No. 765,620. PATENTED JULY 19, 1904.

F. B. HOWE.

WINDOW SCREEN.

APPLICATION FILED APR. 21, 1904.

NO MODEL.

Fig. 1.

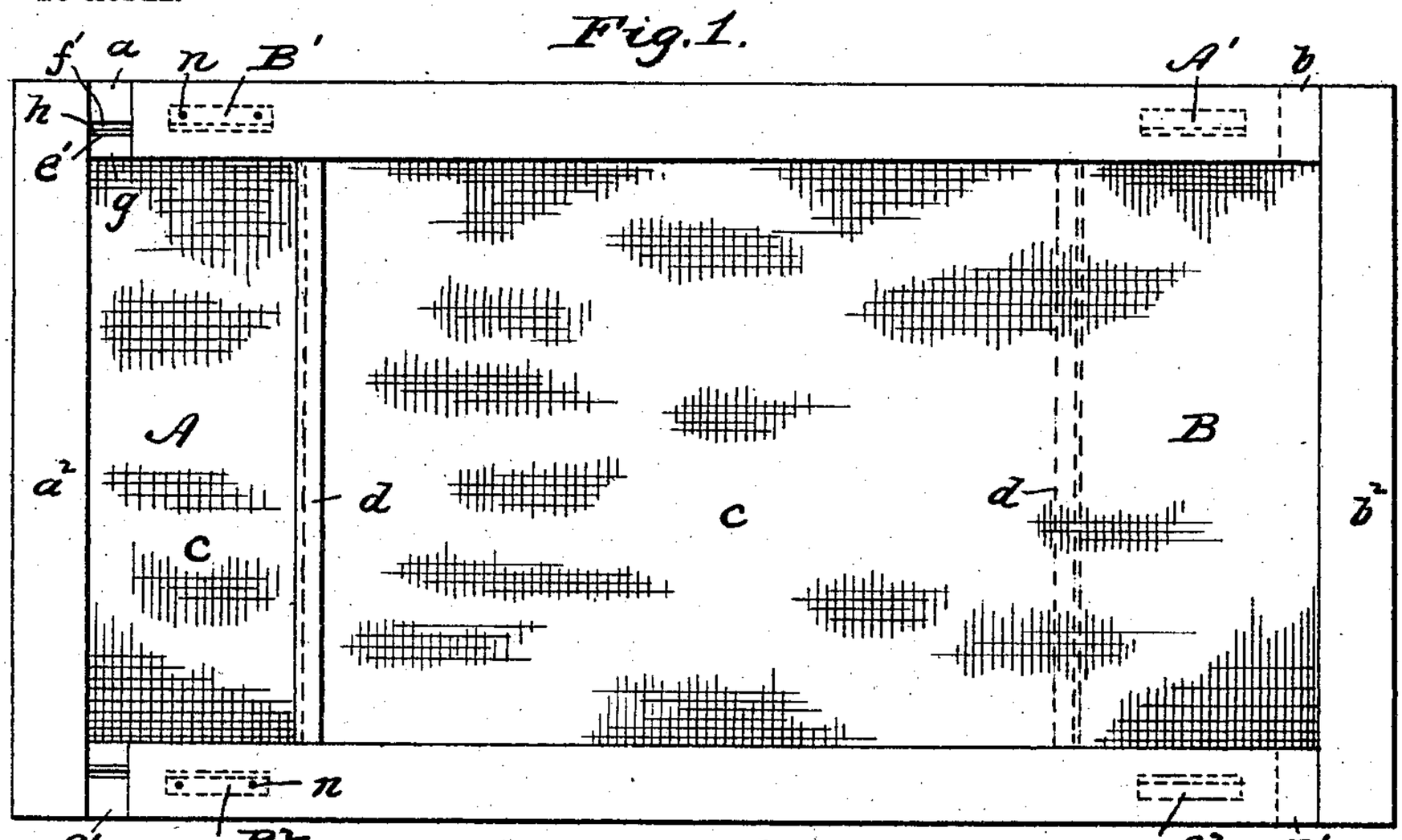


Fig. 2.

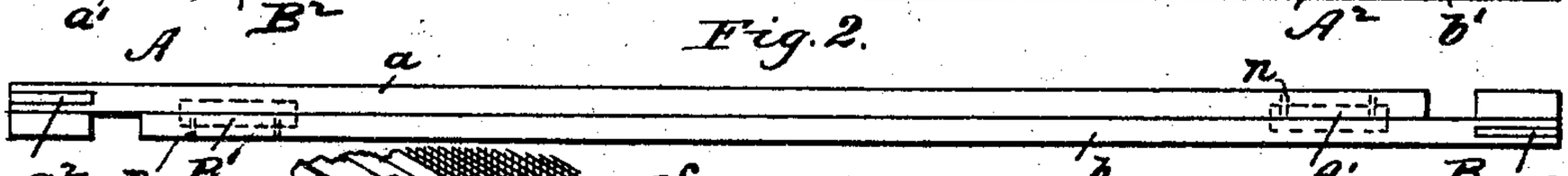


Fig. 3.

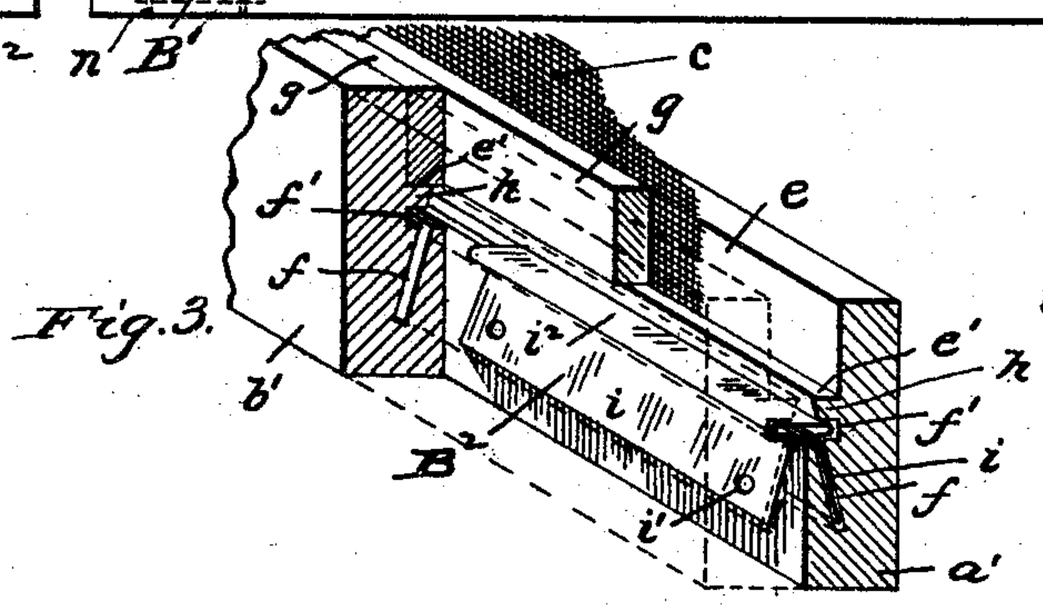
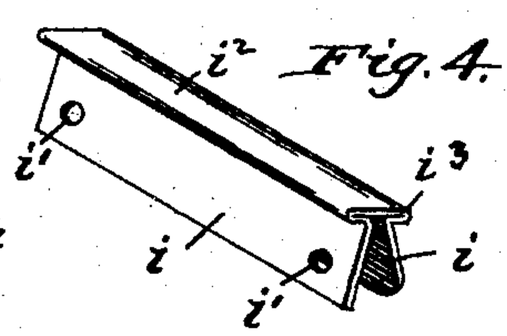


Fig. 4.



WITNESSES:

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No. 765,620. Patented July 19, 1904.

UNITED STATES PATENT OFFICE.

FRED B. HOWE, OF BURLINGTON, VERMONT.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 765,620, dated July 19, 1904.

Application filed April 21, 1904. Serial No. 204,227. (No model.)

To all whom it may concern:

Be it known that I, FRED B. HOWE, a citizen of the United States, residing at Burlington, in the county of Chittenden and State of Vermont, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My improvements relate to that class of window-screens known as "extensible," in which two or more sections have a sliding movement one on another to enable the screen to be readily applied to or removed from a window-frame or to be caused to fit windows of different sizes.

My improvements relate especially to the sliding connections between the sections, and have for their object to provide a clip of such form as will accurately guide the sections and permit their sliding without binding or sticking and which is retained in place independently of the means or strip which retains or secures the edge of the netting.

The invention consists in the parts and combinations thereof hereinafter set forth and claimed.

In order to make the invention more clearly understood, I have shown in the accompanying drawings means for carrying the same into practical effect without limiting my improvements in their useful applications to the particular constructions which for the purpose of illustration I have delineated.

In said drawings, Figure 1 is an elevation, partly broken away, of a window-screen embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a perspective view, partly in section, of a portion of the same on a larger scale. Fig. 4 is a perspective view of one of the clips.

Referring to the drawings, A and B indicate the two connected and relatively slidable sections of which the screen is in this instance composed. The invention may, however, be embodied in a screen having more than two sections.

a and *b* are the top rails of the frames of said sections, and *a'* *b'* are the bottom rails, which are connected with end rails a^2 b^2 in a known manner. Each section has a wire or other netting *c* attached to the said rails of the section and supported at its inner edge by a sheet-metal or other stay or binding strip *d*, the latter being attached at its upper and lower ends to the inner ends of the top and bottom rails in the usual manner. Each of the top and bottom rails is or may be formed with a rabbet *e*, having an outer shoulder *e'*, at the inner side of which the edge of the netting *c* and the end of the stay *d* are overlaid and retained in place by a strip *g*, which is tacked to the vertical face of the rabbet.

f is an undercut groove sawed in the rail, (one in each top and bottom rail,) ordinarily and preferably in an inclined direction leading inward into the body of the rail from a point at or near the top of the shoulder *e'*. At the open side of the inclined groove *f* and at the outer side of the shoulder *e'* is formed a horizontal groove *f'*, so as to leave between the grooves *f* and *f'* a rib *h*.

A' A^2 are metal clips secured to the screen-section A and having a sliding connection with the section B, and B' B^2 are clips secured to the section B and having a sliding connection with the section A. Each clip is of **V** shape, having two diverging limbs *i*, which are immediately opposite to each other. One of the said limbs of said clip engages in a groove *f* of one screen-section, and the other limb is in a groove *f* of the other section. Thus the clip A' has one limb *i* fitted in the groove *f* of the rail *a* and secured by nails or pins *n*, driven into the rail, so as to cross the groove *f* and to pass through perforations *i'* in the clip, and has the other limb fitted in the groove *f* of the opposing rail *b*, so as to slide freely therein in a longitudinal direction. The other clips, A^2, B', and B^2, are correspondingly arranged and secured, respectively, to the rails *a'*, *b*, and *b'*. To prevent any clamping of the rails between the diverging clip-limbs, I form the clips with horizontal heads i^2, the flanges of which run in the grooves *f'* and besides keeping the clips from wedging or binding the rails keep the opposing rails (and the two screen-sections) acccurately in line with each other in the same horizontal planes. The clips may be constructed in various ways, but are preferably of sheet metal bent into the form shown, Fig. 4, the heads i^2 being

formed of doubled metal and rounded at the edges i^3.

What I claim is—

1. In a window-screen the combination of a plurality of relatively sliding sections, the rails of said sections being formed with longitudinal undercut grooves by which the sections are to be held together, and with guiding-grooves f' horizontally arranged by which the sections and clips are directed, and connecting-clips having inner and outer limbs engaging the said undercut grooves of two screen-sections and having also horizontally-flanged heads engaging the grooves f' of the sections, substantially as set forth.

2. In a window-screen the combination of a plurality of relatively sliding sections, the rails of said sections being formed with rabbets, inclined grooves f, horizontal grooves f' and ribs h, and V-shaped connecting-clips having limbs i fitted in said inclined grooves, and horizontal heads i^2 fitting in the horizontal grooves f', substantially as set forth.

3. In a window-screen having slidable sections formed with inclined grooves, the connecting slide-clip of sheet metal bent to form diverging limbs i and a horizontal flanged head i^2, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRED B. HOWE.

Witnesses:

HOWARD CRANE,

C. E. BEACH.