No. 741,441. PATENTED OCT. 13, 1903.

P. M. BARNES.

COMBINED WINDOW AND SCREEN.

APPLICATION FILED MAY 10, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

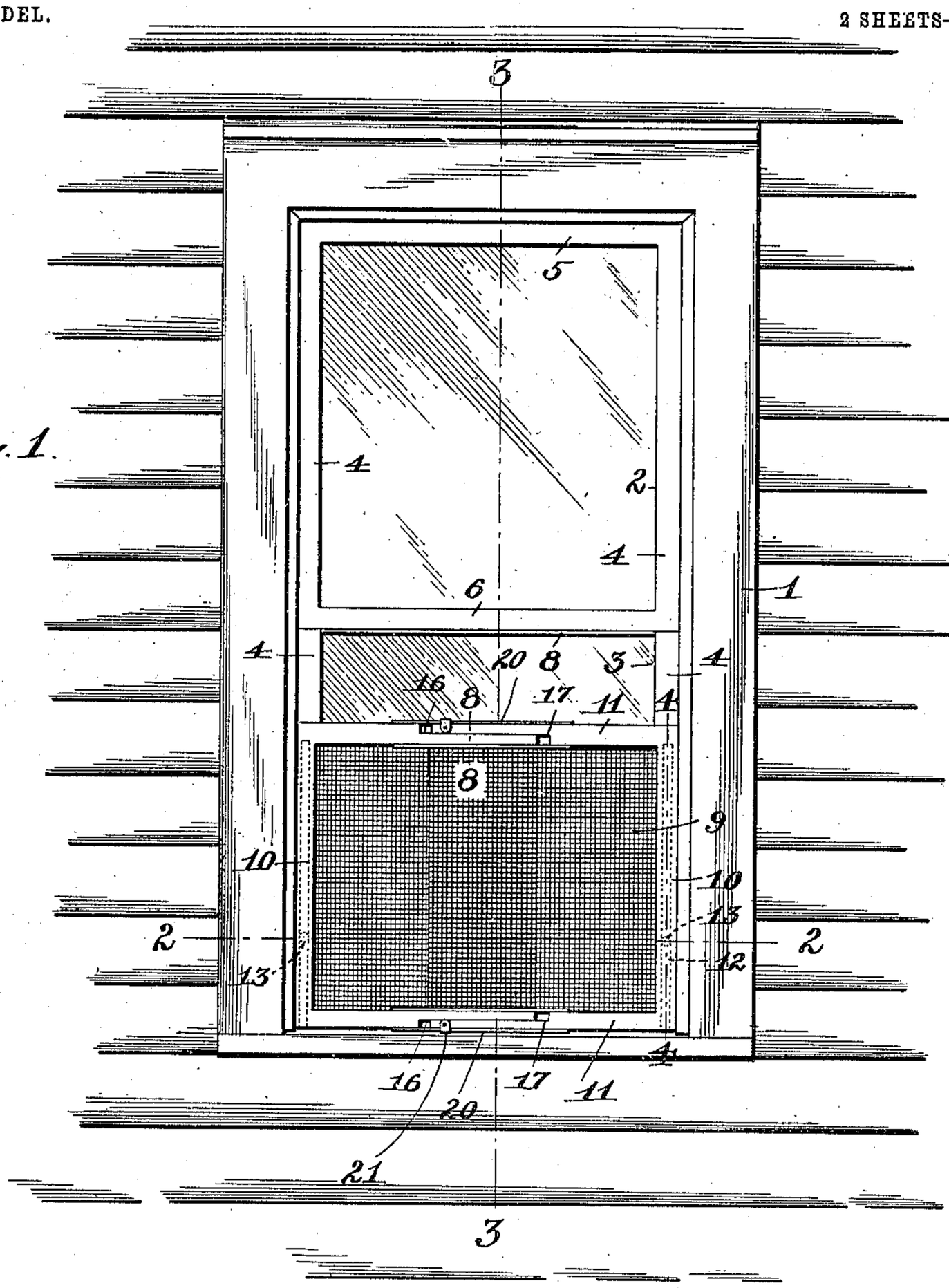
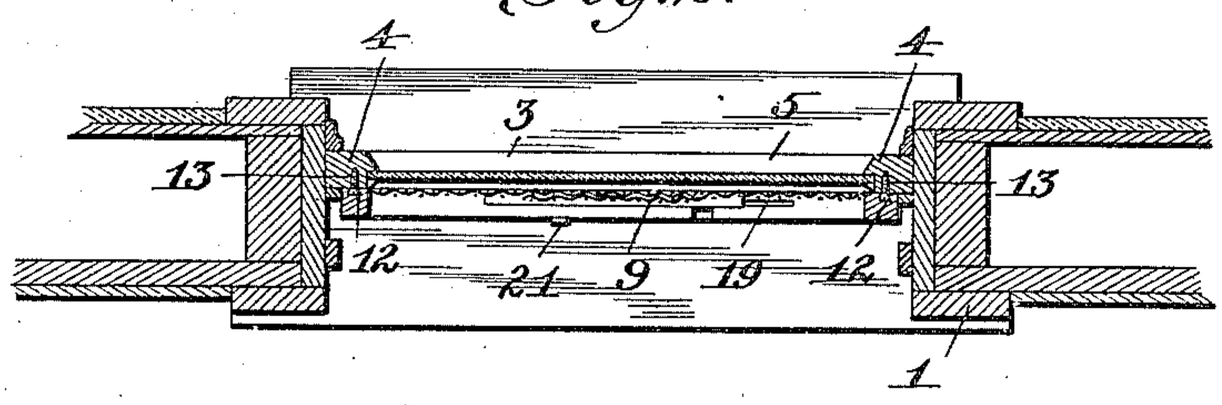


Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

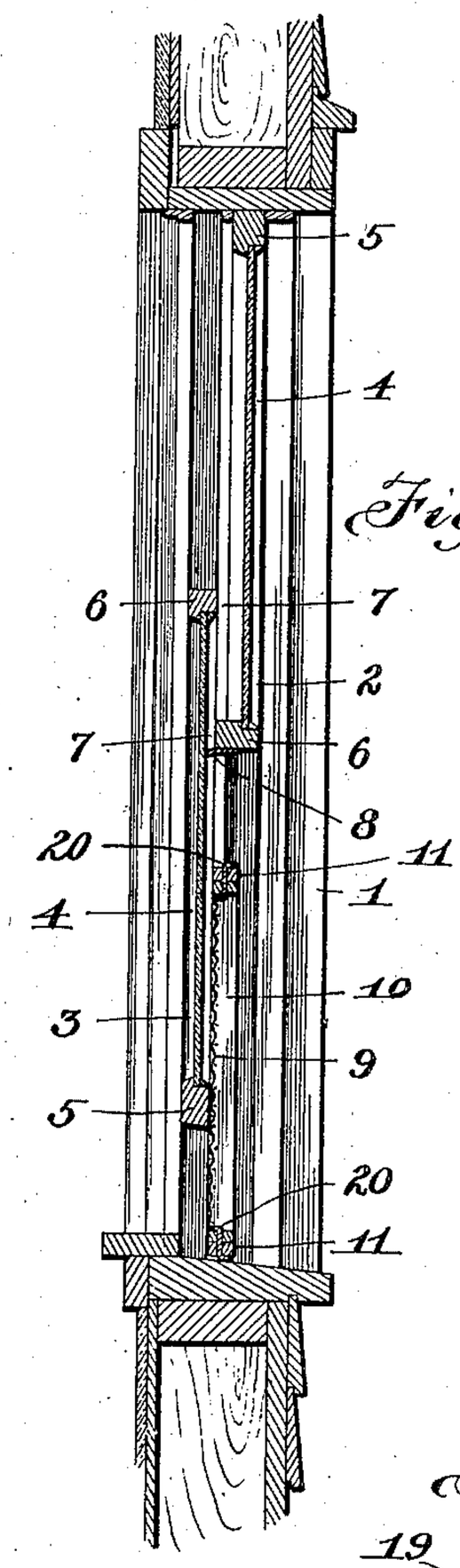

Fig. 4.

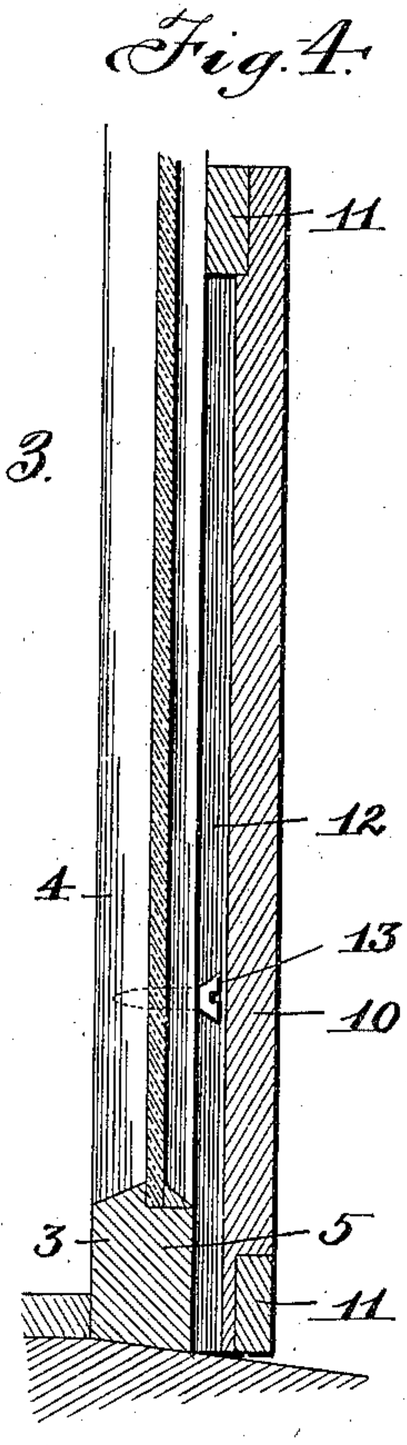

Fig. 5.

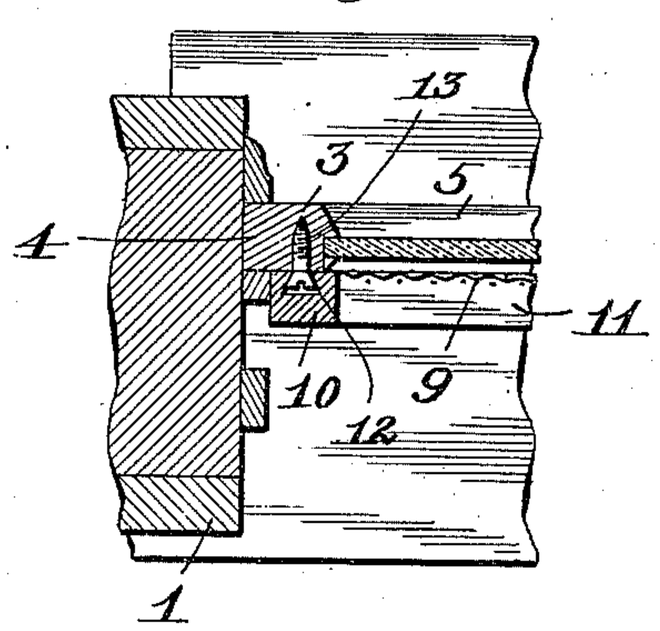

Fig. 6.

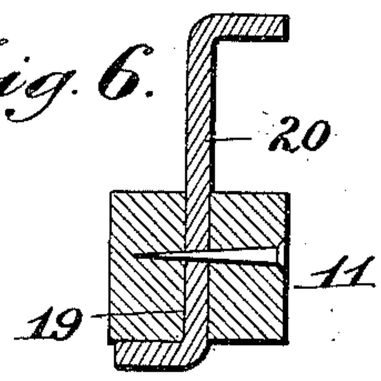

Fig. 7.

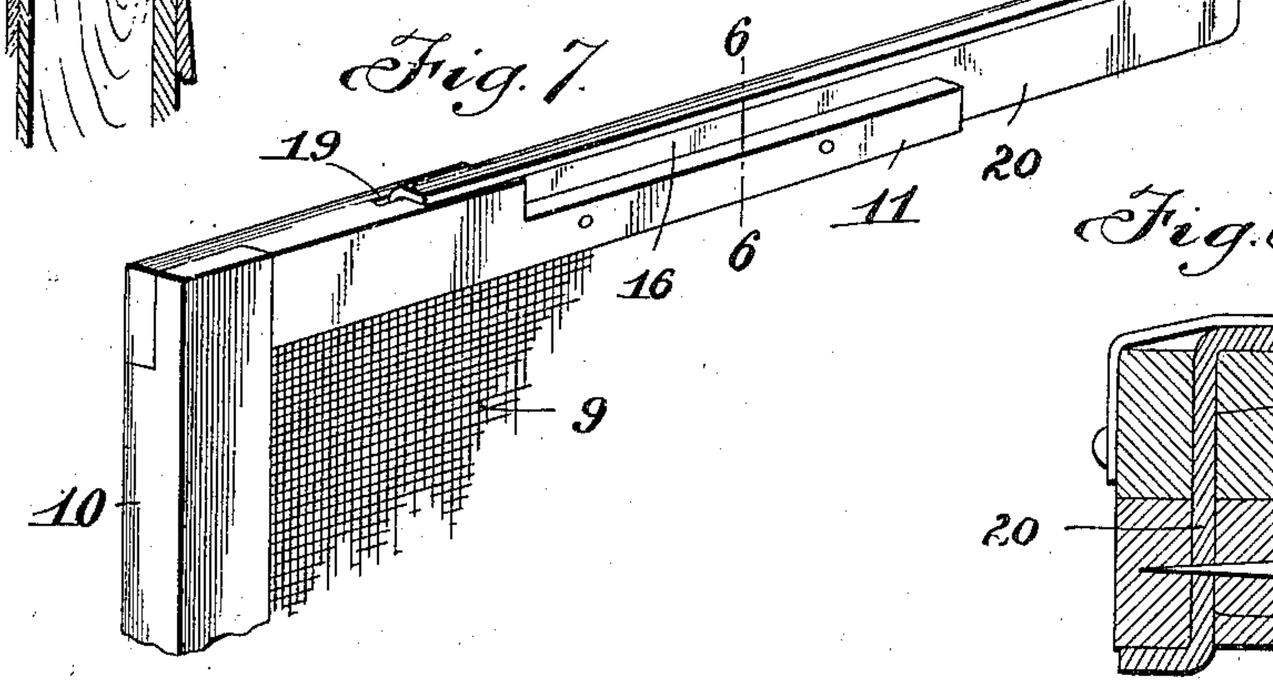

Fig. 8.

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No. 741,441. Patented October 13, 1903.

UNITED STATES PATENT OFFICE.

PHILO M. BARNES, OF LOCKPORT, NEW YORK.

COMBINED WINDOW AND SCREEN.

SPECIFICATION forming part of Letters Patent No. 741,441, dated October 13, 1903.

Application filed May 10, 1902. Serial No. 106,727. (No model.)

To all whom it may concern:

Be it known that I, PHILO M. BARNES, a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Window-Screens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to window-screens; and it has for its object to provide an adjustable screen which is simple, durable, and efficient in its purpose; and to this end it consists of the new and novel construction, arrangement, and combination of parts, as will be hereinafter fully described and particularly pointed out in the accompanying specification.

In the accompanying drawings, Figure 1 is a front elevation of a window provided with my improvements. Fig. 2 is a horizontal section on line 2 2, Fig. 1. Fig. 3 is a vertical section on line 3 3, Fig. 1. Fig. 4 is a vertical section, on an enlarged scale, taken through the screen on line 4 4, Fig. 1. Fig. 5 is a horizontal section, on an enlarged scale, taken on part of line 2 2, Fig. 1. Fig. 6 is a section on line 6 6, Fig. 7. Fig. 7 is a perspective view of the upper corner of one of the screen-sections. Fig. 8 is a section on line 8 8, Fig. 1, on an enlarged scale.

Referring to the drawings in detail, like numerals of reference refer to like parts in the several figures.

The numeral 1 designates a window-frame having the usual vertically-movable sashes 2 and 3, each of which consists of side bars or stiles 4, end bars 5, and intermediate bars 6, commonly known as the "meeting-rails." As is well known, the meeting-rails fit closely together when the sashes are closed; but when opened to any extent whatever spaces or passages 7 are formed between the upper meeting-rail and the lower window-pane and also between the lower meeting-rail and the upper window-pane. Without provision being made to close such passage a screen between the window-sill and the lower end of the lower sash when raised will only partly prevent the entrance of flies to a room, as they freely enter through the passage between the two window-sashes. To prevent this, I secure to one of the meeting-rails (preferably the meeting-rail of the upper sash) a flexible strip 8 of rubber, felt, or other suitable material, such strip extending the full width of the window-panes and projecting beyond the meeting face, so as to bear against the window-pane of the other sash, thus effectively closing the passage between the window-panes.

9 designates a screen comprising side bars 10 and upper and lower cross-bars 11. The side bars have each a dovetail groove 12, formed lengthwise therein, which extends from the lower end of the screen to a point near the upper end thereof. A screw 13 or other object having a dovetail head is screwed in the side bars of the lower sash in line with the dovetail grooves in the screen. In combining the screen and window-frame the former is placed against the frame above the screws 13 and then lowered to cause the dovetailed grooves to engage the said screws, thereby holding the two together. This permits both the screen and lower sash to be raised together for convenience in closing blinds or to permit of free access through the window for any other purpose. If desired, the lower sash may be elevated without elevating the screen, as shown at Fig. 3, thus serving the purpose it is primarily intended for. It is apparent that the screen may as readily be applied to the upper sash, serving the purpose of a fly-screen fully as well as when attached to the lower sash. It is also apparent that various other connections might be suggested to hold the screen against the window-sash and still permit of moving one independent of the other. This screen is also made adjustable to fit windows of different widths, and it consists of two sections, each of which comprises a part of the upper and lower cross-bars 11 and one side bar 10. The upper and lower cross-bars overlap, as does the wire cloth or meshing, to permit the two sections to be adjusted to any width within certain limits. The overlapping of the upper and lower cross-bars is accomplished by cutting away the outer half of the free ends of the cross-bars of one section, as at 16, and the inner half of the free ends of the other section, as at 17. A vertical longitudinal slit is formed in the inner ends of

each sectional cross-bar, as at 19, and in the slits of the cross-bars of one section oppositely-flanged metallic strips 20 are secured. The said strips fit loosely in the slits of the other section, which permits of adjusting the two sections to any desired width within certain limits. The oppositely-disposed flanges of the said strips bear against the upper and lower faces of the said cross-bars and are flush with the sides thereof. As shown in Figs. 1 and 8, the ends of the sectional cross-bars are held alined by the flanges of the metallic strips 20; but to further secure and tie the sections together a clip 21 is provided for each cross-bar and is secured to opposite sides of the outer overlapping half of the same and passes over the outer flange of the metallic strip 20. The metallic strip in addition to providing a cheap and durable connection between the sectional cross-bars serves also to close the spaces between the ends of the same when separated.

By the construction above described a screen is provided which most effectively closes every crevice and which is cheaply manufactured, quickly assembled, and conveniently adjusted to any size window within certain limits.

This invention is susceptible to various changes in form, size, construction, and arrangement of minor details without departing from the spirit or sacrificing any of the advantages thereof.

Having thus described my invention, what I claim is—

1. An adjustable window-screen, comprising two sections, each consisting of a side bar, an upper and lower sectional cross-bar each having its inner end cut away, and wire-cloth secured to said bars, the cut-away ends of the cross-bars and the wire-cloth being arranged to overlap; and a metallic strip serving to close the spaces between the overlapping ends when the two sections are separated, substantially as set forth.

2. An adjustable window-screen, comprising two sections, each consisting of a side bar, end bars, and a wire-cloth secured to said bars, the end bars of one section having the outer half of their inner ends cut away, while the end bars of the other section have the inner half of their inner ends cut away to correspond to the other section and thus provide an overlapping connection, each sectional cross-bar having a vertical longitudinal slit, and a metallic strip secured in each slit on one section and being adapted to slide in the slit of the corresponding sectional cross-bar, substantially as set forth.

3. An adjustable window-screen, comprising two sections, each consisting of a side bar, end bars having vertical longitudinal slits, and wire-cloth secured to said bars so as to overlap when the two sections are held together, and a metallic strip secured in each slit of one section and being adapted to slide in the corresponding slit on the other section, substantially as set forth.

4. An adjustable window-screen, comprising two sections, each consisting of a side bar, end bars having vertical longitudinal slits, and wire-cloth secured to said bars so as to overlap when the two sections are held together, and metallic strips having oppositely-disposed flanges, one of said strips being secured in each slit of one section, and being adapted to slide in the corresponding slit on the other section, said flanges serving to keep the said end bars alined, substantially as set forth.

5. An adjustable window-screen, comprising two sections, each consisting of a side bar, end bars, and a wire-cloth secured to said side bars, the end bars of one section having the outer half of their inner ends cut away, while the end bars of the other section have the inner half of their inner ends cut away to correspond to the other section and thus provide an overlapping connection, each sectional cross-bar having a vertical longitudinal slit, and a metallic strip having oppositely-disposed flanges, one of said strips being secured in each slit of one section, and being adapted to slide in the corresponding slit on the other section, said flanges serving to keep the said end bars alined, substantially as set forth.

In witness whereof I have affixed my signature in the presence of two subscribing witnesses.

PHILO M. BARNES.

Witnesses:
CHAS. F. BURKHART,
EMIL NEUHART.