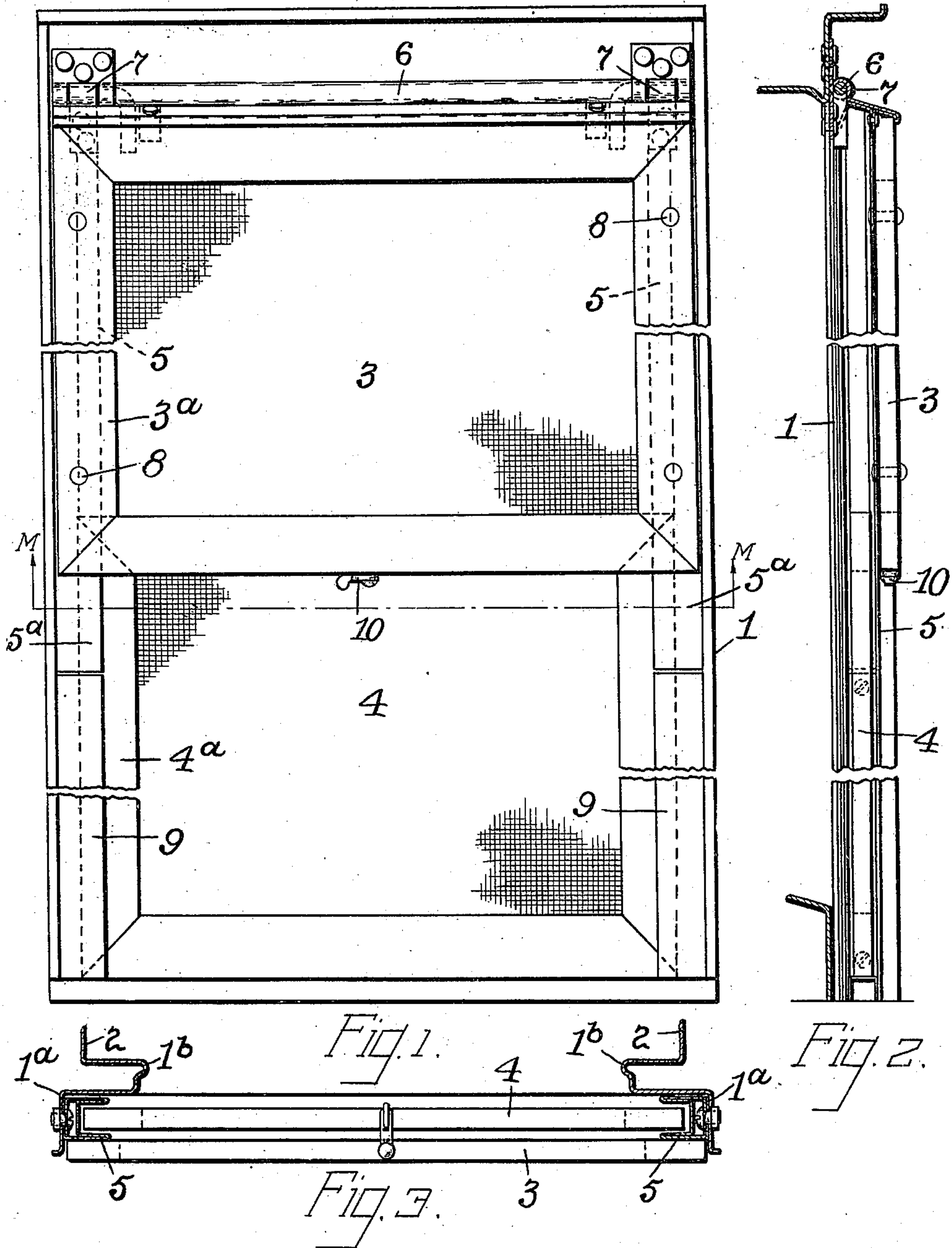


E. H. LUNKEN.
WINDOW SCREEN.
APPLICATION FILED NOV. 17, 1910.

989,716.

Patented Apr. 18, 1911.

2 SHEETS—SHEET 1.



Witnesses:

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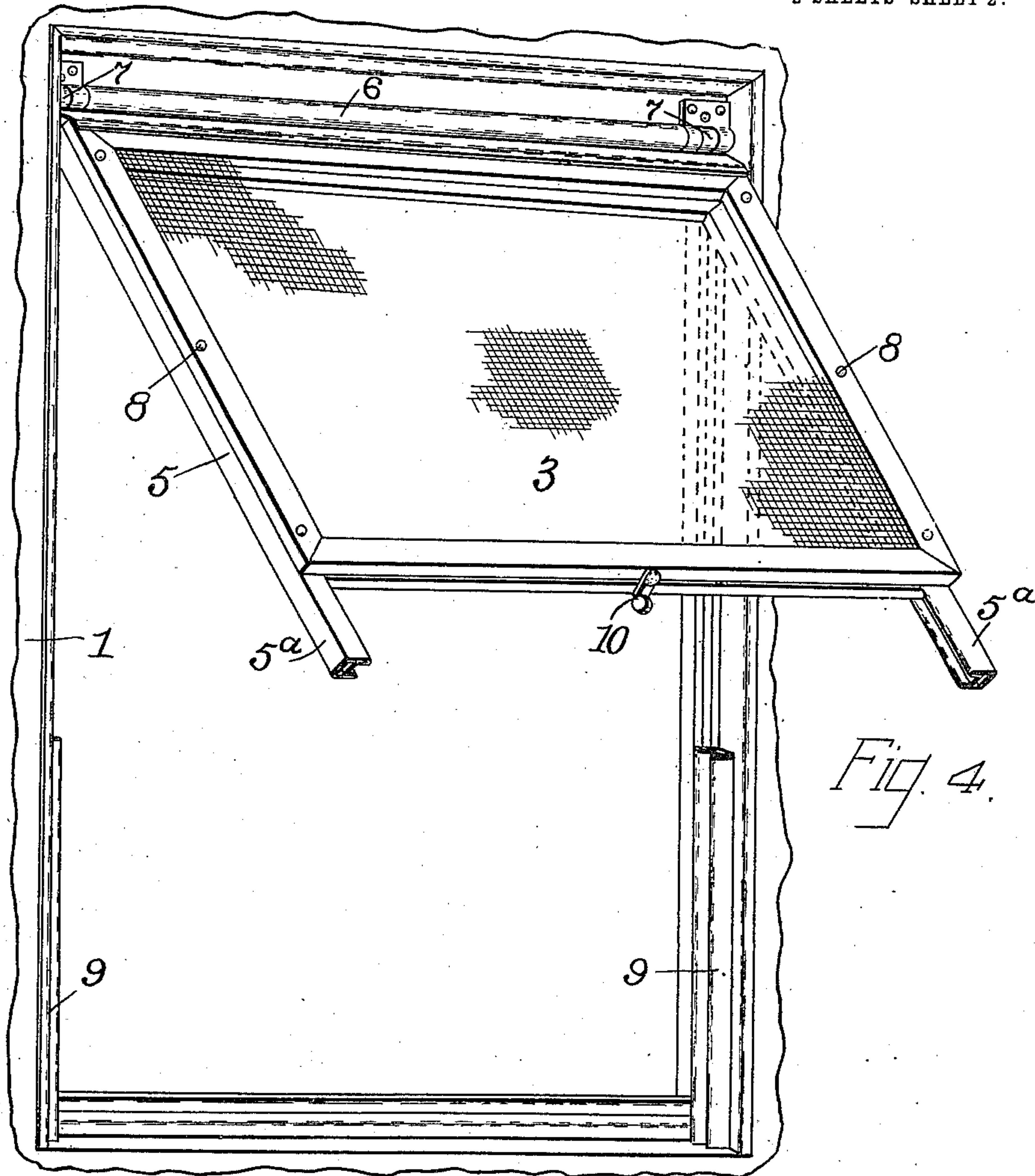


Fig. 4.

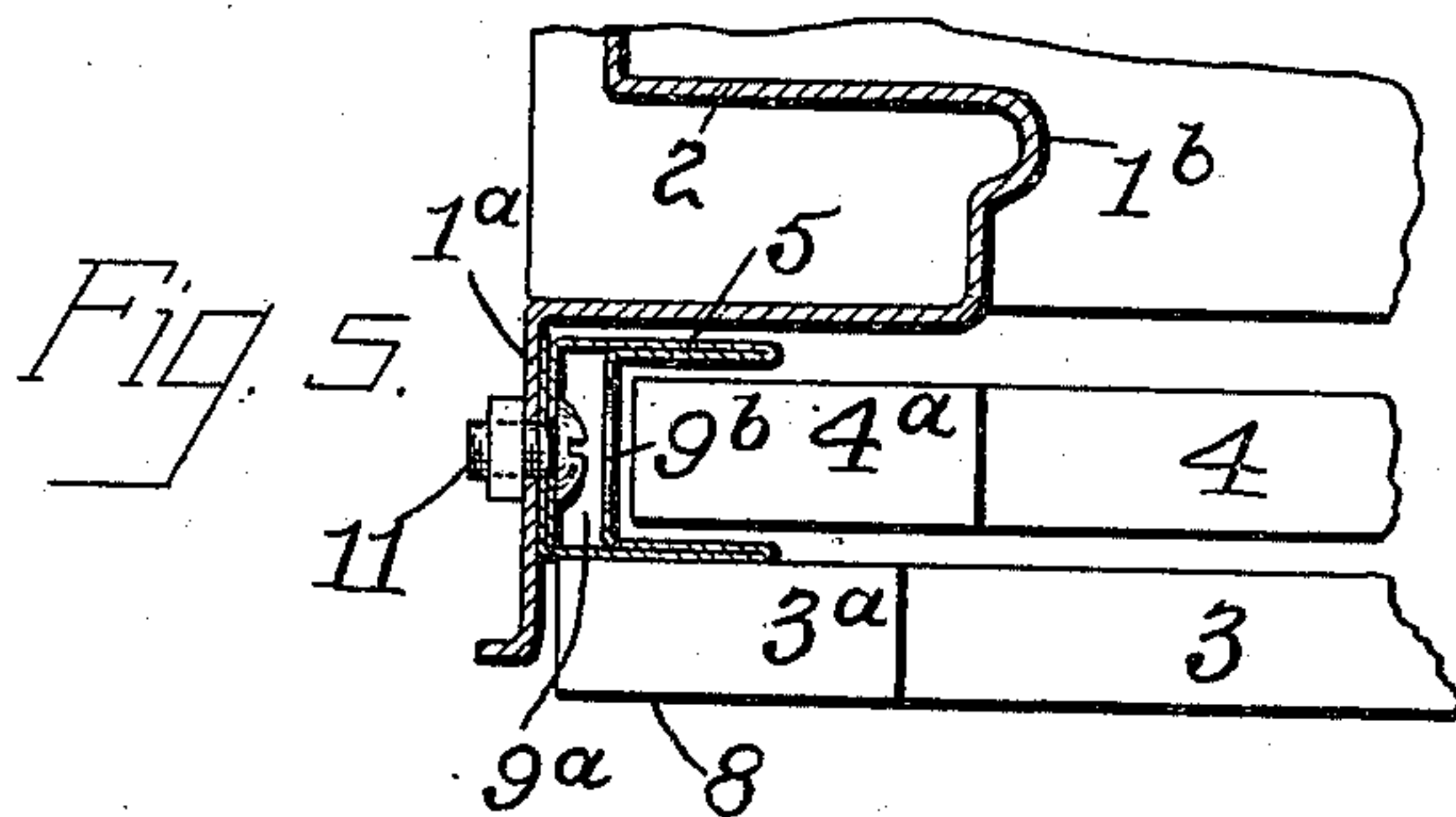


Fig. 5.

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UNITED STATES PATENT OFFICE.

EDMUND H. LUNKEN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE LUNKENHEIMER COMPANY, A CORPORATION OF OHIO.

WINDOW-SCREEN.

989,716.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed November 17, 1910. Serial No. 592,946.

To all whom it may concern:

Be it known that I, EDMUND H. LUNKEN, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My present invention relates to improvements in window screens.

One of the objects is to provide a screen which is specially adapted for use in connection with metallic or fire proof windows of the type which normally slide vertically, but are capable of being swung upon horizontal pivots for cleaning purposes.

Another object is to provide a construction in which the screen frame shall be concealed from view from the inside of the building, only the wire mesh of the screen being visible.

Other objects are to provide a screen improved as to various features of construction with a view to producing an article of simplicity, durability, and one convenient to manipulate and of neat appearance from the exterior.

The invention includes the novel features of construction hereinafter described and particularly set forth in the appended claims.

An embodiment of my invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a window frame and screen viewed from the outside; Fig. 2 is a transverse vertical section; Fig. 3 is a horizontal section on line M—M looking up; lower screen being raised in position for reversing window. Fig. 4 is a perspective view also from the outside showing the lower screen member raised and the hinged guides swung outward; and Fig. 5 is an enlarged sectional detail through one of the stationary guides, at line "M—M" looking up.

Referring by reference characters to this drawing, the numeral 1 designates the window frame, the sides of which are provided with the finishing or cover plates 2 in which the sashes (not shown) are mounted to slide vertically, and also swing upon horizontal pivots as shown, for example, in Letters Patent Nos. 903,058 and 957,693, dated Nov. 3, 1908, and May 10, 1910, respectively.

The upper screen is indicated at 3 and the

lower at 4, said upper screen being carried by guide strips 5 which are hinged at their upper ends to the top cross member 6 of the window frame by means of hinges 7. The upper screen 3 is secured to the outer face of the hinged guide strips, preferably by means of bolts or rivets, as indicated at 8, and the guide strips are extended below the lower edges of the screen 3, as indicated clearly at 5^a in Figs. 1 and 4. Other and stationary guide rails 9 are provided at the sides of the lower portion of the window, which are designed to form continuations of the upper guide rails 5 when the latter are in their normal and vertical position, and the lower screen 4 is mounted to slide vertically in the channel formed by the alining guides 5 and 9. Owing to the break between the hinged and stationary guide rails being below the lower edge of the upper screen, it will be seen that when the lower screen is in its normal position it bridges the breaks and locks the hinged guide rails against outward movement, thus automatically holding the upper screen in position. When, however, it is desired to swing the sashes upon their horizontal pivots for the purpose of cleaning, the lower screen is raised until it coincides in position with the upper screen, where it is held by a suitable catch carried by the lower edge of the upper screen at which time guide rails 5 may be swung outward into the position shown in perspective in Fig. 4, carrying with them both upper and lower screens, as shown.

It will be observed that the guide bars or strips 5 and 9 are carried by the flange 1^a of the cover plate, and the frame members 3^a and 4^a of the screens are completely behind the inwardly extending portions 1^b of the cover plates so that they are not visible from the inside of the room. Thus when viewed from the inside, only the wire screening is visible, which adds greatly to its attractiveness.

In order to provide convenient means for securing the guide strips to the cover plates without having the securing means interfere with the sliding movement of the screen, I form these guide strips of hollow sheet metal or channel iron, thus providing a space between the walls for the reception of the heads of the screws or bolts 11 which are used as the securing means, these screws being inserted through openings 9^b in the inner

walls of the channel strips, which openings are of a size sufficient to permit the ready passage of the screws, but which do not, of course, interfere at all with the sliding of
5 the screen.

It is evident that where only a lower screen is desirable, the screen cloth in the upper or swinging part of the device could be omitted and otherwise the device would
10 operate in the same manner (as regards the operation of the lower screen), to permit the reversal of the sashes for cleansing.

Having thus described my invention what I claim is:

15 1. The combination with a window frame, of a screen member and connected guides hinged to the window at one end, and a second screen member slidable within said guides.

20 2. The combination with a window frame, of a pair of guides and connected screen member hinged to said window at the upper end thereof, said guides extending beyond said screen member, stationary guides carried by the window frame and alining nor-
25 mally with said hinged guides, and a second screen member slidable within said stationary and hinged guides, substantially as described.

30 3. The combination of a window frame, of a pair of guides hinged at the top of the window, a screen member secured to the outer faces of the guides, stationary guides carried by the window frame and normally
35 alining with said hinged guides, a second screen member mounted to slide in said hinged and stationary guides, and means for locking the second screen member in elevated position within the hinged guides
40 when desired, substantially as described.

4. The combination with a window frame, of a pair of guides and an attached screen member hinged to the top of the window frame, a pair of stationary guides secured

to the window frame and normally in aline- 45
ment with said hinged guides, a second screen member movably held within said stationary and hinged guides, the line of break between said stationary and hinged
50 guides being below the upper edge of the second screen member when the latter is in its normal position whereby the hinged guides are automatically locked against swinging movement, substantially as de-
55 scribed.

5. The combination with a window frame, of an upper hinged part carried upon the outside thereof, and a lower screen member
60 slidable on said upper part so as to be raised and swung outward therewith, said window frame having a portion projecting inwardly and concealing the hinged part and screen frame from view from the inside of the room, substantially as described.

6. The combination with a window frame, 65
of guides hinged to the window frame at the top thereof, and a screen slidably carried by said guides, substantially as described.

7. A guide rail for a window screen com-
70 posed of channel iron, having the hollow portion at the base of the channel for the reception of securing devices.

8. A guide rail for a window screen con-
75 sisting of sheet metal having double side webs to engage the opposite faces of the screen, and parallel spaced connecting webs, one of said webs being suitably perforated for the passage of a screw or like securing device, and the other for the passage of the head of the screw and an operating tool, 80
substantially as described.

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

EDMUND H. LUNKEN.

Witnesses:

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E. G. CASE.