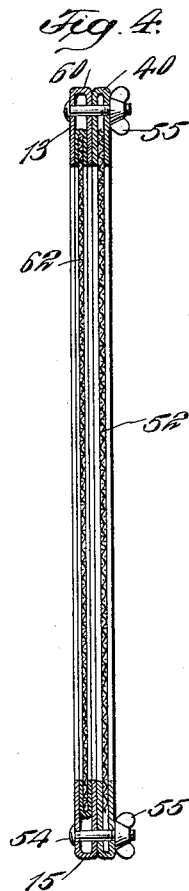
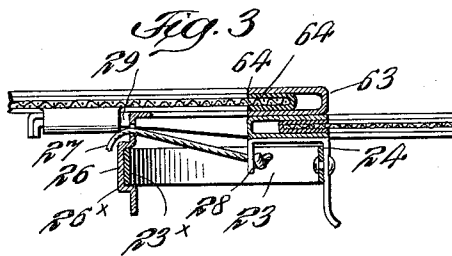
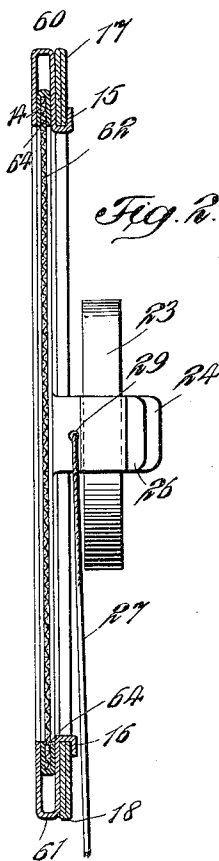
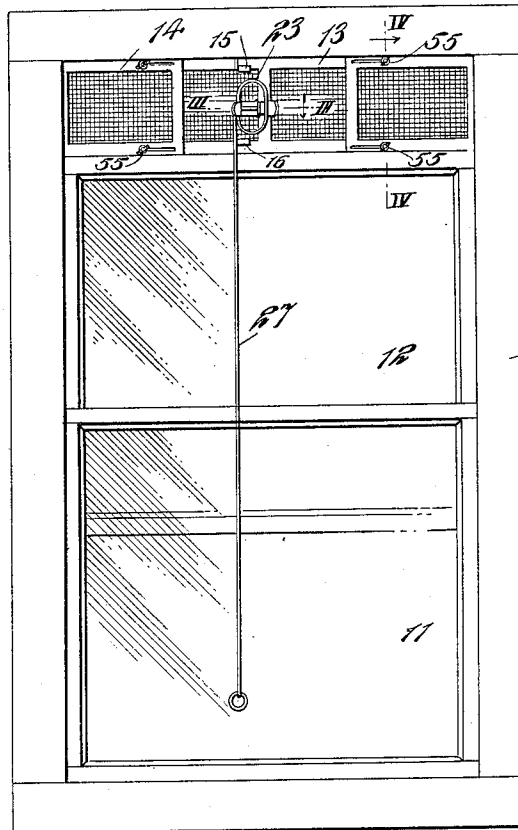


SCREEN.

Patented Jan. 2, 1912.

2 SHEETS--SHEET 1.

Fig. 1.



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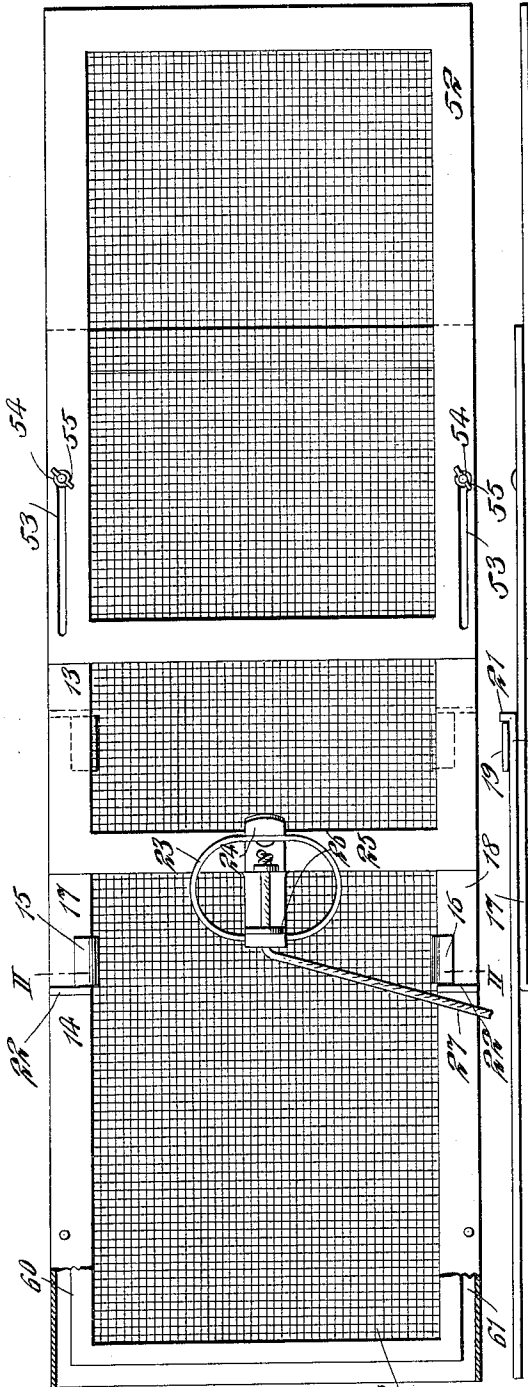
SCREEN.

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1,013,118.

Patented Jan. 2, 1912.

2 SHEETS-SHEET 2



Witnesses
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Fig. 5.

Fig. 6.

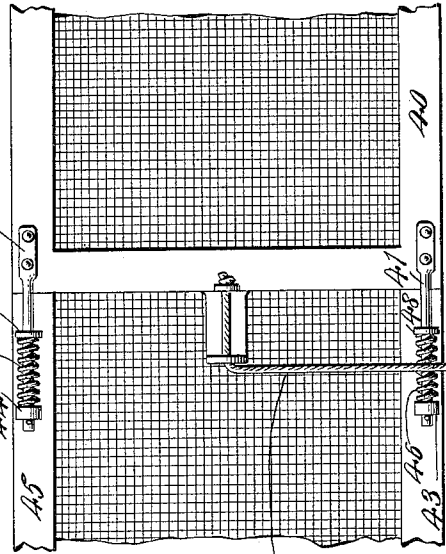


Fig. 8.

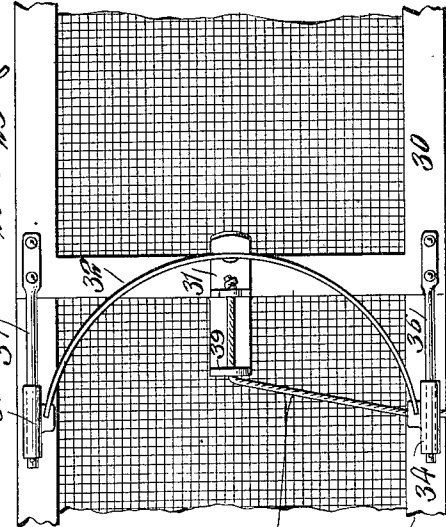


Fig. 7.

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UNITED STATES PATENT OFFICE.

NOAH BRANDT, OF NEW YORK, N. Y.

SCREEN.

1,013,118.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed February 8, 1911. Serial No. 607,294.

To all whom it may concern:

Be it known that I, NOAH BRANDT, a citizen of the United States, and a resident of New York, county and State of New York, have invented certain new and useful Improvements in Screens, of which the following is a full, clear, and exact description.

This invention has particular reference to an adjustable screen for placing in the upper or lower portion of windows, and especially adapted for the upper portion when the upper sash is lowered.

The principal object of the invention is to provide a practical device for insertion in windows of different widths, that can be contracted to insert in the window and will automatically expand upon release to fit the opening and which member can be manipulated easily when placed at the top of a comparatively high window.

Another object of the invention is to provide a simple and economical construction of connecting means between the members, to facilitate their sliding one upon the other.

A further object of the invention is to provide an improved form of extension for one or both of the members, that can be readily adjustable.

A still further object of the invention is to provide a form of wire netting or screen portion that can be readily inserted and removed for replacement when injured, without the use of tools, or of any special fastening means.

With these and other objects in view, the invention will be hereinafter more particularly described with reference to the accompanying drawings, which form a part of this specification, and will then be pointed out in the claims at the end of the description.

In the drawings, Figure 1 shows in elevation a window with a screen in position that embodies my invention. Fig. 2 shows enlarged a transverse section on the line II—II of Fig. 5. Fig. 3 is a fragmentary horizontal section on the line III—III indicated in Fig. 1. Fig. 4 is a transverse section on the line IV—IV of Fig. 1. Fig. 5 is a front elevation, one end being broken away to show the interior. Fig. 6 is a plan view of the parts, as shown in Fig. 5. Fig. 7 is a fragmentary plan view, showing a

modified form of spring; and Fig. 8 is a similar view showing another form of spring. The window frame 10 is shown as provided with a lower sash 11 and an upper sash 12, slidable vertically in the usual manner. One form of my invention is shown placed in the opening caused by lowering the upper sash 12. The device is formed of a pair of members one slidable upon the other and whose aggregate length is made to suit the average size of window, or of any other length desired. The width of the device is made to accommodate the amount of opening space desired but is preferably considerably less than the length of the device.

The screen is preferably composed mainly of two members 13 and 14, and these are provided with connecting means whereby the two members, preferably of equal width, are slidable one upon the other in a longitudinal direction. As shown, the member 14 has its opposite longitudinal edges provided with lugs 15 and 16 that are somewhat hook-shaped, and preferably integral with the frame. These lugs are bent to form a channel of a width to accommodate a portion of the frame of the other member 13. This member 13 is shown as having its longitudinal edges provided with extensions 17 and 18, that are slidable in the channel portions of the lugs 15 and 16, respectively; as best shown in Fig. 2. Preferably the other member 13 is provided with similar lugs 19 integral with the frame 13, and which engage extensions 20 of the frame 14, as indicated in Fig. 6. These extensions have limiting means, such as flanged ends 21 that limit the outward slide movement of the members; and similar flanges 22 of the extensions 17 and 18, serve the same purpose. The extensions are of double thickness, formed by flattening the U-shaped frame together as shown in Fig. 2.

Resilient means are provided to force the members apart, when slid together. In Figs. 1, 2, 3 and 5, a form of bow spring is provided, that is substantially elliptical, one portion of which is connected to one of the frame members as 13, and another portion attached to the member 14 at places longitudinally opposite, whereby when the members are slid together and the spring

tensioned, the spring will operate to expand the members when free to move. An elliptical spring 23 is carried by a bracket 24 secured to the end portion 25 of the screen member 13. The screen member 14 is provided with an arm 26 arranged to be engaged by the opposite portion 23* of the spring. The arm 26 may be provided with a channel portion 26* of a size to fit the elliptical spring 23, that is seated therein, but does not require to be secured to the arm. The arm and bracket are so relatively positioned that the spring in its normal position will press the members outwardly the desired longitudinal distance. But when the members are together the spring will be compressed; and therefore when free the tension of the spring will force the members outwardly. It will, therefore, be easily understood that the members can be slid together to compress the spring and reduce their aggregate length, whereby the member can be inserted in the frame at each side of the opening, upon lowering or raising the sash. After placing in position on top or below the sash, the members are released and the reaction of the spring will force the members outwardly and into the channel spaces above or below the edges of the sash to completely fit the opening at each side. Then the sash is raised or lowered to engage the edge of the device and forced against the member of the window frame.

To facilitate the operation of the device, especially when using at the upper portion of a window, I provide a flexible member that will serve to draw the members together. Preferably, I use a cord having one end attached to one of the screen members and passed through a guide portion on the other member and then passed downwardly, whereby when on pulling the cord the members will be caused to separate. From Figs. 3 and 5, it will be seen that I attach a cord 27 to a lug 28 on the bracket 24. The cord then passes through a guide portion in the form of an opening 29 in the arm 23, and then may pass downwardly. By pulling on this cord, it will be seen that the spring will be compressed and the two members slid together, and upon release the spring will expand to open the members.

In Fig. 7 is shown a slightly modified construction in which a single bow spring is used instead of an elliptical spring, or double bow spring. In this form the member 30 carries an arm 31 to which is secured a bow spring 32 at its middle portion. The extremities of this form of bow spring are shown as secured or held in blocks 33 and 34 carried by the other member 35 of the screen. It will be easily understood that when the members are slid together, the spring will be somewhat flattened and on

release of the members the spring will force the members apart. In this form a pair of rods 36 and 37 are shown carried by the member 30, and extending into the tubular blocks 33 and 34 on the other member, which serve to guide the two members in their longitudinal movement upon each other. And a cord 38 passes through a guide arm 39 of the member 35, and has its end secured to the arm 31 of the member 30; for contracting the members when desired.

In the arrangement shown in Fig. 8, the screen member 40 carries rods 41 and 42 that slide in eye portions 43 and 44 on the other screen member 45. The resilient means in this form comprises coil springs 46 and 47 mounted in the rods 41 and 42 and engaged at one end by collars 48 and 49 fast on the rods. When the members are brought together, as by the cord 50, the advance of the rods with their coils will compress the springs whose other ends engage the eye portions, whereby release of the members will cause their separation from reaction of the spring.

If desired, one or both of the two slidable members comprising the screen may be provided with extensions, and these extensions are preferably adjustable thereon, whereby the available length of the device in its operative position can be varied to suit the requirements. As shown in Figs. 4 and 5, the member 13 is provided with an extension member 52 of a width corresponding to the member 13, whose frame at opposite sides is provided with slots 53. The frame 13 is provided with bolts 54 projecting through the slots 53, and having suitable nut members threaded on the bolts, such as wing nuts 55, to clamp the extension to the screen member. This extension can be adjusted along the member for the full length of the slots, and clamped by the wing nuts in the desired position of adjustment.

The screen members, or any of them, may be provided with readily removable wire mesh or screen portion proper. As shown, these members are removable by simply sliding them out of frames and other screen members can be slid into the frames. In Figs. 2-5, the frame members, as 14, have the opposite longitudinal portions 60 and 61 made channel shaped, and which at the left hand end are open, as indicated in Fig. 5. This permits a screen member comprising a wire screen portion 62, to have its opposite or longitudinal edges or margins slid into these oppositely opening channels, and advanced until in position to fill the frame. Preferably the end member 63 is also channel shaped, as shown in Fig. 3, to receive the front end of the screen member 62. And this screen member preferably has

its margins incased in a narrow U-shaped member 64 at all of its margins, which member snugly fits in the U-shaped members 60, 62 and 63. By this means, upon the screen becoming broken or damaged, it is simply slid out of the frame and a similar one substituted therefor.

From such a construction, it will be seen that an adjustable window screen is provided that can be easily reduced in length to be placed into the opening above or below a sash, and will automatically expand to fit such opening. This device is also easily operated for insertion and removal at the upper portion of the window, by reason of the flexible member. It will also be understood that should any portion of the wire netting or screen member become damaged a new one is easily and cheaply provided, by simply sliding out the damaged member and sliding in another.

It will be seen that extensions are provided whereby the screen can be made longer or shorter than the amount of its movement effected by the spring.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In a screen, the combination of two screen members connected at their end portions to be slidable one upon the other, a resilient device carried by one of the members and connected to the other member to force the members apart when one is advanced upon the other member, a guide on one of the members, and a flexible member passing through the guide and secured to the other member to cause the members to slide on each other in the opposite direction to which advanced by the resilient member.

2. In a screen, the combination of a pair of members connected to slide one upon the other, a bracket carried by one of the members, a bow spring secured to the bracket, an arm secured to the other member of the screen and engaged by the said spring whereby the spring is tensioned when the members are slid together and the spring will expand the members when free to move, a flexible member secured to one of said spring supporting members and engaging a guide portion of the other spring supporting member and arranged to slide the members together when pulled to tension the spring, and permit the spring to return the members upon its release.

3. In a screen, the combination of a pair of members connected to slide one upon the other, a bracket carried by one of the members, a bow spring secured to the bracket, an arm secured to the other member of the screen and engaged by the said spring whereby the spring is tensioned when the members are slid together and the spring will expand the members when released, a

flexible member secured to one of said spring supporting members and engaging a guide portion of the other spring supporting member and arranged to slide the members together to tension the spring, and permit the spring to return the members upon release of the flexible member, a flexible member secured to one of the screen members, the other screen member being provided with a guide portion engaged by the flexible member to cause the screen members to open when the flexible member is pulled, and upon release of the flexible member the spring will expand the members of the screen.

4. In a screen, the combination of a pair of members each having bent lugs engaging the other member to cause the members to slide one upon the other, a bracket carried by one of the members, a bow spring secured to the bracket, an arm secured to the other member of the screen and engaged by the said spring whereby the spring is tensioned when the members are slid together and the spring will expand the members when free to move, a flexible member secured to the bracket and engaging a guide portion of the arm to slide the members together when pulled to tension the spring, and permit the spring to return the members upon release of the flexible member.

5. In a screen, the combination of a pair of members comprising a frame containing a screen, each member having at one end of the frame member an extension arranged to lap the said extension of the other member, each member also having a lug bent around the said extension of the other member to guide the members to slide together and apart, said extensions having their extremities offset to engage the lug and limit the expanding movement of the members.

6. In a screen, the combination of a pair of members comprising a frame containing a screen, each member having at one end of the frame member an extension arranged to lap the said extension of the other member, each member also having a lug bent around the said extension of the other member to guide the members to slide together and apart, and means for limiting the expanding movement of the members.

7. In a screen, the combination of a pair of members comprising frames U-shaped in section and containing screens, each member having at one end of the frame member a flat U-shaped extension which laps the extension of the other member, each member also having a lug bent around the said extension of the other member to guide the members to slide together and apart.

8. In a screen, the combination with a pair of members, comprising a frame containing a screen, each member having at one end of the frame member an extension ar-

ranged to lap the extension of the other member, each member also having a lug bent around the said extension of the other member to guide the members to slide together and apart, means for limiting the
5 expanding movement of the members, and a resilient device carried by one of the members and connected to the other member to

force the members apart when one is advanced upon the other.

This specification signed and witnessed
this sixth day of February, A. D. 1911.

NOAH BRANDT.

Witnesses:

C. BARTELS,

LESTER C. TAYLOR.

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