No. 778,423. PATENTED DEC. 27, 1904.

A. H. MIX & W. H. N. MAYNARD.

WINDOW SCREEN.

APPLICATION FILED MAY 23, 1904.

Fig. 1.

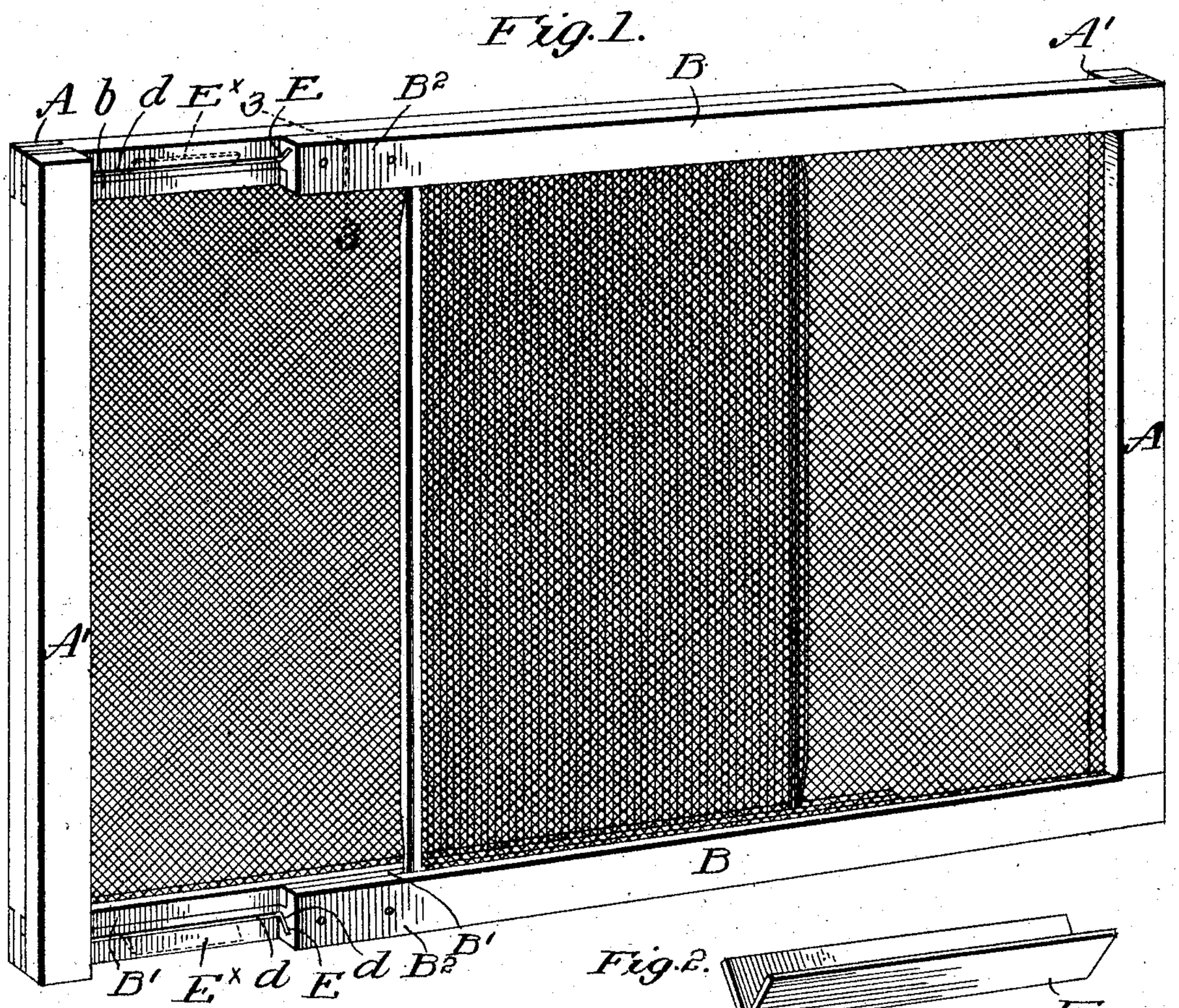

Fig. 2.

Fig. 3.

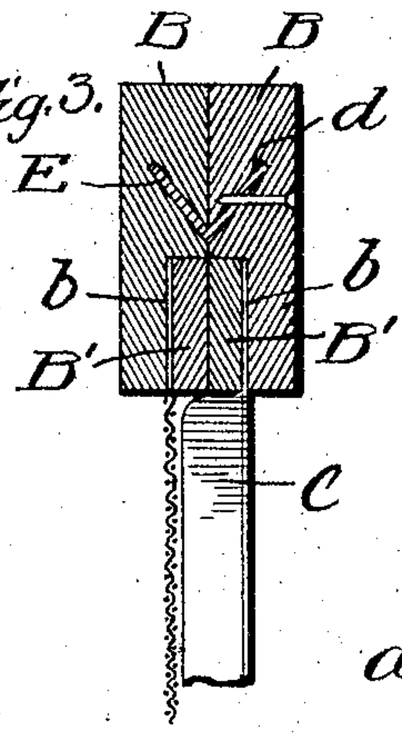

Fig. 4.

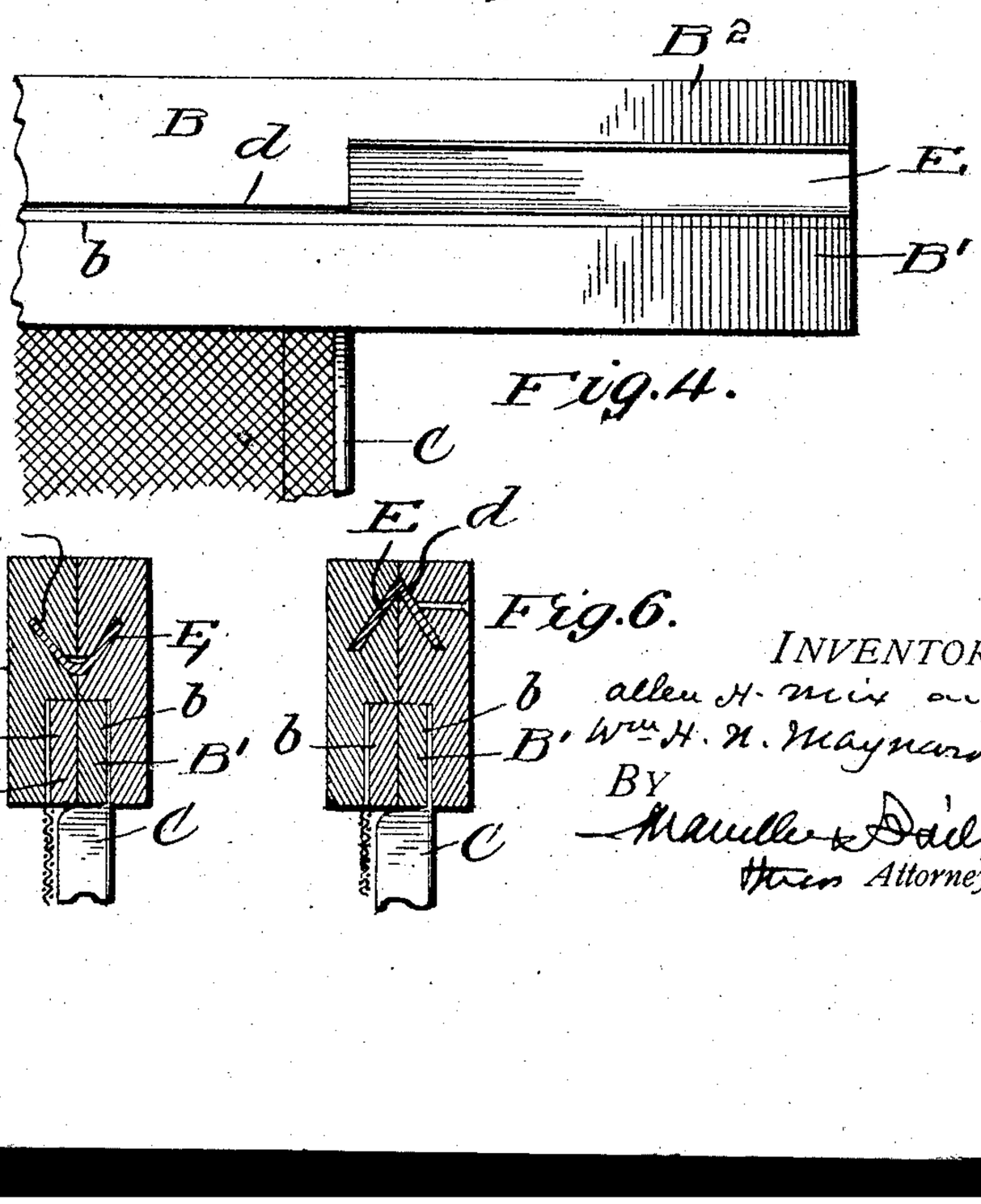

Fig. 5.

Fig. 6.

WITNESSES:

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No. 778,423. Patented December 27, 1904.

UNITED STATES PATENT OFFICE.

ALLEN H. MIX AND WILLIAM H. N. MAYNARD, OF BURLINGTON, VERMONT, ASSIGNORS TO PORTER SCREEN MANUFACTURING COMPANY, OF BURLINGTON, VERMONT, A CORPORATION.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 778,423, dated December 27, 1904.

Application filed May 23, 1904. Serial No. 209,209.

To all whom it may concern:

Be it known that we, ALLEN H. MIX and WILLIAM H. N. MAYNARD, citizens of the United States, and residents of Burlington, in the county of Chittenden and State of Vermont, have invented a certain new and useful Improvement in Window-Screens, of which the following is a specification.

Our invention relates to extension-screens composed of sections so connected and held together by clips or fasteners as to permit one section to slide on the other; and its object is to produce a screen of this kind in which the clips or fasteners are concealed from view and which shall be simple and economical in construction and easily and expeditiously put together.

To this end it consists of the parts and combinations of parts, which will first be described by reference to the drawings accompanying and forming part of this specification and will then be more particularly pointed out in the claims, the main characteristic of the invention being that the clips are formed each of metal substantially V-shaped in cross-section or with legs oppositely inclined with respect to each other, which legs are received in correspondingly-inclined longitudinal slots in the meeting faces of the overlapping rails of the screen-sections, one inclined leg of the clip being secured by any suitable means in the inclined slot in one of the rails and the other inclined leg of the clip being fitted into and adapted to slide lengthwise of the inclined slot in the opposite rail.

In said drawings, Figure 1 is a perspective view of a screen, partly extended, embodying our invention in its preferred form. Fig. 2 is a perspective view of one of the clips detached. Fig. 3 is a section on line 3 3, Fig. 1. Fig. 4 is an inner face elevation of part of one of the screen-sections. Fig. 5 is a cross-section of a modification. Fig. 6 is a cross-section of still another modification.

Each screen-section is composed of a vertical end rail A, top and bottom horizontal rails B, and an inner vertical rail C, usually of metal and which may be of any suitable construction. In this instance it is a sheet-metal angle-iron strip of the kind shown and described in Letters Patent No. 687,466, of November 26, 1901. The wire-netting D is secured to this strip C in the manner indicated in said patent and to the end rail A by a covering-strip A′ in the usual way. Its longitudinal edges are located in longitudinal recesses *b*, one in each rail B, formed in the meeting faces and along the inner edges of said rails, and are there secured by covering-strips B′ of a size to fill said recesses and be flush with the faces of their respective rails. In the unrecessed portions of the rails B, between the points where the recesses *b* end and the outer edges of the longitudinal rails, are formed inclined slots *d*. These slots extend from the interior opposite or meeting faces of the rails B in an inclined direction toward the exterior opposite faces of their respective rails, and thus in each pair of rails the slot *d* in the one is inclined in a direction opposite to the other. The mouths or inner ends of the slots are open and are so located that whenever the screen-sections are put together the open ends of the two slots *d* of each pair of rails B will substantially register with one another, thus forming, in effect, a continuous V-shaped slot, one leg of which is located in one rail B and the other leg of which is located in the other rail B. These slots can be readily and expeditiously cut in the rails B by an easy and inexpensive operation. The converging ends of the inclined slots may be next to the recesses *b*, as already described, or next to the outer edges of the rails, as indicated in Fig. 6.

To secure the two screen-sections together, we make use of V-shaped sheet-metal clips E of shape corresponding to the conjoined oppositely-inclined slots *d*, one of which clips is shown detached in Fig. 2. One leg of each clip is inserted and fitted into one of the slots *d* and is there secured by any suitable means, and its other leg is inserted and fitted into the other companion slot *d* in the opposite rail and is free to slide lengthwise therein. Each top and bottom rail B is prolonged beyond its inner rail C, as at B^2, and in the slot *d* in

this extension B^2 a clip E is secured. To fit and secure the clips E in place is a simple matter. All that is needed after the two screen-sections are put together so as to partly overlap is to insert one leg of the clip into the slot *d* in the body of that rail B in which it is to slide, as indicated in dotted lines at $E^{\times}$, Fig. 1, and then to push it along in that slot until its other leg enters and is housed in the portion of the slot *d* in the extension B^2 of the opposite rail B, where it can be secured against movement by nails or by any other suitable means. Thus the two screen-sections can be completed in all respects before they are put together, and the clips can then be applied and fitted and secured in place easily and quickly. There is also a saving of material in that a clip of this kind requires less metal than others now in use. We may widen the slots at their mouths or interior opposite ends, as in Fig. 5, in which event the apex of the clip may be blunted to follow the conformation of the edges of the slots which it bridges; but the opposite inclined legs of the clip and the correspondingly inclined slots are still retained.

We are aware that the two sliding sections of a screen have been united by metallic slides of X or cross shape, engaging correspondingly-shaped grooves in the meeting faces of the overlapping rails of the screen-sections, as in Patent No. 729,419, of May 26, 1903. This we do not claim, nor would it be possible with a device of the kind referred to to complete the two screen-sections before applying the clips and fitting or telescoping the sections together, as can be done under our arrangement.

Having described our invention and the manner in which the same is or may be carried into effect, we state in conclusion that we do not limit ourselves narrowly to the structural details hereinbefore set forth and illustrated; but

What we believe to be new herein, and desire to secure by Letters Patent, is as follows:

1. In an extension-screen, two overlapping screen-sections having in their overlapping rails oppositely-inclined longitudinal slots, which open on the inner or meeting faces of the rails, and register at their open ends with one another to form a continuous slot of substantially V cross-section, and clips of corresponding shape, one for each rail, each clip having one leg fitted and adapted to slide in and lengthwise of the oppositely-inclined slot in the adjoining rail, substantially as and for the purpose hereinbefore set forth.

2. In an extension-screen two overlapping screen-sections, having overlapping rails B with end portions B^2 extending inwardly beyond their inner vertical rails C, oppositely-inclined slots *d* in said rails which open on the inner or meeting faces of said rails and register at their open ends with one another to form a continuous slot of substantially V cross-section, and clips of corresponding shape, one for each rail, and having one leg fitted and secured in the portion of the slot *d* in the extension B^2 of its rail, and the other leg fitted and adapted to slide lengthwise in the oppositely-inclined slot *d* of the adjoining rail, substantially as and for the purpose hereinbefore set forth.

3. In an extension-screen, two overlapping screen-sections having overlapping rails B, longitudinal recesses *b* in the meeting faces and along the inner edges of said rails, wire-netting having its edges located in said recesses, covering-strips B′ secured in said recesses over the edges of the wire-netting therein, oppositely-inclined longitudinal slots *d* in said rails, whose open ends are in the meeting faces of the rails beyond the recesses *b* and register with one another to form a continuous slot of substantially V cross-section, and clips of corresponding shape, having one leg secured in the slot *d* of one rail and the other leg fitted and adapted to slide in the oppositely-inclined slot *d* of the opposite rail, substantially as hereinbefore set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ALLEN H. MIX.
WILLIAM H. N. MAYNARD.

Witnesses:
H. F. Wolcott,
L. R. Stinson.