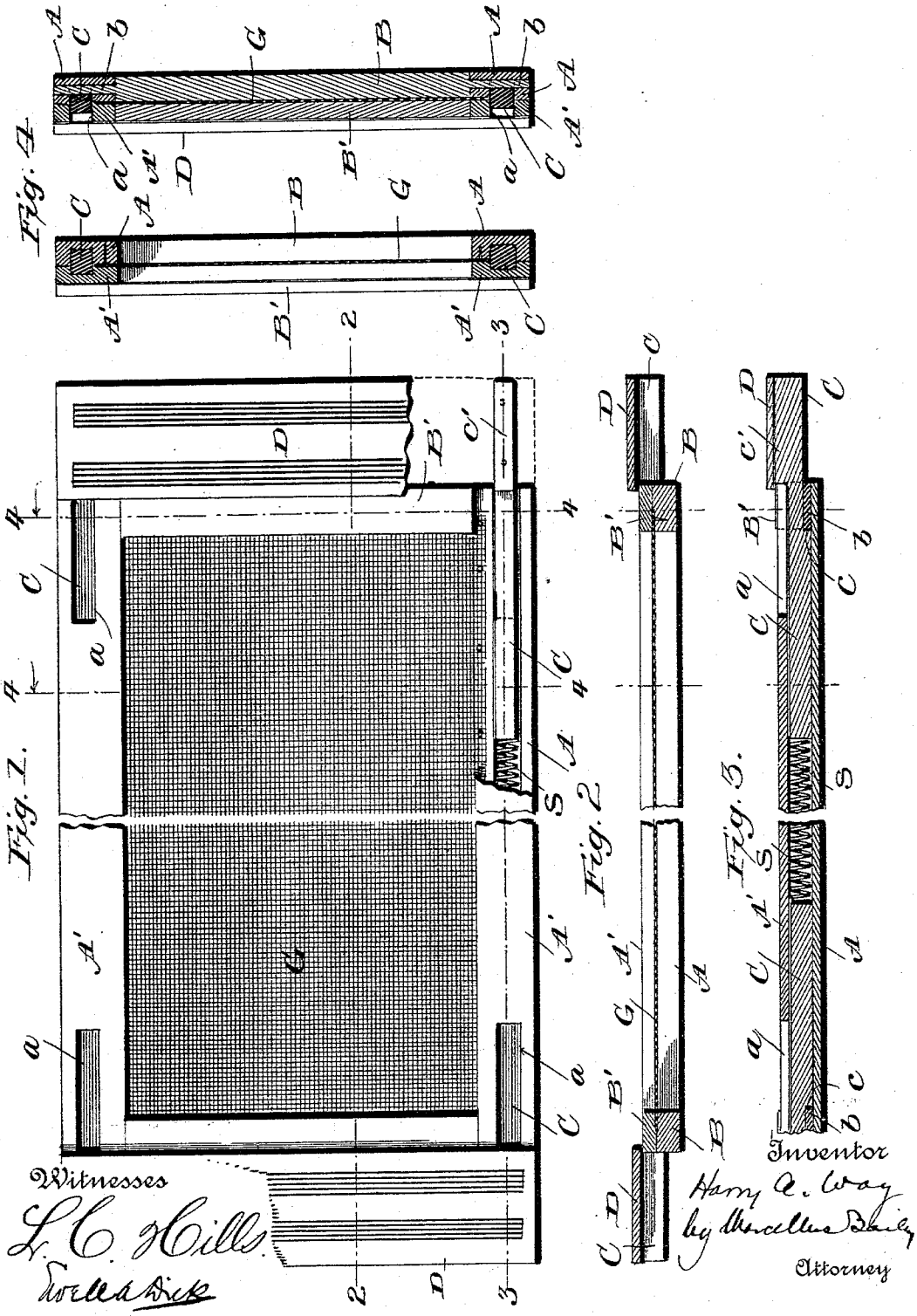
(No Model.) 2 Sheets—Sheet 1.

H. A. WAY.

WINDOW SCREEN.

No. 548,488. Patented Oct. 22, 1895.



Witnesses
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(No Model.) 2 Sheets—Sheet 2.

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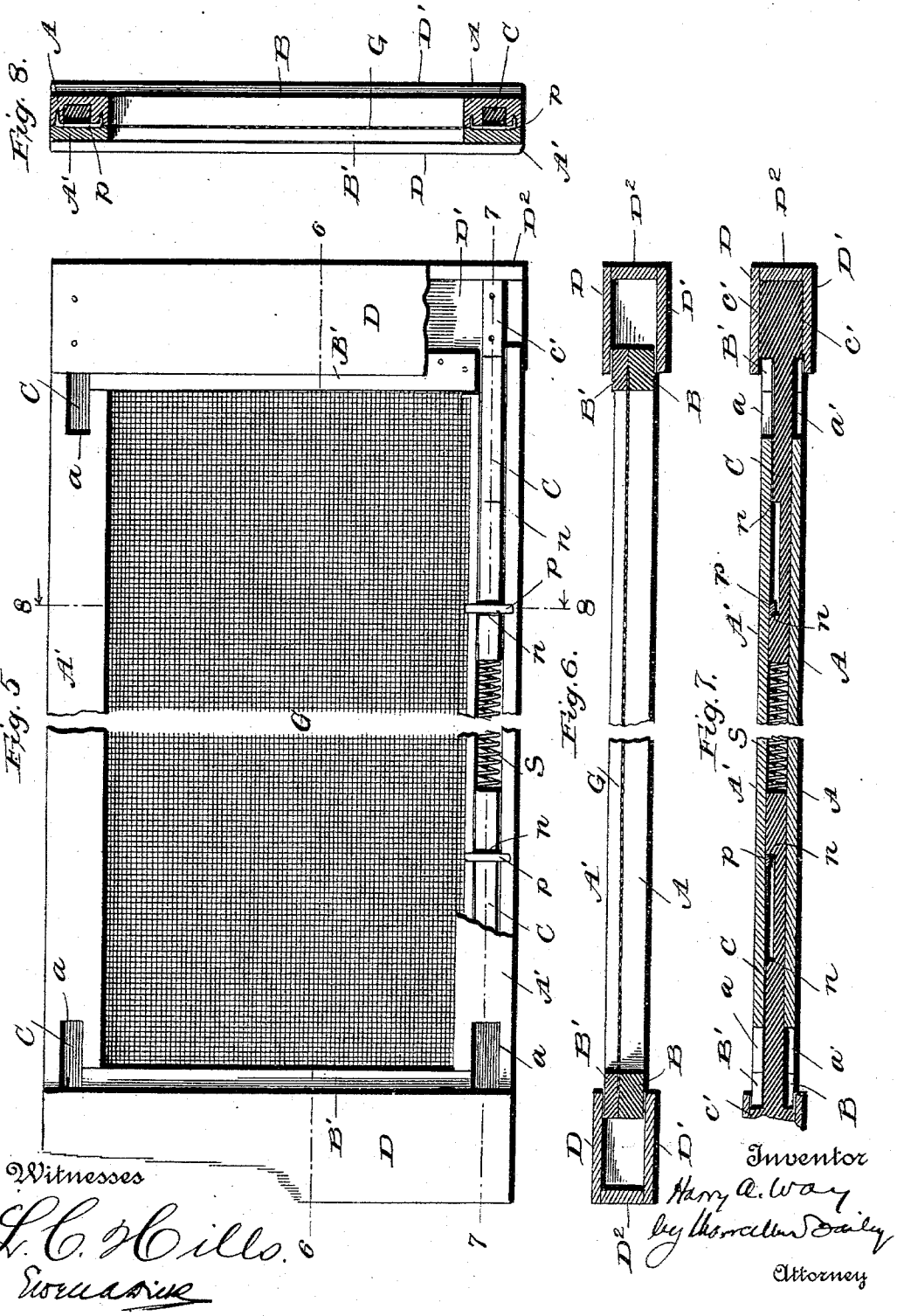

UNITED STATES PATENT OFFICE.

HARRY A. WAY, OF BURLINGTON, VERMONT.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 548,488, dated October 22, 1895.

Application filed May 26, 1894. Serial No. 512,553. (No model.)

To all whom it may concern:

Be it known that I, HARRY A. WAY, of Burlington, in the State of Vermont, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My invention relates to what are known as "panel-screens," or screens having sliding end panels capable of being moved toward and away from each other for the purpose of adjusting the screen to the width of the window which it is to fill, and it has relation more particularly to that type of such screens in which the panels are spring-impelled outwardly.

It is my object to produce a screen which shall be strong and durable, but at the same time lighter, of less bulk, and easier to manufacture than other screens of the kind heretofore made of which I have knowledge. This result I attain by constructing and arranging the devices which compose the screen in a way which can best be explained and understood by reference to the accompanying drawings, in which—

Figure 1 is a front view of a wing or "single-panel" screen embodying my improvements, a portion of the frame being broken away in order to expose the interior parts. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a section on line 3 3, Fig. 1. Fig. 4 is a section on line 4 4, Fig. 1. Fig. 5 is a front view of a "box-panel" screen constructed in accordance with my invention. Figs. 6, 7, and 8 are sections on lines 6 6, 7 7, and 8 8, respectively, of Fig. 5.

In each or the screens represented the frame is composed of top and bottom and side rails, each of which is composed of two longitudinal strips laid one on the other. These two strips are lettered on the top and bottom rails A and A′ and on the side rails B and B′. The strips A A B B are thicker than their fellows A′ A′ B′ B′, and in the single-panel screen the thick side and top and bottom strips are united by a tongue-and-slot joint, the tongues *b* on the opposite ends of each side strip entering slots in the adjoining ends of the top and bottom strips.

The two strips A A′ are grooved longitudinally on their interior opposite faces, so that when put together they have within and lengthwise of them a guideway which contains the sliding sticks C and the intermediate spiral springs S. The tongues *b* of the side strips intersect these guideways and form convenient, strong, and durable shoulders, which I avail of in order to limit the outward movement of the sticks C. To this end the sticks at their outer ends and on their faces next to the tenon are cut away to form shoulders *c*, which bring up against the tenons or tongues *b* and thus arrest further outward movement of the sticks. The sticks have also on the opposite face a raised portion *c′*, which is flush with the outer faces of the top and bottom rails, and upon these portions *c′* are secured the wings or single panels D, which thus overlap and move over the outer faces of the rails. To permit the inward movement of the panels the top and bottom rails are slotted on one face at *a*, these slots being of dimensions sufficient to receive the raised portions *c′* of the sticks. The thin strips B′ of the sides of the frame fit between the top and bottom rails and are of such thickness as to be flush with the panel face of the screen-frame, thus giving a good finish to the sides of the frame.

In putting the screen together the heavy frame-strips A A B B are first fitted together with the longitudinal grooves in the top and bottom strips upward. Then the wire-gauze G is placed on them and secured. Next the springs S and sticks C are fitted in place and the covers or thin top and bottom strips A′ A′ are fitted and secured in place. Then the thin side strips B′ B′ are applied, and finally the panels D are fastened on.

The screen thus made is very strong, durable, and well finished, while at the same time it is light and made with the utmost economy of material and labor.

The screen which is represented in Figs. 5 to 8, inclusive, is what is termed a "box-panel" screen, and differs from the screen shown in the preceding figures only in those respects needed to properly apply the box-panels.

The head or outer end of each stick C has the enlargement *c′* on each side or face, so as to take the two opposite panels D D′, which together with the end strips D^2 make the box-panel; and consequently in order to accommodate this head there must be slots *a′* in the ends of the top and bottom rails, which, while

located at the same point as the slots *a* in the single-panel screen of Fig. 1, extend entirely through the rails from one face to the other. By thus carrying the slots *a'* entirely through the rails, it becomes impracticable to have stops *b*, such as shown in Fig. 1. Consequently the sticks C are recessed to form two shoulders *n n*, and extending crosswise of each stick, and between these shoulders, is a stop-bar *p*, attached to the rail, in this instance the thicker or main strip A. The sticks can play back and forth as far as permitted by the cross-bar, against which one or the other of their shoulders *n* will bring up at either extreme of movement.

In both of the screens the top and bottom rails are formed each of two strips longitudinally grooved on their interior opposite faces to form a guideway and receptacle for the panel sticks and their impelling springs. The panels are so attached and mounted that they move over or upon the top and bottom rails, and these rails are slotted at their ends to accommodate and permit the inward movement of the heads of the sticks to which the panels are secured.

Having described my improvements, what I claim, and desire to secure by Letters Patent, is—

1. In a screen, the combination with a frame consisting of top and bottom rails connected by side pieces and consisting each of two strips longitudinally grooved upon their meeting faces to form a guide way, of sliding sticks and their impelling springs housed in said guide ways, stops to limit the outward movement of said sticks, panels secured to the heads or enlarged ends of said sticks in position to move over or upon the outside of the frame, and slots in the ends of the top and bottom rails to receive the heads of the panel sticks when the latter move inward, as and for the purposes set forth.

2. In combination with the top and bottom rails formed with longitudinal guide ways for reception of the panel sticks and their impelling springs, the side rails tenoned into the top and bottom rails with their tenons intersecting the guide ways therein so as to form stops *b*, and the panel sticks formed with shoulders *c*, under the arrangement hereinbefore shown and described.

In testimony whereof I have hereunto set my hand, before two subscribing witnesses, this 22d day of May, 1894.

HARRY A. WAY.

Witnesses:
HAMILTON S. PECK,
ASSON S. WITTERS.