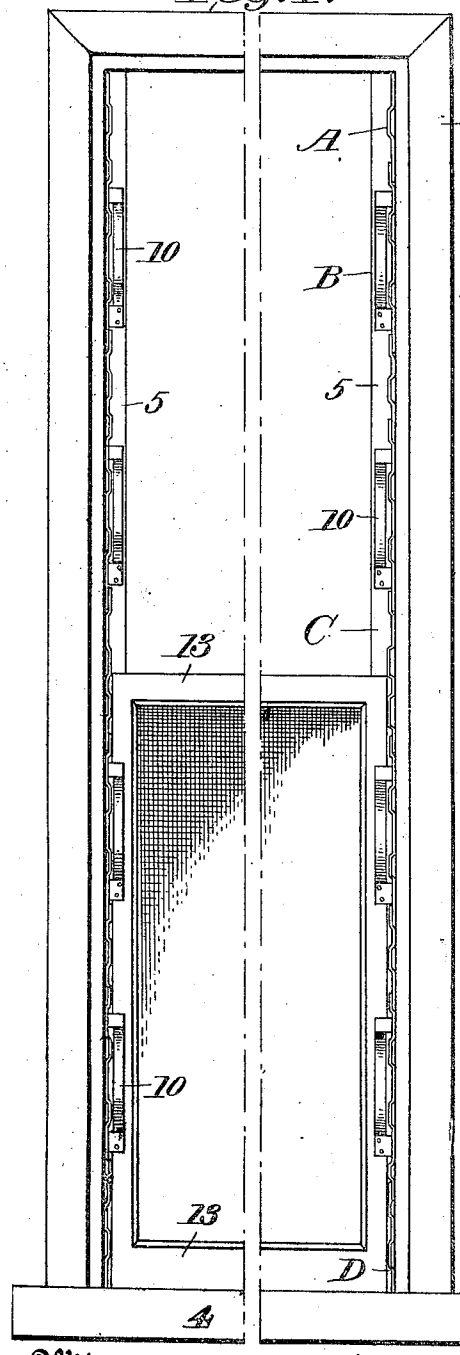


Fig. 2.

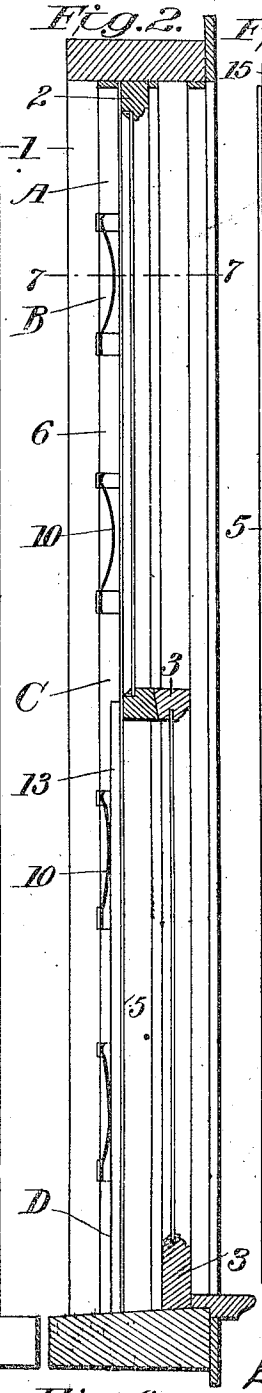


Fig. 3.

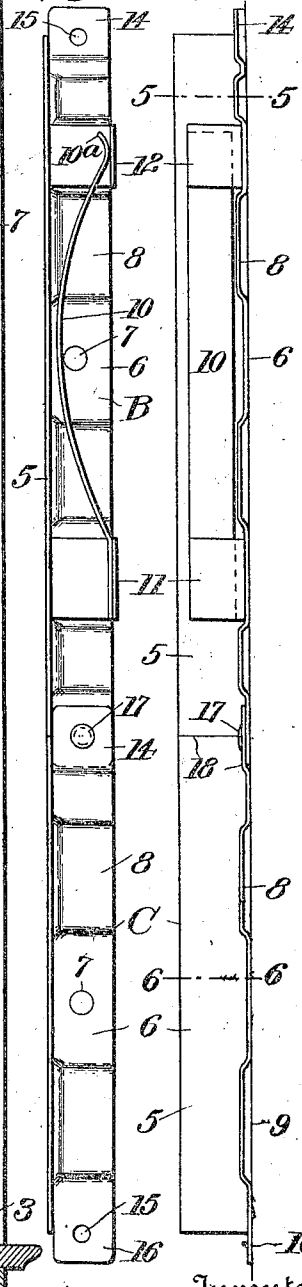


Fig. 4.

Witnesses

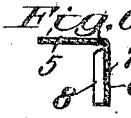
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Fig. 5.



Fig. 6.



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2 SHEETS—SHEET 2.

Fig. 9.

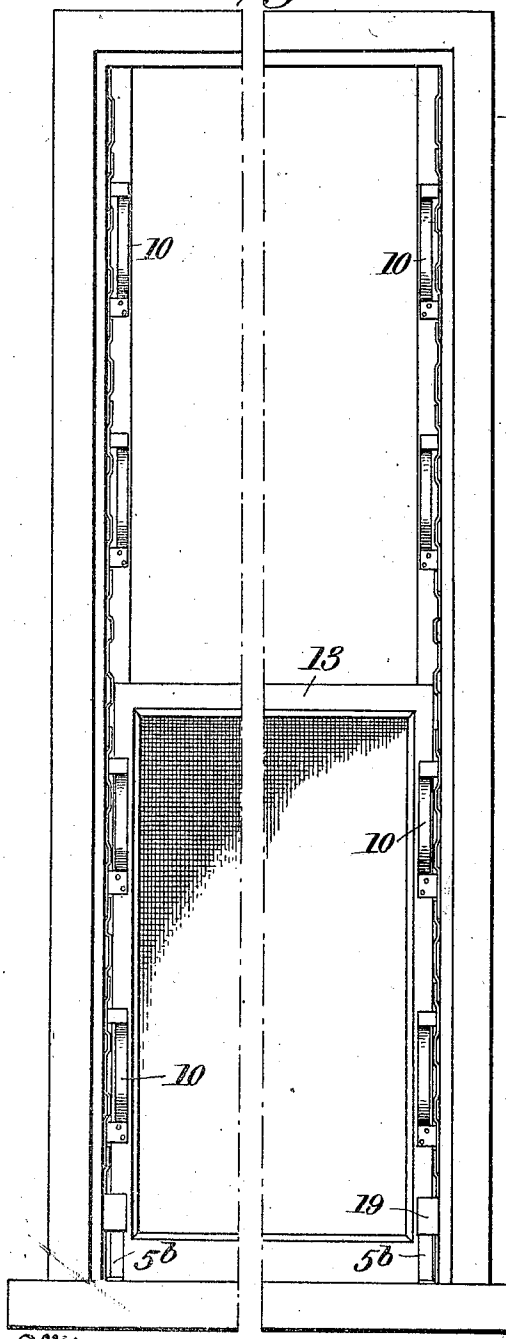


Fig. 7.

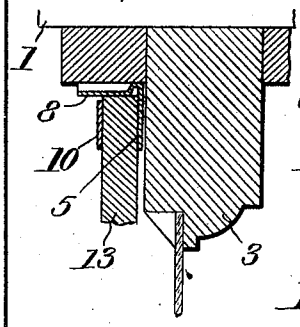


Fig. 12.

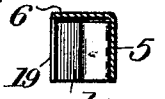


Fig. 11.

Fig. 10.

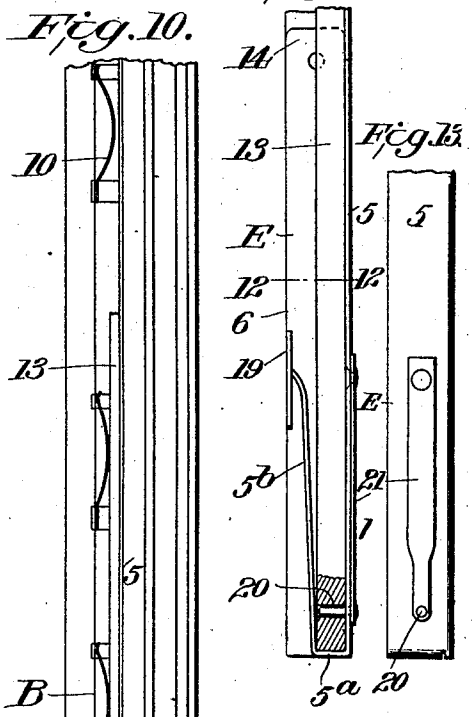
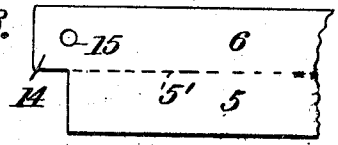


Fig. 13.

Fig. 8.



Witnesses
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UNITED STATES PATENT OFFICE.

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METAL SCREEN-GUIDE.

1,152,074. Specification of Letters Patent. Patented Aug. 31, 1915.

Application filed August 3, 1914. Serial No. 854,721.

To all whom it may concern:

Be it known that I, EDWARD T. BURROWES, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Metal Screen-Guides, of which the following is a specification.

This invention relates to guides for use in connection with window screens, and particularly to guides of this nature formed of metal, as distinguished from wood.

The objects of the invention are to provide an efficient and convenient guide of this character which shall be simple and cheap in construction, easy to install, and which is readily adapted for use on windows of different lengths. To the latter end, I propose to construct my improved guide in relatively short sections and to provide means whereby such sections may be assembled so as to produce a guide of any desired length.

In order that the invention may be clearly understood, reference is had to the accompanying drawing forming a part of this specification, and in which,

Figure 1 is a front elevation of a complete window with my improved guides applied thereto, and showing a screen in position; Fig. 2 is a central vertical section of the same; Figs. 3 and 4 are side and front elevations, respectively, on an enlarged scale, showing the details of construction of my improved guide sections; Figs. 5 and 6 are transverse sections, respectively, on the lines 5—5 and 6—6 of Fig. 4; Fig. 7 is a similar section substantially on the line 7—7 of Fig. 2, parts being omitted; Fig. 8 is a fragmentary plan view of the blank from which my improved guide sections are formed; Fig. 9 is a front elevation similar to Fig. 1, showing a slightly modified construction of guide; Fig. 10 is a fragmentary vertical section similar to Fig. 2, showing the construction illustrated in Fig. 9; Fig. 11 is a side elevation on an enlarged scale of the lower end of the guide shown in Figs. 9 and 10; Fig. 12 is a transverse section thereof substantially on the line 12—12 of Fig. 11; and, Fig. 13 is a fragmentary rear elevation of the lower end of the guide shown in Fig. 11.

Referring to the drawings in detail, the usual window frame is designated at 1, while 2 and 3 indicate the upper and lower sashes respectively, and 4 the sill.

My improved guide is preferably L-shaped in cross section and comprises the two flanges 5 and 6. By reference to Fig. 8, it will be seen that a flat strip of sheet metal is bent longitudinally along the dotted line indicated at 5′ so as to form the flanges 5 and 6 at substantially right angles to each other. The flange 6 preferably has its end 14 projecting beyond the flange 5, and is provided with an opening 15, whereby the projecting portions of two adjacent sections may be overlapped and fastened with a nail or screw, as hereinafter more fully described.

Referring to Figs. 1 and 2, I have designated the various sections of my improved guide by the letters A, B, C, D. These sections are relatively short, and are usually of different lengths. The section A, for example, may be quite short and is designed to be placed at the upper end of the frame. Adjacent this is a section B, carrying a spring 10 in the manner hereinafter described. Then comes another section such as A, without a spring, then another section such as B, carrying a spring. In the middle of the window adjacent the meeting rails of the two sashes is arranged a section C, which is preferably longer than the others so as to provide a space for the insertion of the screen. Below the section C are arranged two more sections B separated by a section A, and at the bottom the space is filled in by a section D of suitable length. By this arrangement there is provided two springs adjacent each sash and these will ordinarily be sufficient. It will, of course, be understood, however, that any desired number of springs may be employed separated by blank sections of any suitable length. As all of the sections are substantially similar in construction, it will be necessary to describe in detail only one of them. The flange 6 of each section will be referred to as the bottom, and this is adapted to be secured, as by nailing, directly to the stop-strip of the window frame. The other flange 5 serves as one wall of the guideway against which the side of the screen frame bears.

Referring to Figs. 3 and 4, it will be seen that the bottom of the guide has a series of pressed-up portions 8 formed therein, which alternate with the portions 6 which rest against the stop-strip, and which are provided with one or more perforations 7, adapted to receive fastening devices. At one end of each section such as B, the projecting tongue 14 is raised, while at the op-

posite end, the corresponding tongue, such as 16, lies in its normal plane. A tongue such as 14 is therefore adapted to overlap a tongue 16 of the adjacent section so as to bring the perforations 15 therein into registry, and a nail 17, or the like, may then be driven through such overlapped ends into the window frame. When thus assembled, it will be clear from an inspection of Figs. 3 and 4, that the entire bottom of the guide is made up of a series of alternating elevated and depressed portions, the edge of the screen riding upon the elevated portions. This results in causing the screen to run free of any nail heads which are located in the depressed portions, and also causes it to clear the lapped ends of the sections. In other words, the height of the elevated portions is at least equal to the combined thickness of the two tongues 14 and 16, and in practice, should be still greater, so as to allow for nail heads and the like which may slightly project. It will be understood that the ends of the flange 5 are preferably cut off square and abut, as indicated at 18 in Fig. 4, thus forming a smooth wall, but these ends may be made to lap, if desired. In order to prevent the formation of cracks or openings between the raised portions 8 and the window frame, I form along the edge of each such portion adjacent the flange 5, a straight rib or bead as clearly shown at 9 in Fig. 5. This lies flat against the window frame and insures a tight fit, so as to exclude insects. In order to hold the screen in the guide, I provide the springs 10 above referred to. Each of these springs is of bow form and is rigidly secured at one end to one of the sections B of the guide. This may be done by forming a projection on the spring, but as shown in Figs. 3 and 4, a bracket 11 is provided to which the end of the spring is riveted or otherwise secured. The free end of the spring, which is preferably upturned as indicated at 10^a, rests against a stop or bracket 12, which may be formed integral with or riveted or otherwise secured to the section B of the guide strip. It will be understood that the brackets 11 and 12 are mounted in the depressed portions of the bottom flange 6, and are spaced slightly therefrom so as to form between themselves and such flange a space for the reception of the screen 13.

It will be understood that the screen is inserted adjacent the section C of the guide which does not carry any spring and which is longer than the others. When forced down between the springs 10 and the flange 5, the screen is frictionally gripped in such a way as to hold it in position, and at the same time admit of its being raised and lowered as desired. By employing an angle bar in place of the usual channel bar, I achieve an advantage in ease of manipulation and of inserting the screen, and at the same time effect a marked saving in the quantity of metal required to construct a guide of any given length. It will be clear that different lengths of the sections A, C, and D can be selected so as to form when assembled a guide of any desired length, the sections B, carrying the springs, being preferably of uniform length.

In some cases the construction shown in Figs. 9 to 13 may be desirable. In such construction, I provide a special section E for the lower end of the window, the flange 5 of such section being extended considerably beyond the flange 6, bent around at substantial right angles as indicated at 5^a, and thence upwardly as indicated at 5^b. The upper end of the strip 5^b rests against and may be secured to a lug or bracket 19 carried by the flange 6. The strip 5^a and 5^b thus bent forms a socket into which the lower edge of the screen fits, such socket being preferably of decreasing width toward the bottom, whereby the screen is more readily guided and may be frictionally gripped as it approaches closed position. In order to positively lock the screen in such closed position and prevent opening thereof by a person outside of the building, I may, in some cases, provide the latch illustrated in Figs. 11 and 13. This consists of a pin 20 adapted to enter alined openings in the flange 5 and screen. This pin is carried by a flexible strip or spring 21 riveted to the flange 5. When it is desired to raise the screen, the pin may be withdrawn readily by a person on the inside, but is inaccessible to a person without.

What I claim is:

1. A screen guide comprising an angle bar, a pair of spaced brackets carried thereby, and a bow spring secured at one end to one of said brackets and engaging the other bracket at its free end, the middle portion of the spring being adapted to grip a screen between itself and one flange of the angle bar.

2. A screen guide comprising an angle bar, a bow spring secured at one end to said bar, and a bracket carried by said bar against which the free end of said spring is constructed to bear, the middle portion of said spring being disposed parallel with one flange of said angle bar and arranged to frictionally grip a screen between itself and such flange.

3. A screen guide made up of sections of relatively short length, each of said sections comprising bottom and side members, the bottom members of said sections having overlapping ends and the side members having abutting ends, and means for securing such guide sections to a window frame.

4. A screen guide comprising a bottom and side members, and made up of relatively

short sections, the bottoms of such sections having overlapping ends, and the bottoms being further provided with raised portions at least equal in height to the combined thickness of said overlapped ends.

5. A screen guide comprising a bottom and side members, said bottom being made up of alternate elevated and depressed portions, the depressed portions having openings therethrough, and fastening devices passing through said openings, the heads of such fastening devices being no higher than the plane of said elevated portions.

6. A screen guide comprising an angle bar and a retaining member secured thereto, one flange of the angle bar being smooth, and the other being made up of alternate elevated and depressed portions, a straight rib or bead extending along said last mentioned flange adjacent one edge thereof and adapted to lie flush against a window frame so as to close the openings which would otherwise be produced by said elevated portions.

7. A screen guide comprising an angle bar having one flange adapted to be secured to a window frame, and having the other flange extended beyond the first and bent back upon itself at a distance therefrom, so as to form a pocket at the end of the guide into which a screen may fit.

8. In combination, a screen guide having at the lower end thereof a socket adapted to receive the screen, and means for locking the screen in said socket, such means comprising a pin extending transversely of the guide and screen, and a resilient strip mounted on the guide and carrying said pin.

In testimony whereof I have affixed my signature, in presence of two witnesses.

EDWARD T. BURROWES.

Witnesses:

FRANK J. BRAGDON,

IDA F. MCNAIRN.