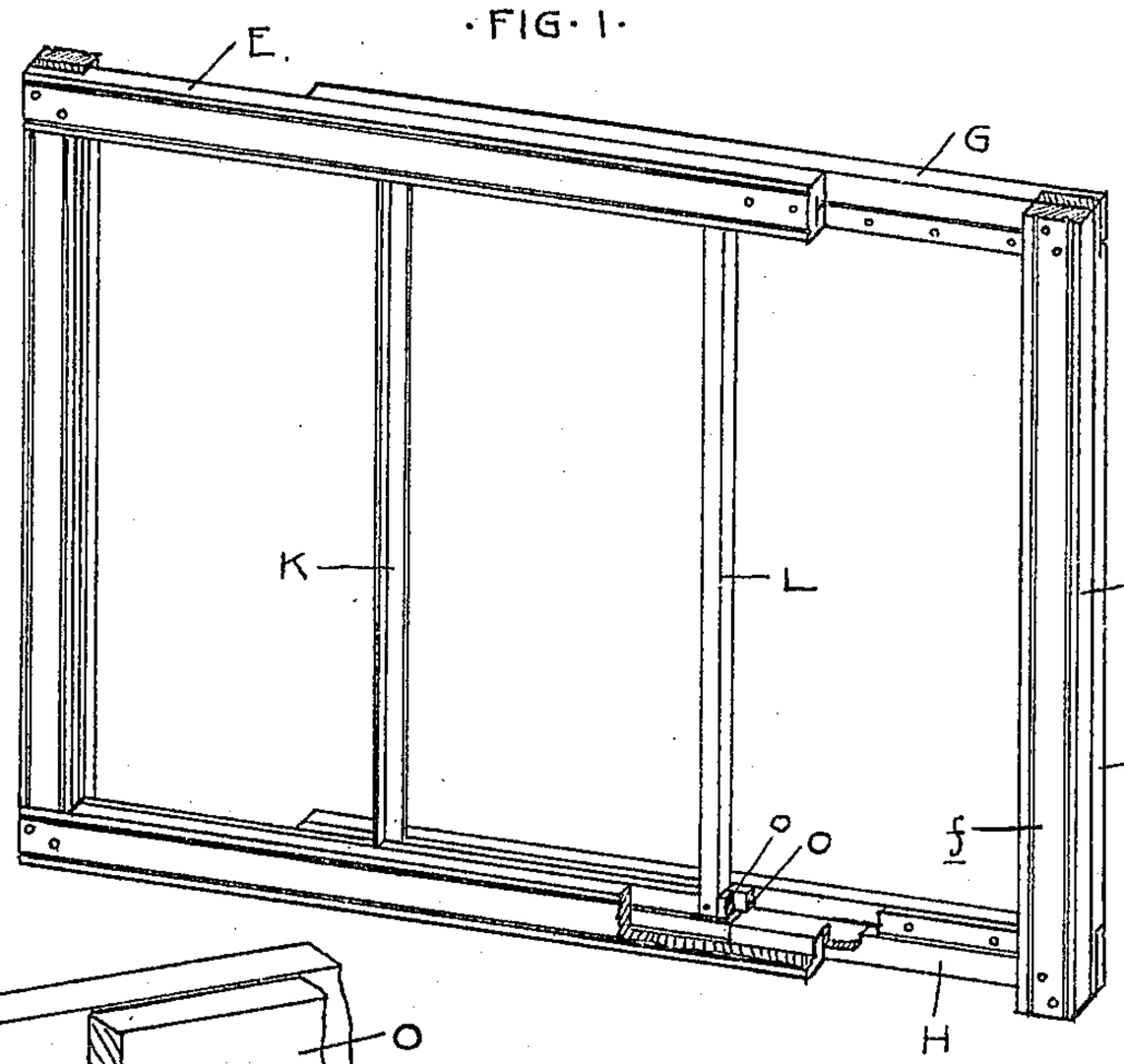
No. 812,813. PATENTED FEB. 20, 1906.

E. T. BROWN.

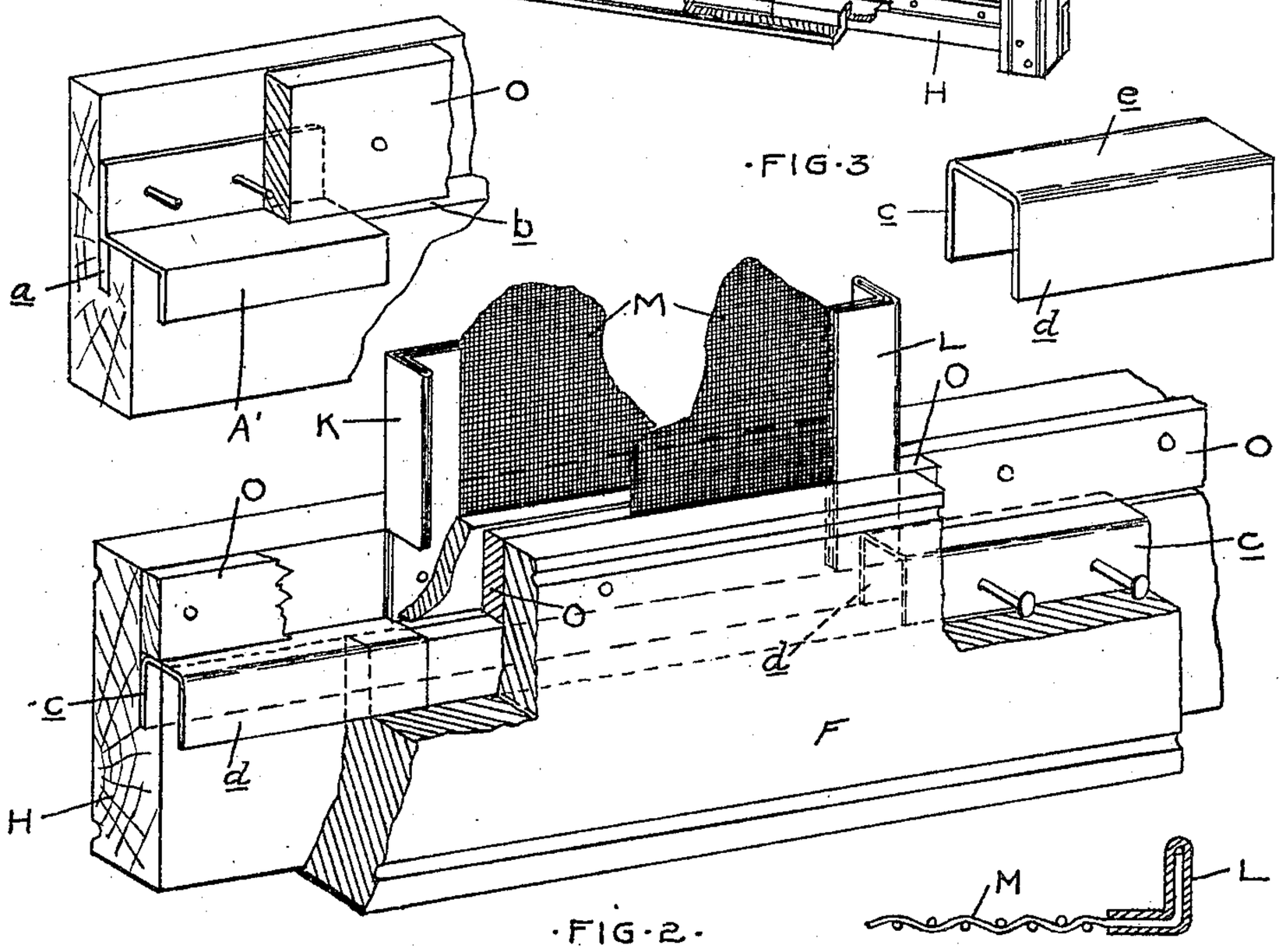
WINDOW SCREEN.

APPLICATION FILED JULY 20, 1903.

·FIG·1·



·FIG·5·



·FIG·2·

·FIG·3

·FIG·4

WITNESSES

Geo. H. Graves.

Jas. P. Barry

INVENTOR

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BY James Whittemore ATT'Y.

UNITED STATES PATENT OFFICE.

EDWARD T. BROWN, OF OWOSSO, MICHIGAN, ASSIGNOR TO OWOSSO MANUFACTURING COMPANY, OF OWOSSO, MICHIGAN, A CORPORATION OF MICHIGAN.

WINDOW-SCREEN.

No. 812,813. Specification of Letters Patent. Patented Feb. 20, 1906.

Application filed July 20, 1903. Serial No. 166,326.

To all whom it may concern:

Be it known that I, EDWARD T. BROWN, a citizen of the United States, residing at Owosso, in the county of Shiawassee and State of Michigan, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to that class of window-screens composed of relatively adjustable sections, whereby the screen may be fitted within any size of window-casing; and it consists in the novel and simple construction of the screen and in the peculiar arrangement and combination of its parts, as will be fully hereinafter described and illustrated.

In the drawings, Figure 1 is a perspective view of a screen, the parts being broken away to show the coupling or tongue. Fig. 2 is an enlarged section, partly in elevation, showing the manner of construction. Fig. 3 is a perspective view of the metallic coupling. Fig. 4 is a section through one of the stiffener-bars, showing its construction and the method of attachment of the wire fabric; and Fig. 5 is a sectional perspective view showing a slight modification.

The reference-letters A and B represent the sections of which the screen is composed, having a relative sliding engagement, as hereinafter set forth. These sections are rectangular in form, comprising parallel side members E F and G H, respectively, and ends I and J, connecting the sides and forming complementary three-sided frames. Stiffening-bars K and L serve to connect the frame ends and also to retain the inner edges of the wire fabric M. Preferably these bars or stiffeners are angle-shaped in form, so that each will be provided with a section that will extend across the space between the fabrics of the two screen-sections, forming fly-tight joints. These stiffeners are also made from doubled sheet-metal blanks, the fabric being retained between the plies of the bars in the manner illustrated in Fig. 2. Each stiffener-bar is also cut away at its ends, and these end portions are retained in place upon the screen-section by strips O. L-shaped openings, kerfs, or channels are formed in each of the parallel bars of the frame-sections, extending from end to end of the bar, in which are inserted the couplings. These channels are preferably formed by first sawing the parallel bars vertically of their length, as indicated at *a*, and then horizontally at a point intermediate the top and bottom of the kerf *a*, as shown at *b*. As thus made, it will be obvious that a strip O, before referred to, is cut out of each bar and serves, as illustrated, as a securing-strip for the wire fabric. The removal of the strip O leaves a recess in the bar, from which extends the slot or groove *a*, the recess and slot together forming the channel in the bar.

The couplings or tongues that permit the sections to slide one upon the other may be of various forms. I have shown a preferable type, however, in Fig. 3 of the drawings, wherein the coupling is U-shaped in form, having the parallel members *c* and *d* and the end or joining section *e*. The couplers described are arranged at the extremities of the parallel bars of the sections, the portions *c* being inserted within the groove in the side in the manner illustrated and nailed rigidly to the frame, as shown in Fig. 2. The complementary portions *d* of the couplers are free from the side members to which the portions *c* are secured and are adapted to be inserted into the grooves in the adjacent frame sides, forming a sliding engagement between the parts.

From the description of the screen as set forth it will be apparent that the grooves are formed within the frames, so as not to weaken the parallel members, the strips formed in producing the grooves being replaced in such manner as to materially reinforce the frame sides and also to conceal the couplers from view.

The ends of the frame-sections which connect the parallel members are made, preferably, of two pieces *f* and *g*, between which the fabrics are secured. Upon drawing the sections of the screen apart the two frames are prevented from becoming entirely disengaged by the couplings, which are adapted to strike against one another at the period when the two stiffener-bars are in proximity to one another. These couplers therefore perform the additional function of stops and are rigidly nailed in place, so that they may properly perform this work.

While I have shown as a preferable type of

tongue or coupler a U-shaped member, it will be apparent that other forms would answer as well in use. For instance, a Z-shaped coupling A′, as illustrated in Fig. 5, could be employed, it being arranged in substantially the same manner as the U-shaped coupling, with the exception that one tongue member would project intermediate the side and its securing-strip in a direction opposite to the groove *a*.

While I have shown a concealed coupling for the screen members of a particular type, I do not desire to be limited to either of the constructions shown, as it is capable of various modifications without in any manner departing from the spirit of my invention.

What I claim as my invention is—

1. In an extensible screen, two frames arranged to overlap and having oppositely-disposed channeled portions, the screen fabrics, and sliding connections between said frames including a plurality of coupling members substantially U-shaped in cross-section, one secured against longitudinal movement in the channeled portion of one of the frames and slidably engaging the channeled portion of the opposite frame, in combination with a retaining means in each of the channeled portions of the frames for the coupling members and screen fabrics.

2. In an extensible screen, two frames arranged to overlap and having oppositely-disposed channeled portions, the screen fabrics, and sliding connections between said frames including a plurality of coupling members substantially U-shaped in cross-section, one secured against movement in the channeled portion of one of the frames and slidably engaging the channeled portion of the opposite frame, in combination with retaining-strips in the channeled portions of the frames for the coupling members.

3. In an extensible screen, two frames arranged to overlap and having oppositely-disposed channeled portions including grooves in the frames, the screen fabrics, and sliding connections between the frames including a plurality of coupling members substantially U-shaped in cross-section, one secured against longitudinal movement in the channeled portion of one of the frames and slidably engaging the groove in the channeled portion of the opposite frame, in combination with retaining means in the channeled portions of the frames for the coupling members and screen fabrics.

4. In an extensible screen, two frames arranged to overlap and having oppositely-disposed channeled portions including grooves in the frames, the screen fabrics, and sliding connections between said frames including a plurality of coupling members substantially U-shaped in cross-section, one secured against movement in the channeled portion of one of the frames and slidably engaging the groove in the channeled portion of the opposite frame, in combination with retaining-strips in the channeled portions of the frames for the coupling members.

5. In a two-part screen, the combination of end rails, top and bottom rails, having recesses, and longitudinal vertical slots, extending from the rear and bottom of said recesses into the body of the rails, wire gauze or netting having its horizontal edges received and secured in said recesses, channel or U shaped clips, one for each rail, each clip having one leg secured in the slot, of one rail, and its other leg engaging and adapted to slide back and forth in the slot, of the adjoining rail, and covering-strips, fitted and secured in the recesses, with their inner edges at such distance from the bottoms of the recesses as to permit the passage of the horizontal portion of the clips connecting the vertical legs of the latter, substantially as described.

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

EDWARD T. BROWN.

Witnesses:

MAY GROW,

L. G. BREWER.