

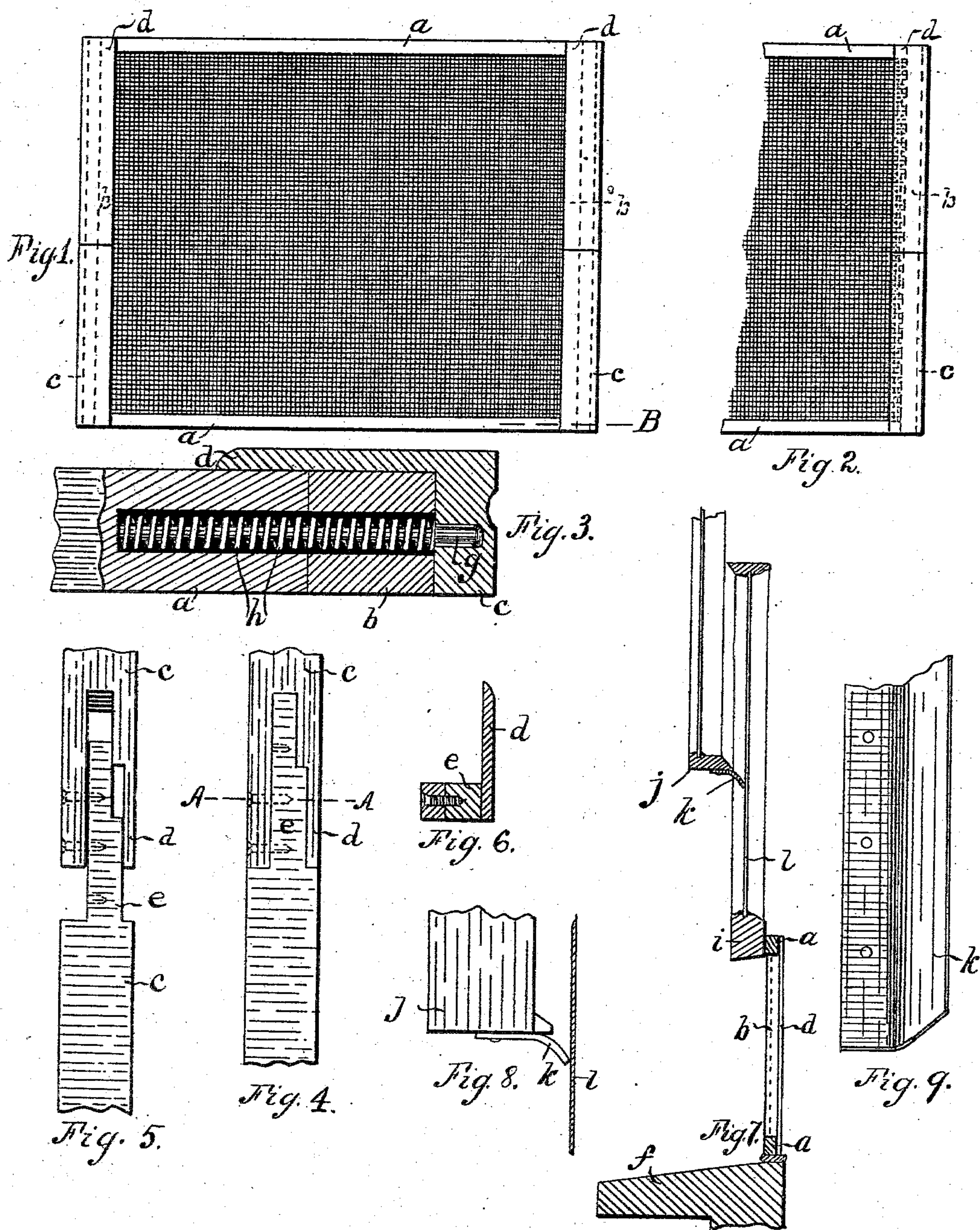
(No Model.)

V. R. CHAMBERLIN.

WINDOW SCREEN.

No. 288,160.

Patented Nov. 6, 1883.



Witnesses:
Chas. S. Gooding.
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UNITED STATES PATENT OFFICE.

VOLNEY R. CHAMBERLIN, OF CAMBRIDGE, MASSACHUSETTS, ASSIGNOR TO
FRANCIS L. HEWLETT, OF SAME PLACE.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 288,160, dated November 6, 1883.

Application filed April 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, VOLNEY R. CHAMBERLIN, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Window-Screens, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

This invention relates to that class of screens which are employed in conjunction with the sash and glass of windows when the latter are partially opened, and the screen is used to close against insects the space which is created by the opening of the sash; and the invention consists of divers new devices and the combination thereof, as will be explained.

In said drawings, Figure 1 is a side elevation of a window-screen embodying my improvements. Fig. 2 is a detached view showing a part of a screen, with the extension-bar closed against the screen-frame. Fig. 3 is a detached view showing the screen-frame in section and the extension devices in elevation. Fig. 4 is a detached elevation, showing my improved extension-bar as telescoped. Fig. 5 is a view like Fig. 4, except that the bar is shown as extended. Fig. 6 is a transverse view taken on line A A, Fig. 4. Fig. 7 is a sectional elevation, showing the screen in position for use, with the lower sash partly raised and a metallic strip to close the space between the "meeting-rail" of the upper sash and the glass in the lower sash. Fig. 8 is an enlarged detached view, showing parts of Fig. 7. Fig. 9 is a section of my metallic strip shown in perspective.

Heretofore the "lip" of the extension-bar has been seated in a rabbet in the main frame of the screen. This construction limits the scope of adjustment or extension of the screen, and, besides, renders the screen unsightly. To remedy this I arrange the lip of my extension-bar upon the flush face of the frame, and so that it may, in case of small windows, extend over the wires a limited distance. The extension or expanding springs of the extension-bar have heretofore been arranged in a tube, which served as the support of the bar; but such tube is liable, by the accumulation of dirt, to bind, so as to resist the force of the spring. To ob-

viate this I mount my springs on solid pins inclosed in the springs, thereby allowing the latter, by their motion against the walls of the passage, to keep the same clear, so as to allow a free motion to the springs. I also form my extension-bar in two sections, in order that it may be varied in its length, so that it may be applied to either the longer or shorter sides of the frame, as the width of windows may render necessary, thereby rendering the same bar available in places where otherwise bars of various lengths would be requisite. I also employ, in combination with my improved screen, a strip of metal, to close the space between the glass in the lower sash and the meeting-rail of the upper sash.

In said views, *a a* represent the rails of the longer sides of the screen, and *b* represents the shorter rails, which longer and shorter rails are of equal and uniform thickness, as shown in Fig. 3, and are united and secured together at the intersecting angles in any desired manner. The extension-bar *c* is formed with a lip, *d*, as shown in Fig. 3, the interior transverse line of said bar being equal to the thickness of the screen-frame, while the outer line is equal to such interior line and the thickness of lip *d* added thereto. As lip *d* overlies the frame *a b*, therefore the extension-bar can be moved laterally to any extent within its limits of adjustment without changing the appearance of the frame, and as the frame is flush in all its parts on the side opposite said lip, therefore the frame can be so arranged that the sash can, when raised or lowered, move at all times close to the screen-frame, and yet leave no passage for insects. For the purpose of supporting bar *c* in position and guiding the same when being adjusted, I secure therein a short rod, *g*, as shown in Fig. 3, (the same being taken as on line B, Fig. 1,) and on said rod I mount the expanding-spring *h*, which by its thrust action will hold the bar against the way on which the screen is supported. For the purpose of rendering said bar telescopic, I form it in two sections or parts, as is clearly shown in Figs. 4 and 5, one being formed with a tenon, *e*, and the other with a mortise to receive the same, said tenon being preferably formed with thicker and thinner sections, and

that portion of the mortise which receives the thicker portion having for one of its sides the lip *d*, as shown in Figs. 4, 5, 6. Said sections are held in proper relative positions, when adjusted, by screws, as shown in Figs. 4, 5, 6, and the advantage of such telescopic adjustment, as already explained, consists in the fact that the same bar may be employed for either the longer or shorter side of the screen, as the size of the window may require, and such extension affords no facility for ingress of insects, and for the purpose of preventing them from crawling between the meeting-rail *j* of the upper sash and the glass *l* of the lower sash, when the latter is raised and the screen is of less height than the lower sash, I employ a thin strip, *k*, of metal, longitudinally bent, as shown, and secured to rail *j*, as shown in Figs. 7 and 8. Said strip is of such thinness that when bent in its cross-section, as shown, and secured in place, it can be readily adjusted to the glass *l* by pressure of the finger, and will then admit of the free raising and lowering of the lower sash, but will prevent flies or other insects from entering the room at that point.

I am fully aware of United States Patents Nos. 235,810 and 101,285, and I claim nothing that is described, claimed, or shown therein,

my invention in the matter of closing the space between the meeting-rail of the upper sash and the glass in the lower sash being confined to the specific devices shown and described, and which constitutes the subject matter of my third claim.

I claim as my invention—

1. In a window-screen, the extension-bar *c*, having its interior face or thickness coincident with the thickness of the main frame *a b*, and with joint-covering lip *d*, overlying the main frame, substantially as specified.

2. The extension-bar *c*, formed in two parts or sections, and to be adjusted at varying lengths, by means and for the purpose substantially as specified.

3. In combination with a window-screen constructed and arranged to form a close joint with the lower sash, the angle-plate *k*, constructed and adapted to be secured to meeting-rail *j* and to close the space between the same and the glass *l* of the lower sash when the sash is raised, substantially as specified.

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Witnesses:

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