Dec. 10, 1929. A. E. LYONS 1,739,157

SCREEN HANGER

Filed Nov. 27, 1928

Fig. 1.

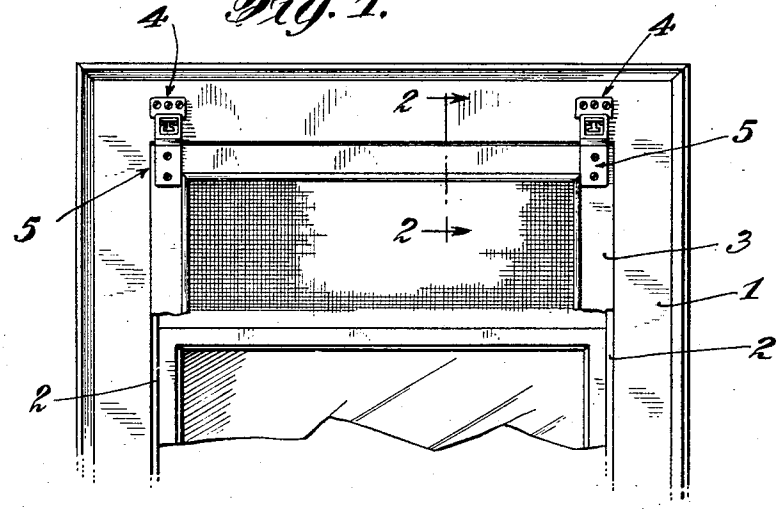


Fig. 2.

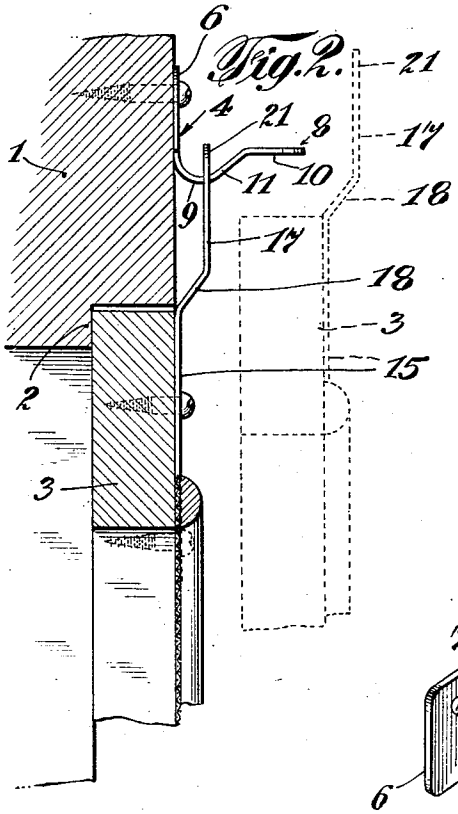


Fig. 3.

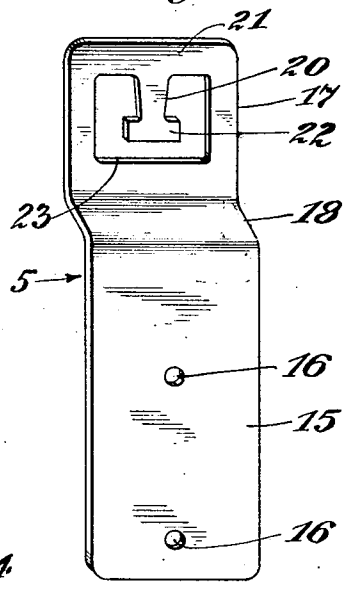
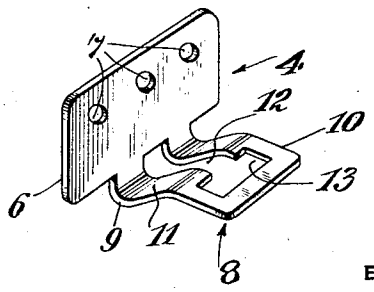


Fig. 4.



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UNITED STATES PATENT OFFICE

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SCREEN HANGER

Application filed November 27, 1928. Serial No. 322,131.

My invention relates to supports or hangers for window screens and especially non-sliding screens which cover the entire area of the window casing.

The object is to provide a very simple and inexpensive hanger which securely and positively supports the screen and prevents displacement or removal by any means except deliberate and proper manipulation, permits "hanging" of the screen by a person located inside or outside the window, by simple manipulation involving practically only vertical movement of the screen with little or no angular movement, and also permits outward swinging of the screen, when mounted, to any angle up to horizontal position, without disconnection of the supporting devices.

The characteristics and advantages of the invention are further sufficiently explained in connection with the following detail description of the accompanying drawing, which shows one preferred embodiment. After considering this example, skilled persons will understand that many variations may be made, and I contemplate the employment of any structures that are properly within the scope of the appended claims.

In the drawing:

Fig. 1 is a front (outside) elevation of the upper part of a window casing and screen, with supporting means applied, thereto, embodying the invention in one form.

Fig. 2 is a section, enlarged, at 2—2, Fig. 1.

Fig. 3 is a perspective view of one of a pair of cooperative supporting devices, this part being identified for convenience as a "hanger."

Fig. 4 is a similar view of the other device of the pair, called for convenience a "bracket."

In Figs. 1 and 2, 1 is the window frame or casing, having an outer, recessed portion 2 to receive the screen frame 3.

Two supporting devices are provided, located at the top, and near or at opposite sides of the screen frame and casing; each device consists of two parts, namely a bracket 4, Fig. 4, and a hanger 5, Fig. 3. Both of these parts are inexpensively produced in sheet metal, by simple cutting, or punching, and pressing or bending operations.

The bracket has an upright, or plate portion 6 for its support on the outer face of the casing by screws passing through screw holes 7, and an outwardly projecting part or arm 8, which includes an inner, depressed or socket portion 9, a horizontal outer portion 10, and a portion 11 which slants inward and downward toward the portion 9. Arm 8 has a central slot 12 extending from plate 6 to arm portion 10, wherein this slot is widened laterally as at 13.

The hanger has a lower or plate portion 15 secured to the screen frame by screws inserted through holes 16, and an upper or tongue portion 17, the hanger strip being bent as at 18 to locate the upper portion 17 somewhat outwardly from the plane of the outer face of the screen frame, but parallel thereto. The upper, or tongue portion of the hanger is slotted to form a tongue 20, depending from the upper, cross portion 21, and terminating in a T-head 22, the lower edge of which is spaced from the lower edge 23 of the slot.

The screen is "hung" by supporting it in the approximate position shown in dotted lines in Fig. 2; that is, it may be held practically vertical, without inconvenience to the workman, if located outside the window, which would be involved in tilting the screen angularly, although when the operator is located inside, the lower part of the screen may be moved out somewhat, in order to afford an easy hand grip on opposite sides, and without jamming the hands against the window casing, but still without necessity for any great angular displacement of the screen.

The screen is now moved toward the window, whereupon the end of bracket arm 8 passes into the hanger slot below the end of tongue head 22, which is then above the outer, wide slot 13 of the bracket arm; the screen is then permitted to move downward, whereupon tongue 20 passes into slot 13 and head 22 is located below the slot; the screen, or its upper portion is then moved slightly inward (or toward the window), whereupon tongue 20 enters slot 12, and the screen then practically automatically moves to proper closed position, as shown in full lines in Fig. 2, the hanger cross piece first resting on the downslanting bracket arm portion 11, which by

gravity causes the hanger and screen to move down and inward to final, "closed" position, with the hanger cross piece 21 resting in the depressed, or socket portion 9 of the bracket arm.

The screen may be swung pivotally outward to any angle up to horizontal, the cross piece 21 acting as a pivot in the socket formation 9, and displacement therefrom is resisted by gravity; it is also impossible to dismount the screen until it is intentionally raised and moved outward, in approximately vertical position, sufficient to bring tongue 20 into the wide bracket slot 13; the further movements of the screen, to complete the disconnection of the hangers from the brackets, are a reversal of the "hanging" operations, as above explained.

The interengaging formations of the hangers and bracket are of the general character known in the mechanical arts as the "buttonhole type" and are so defined in some of the broader claims.

I claim:

1. A support for a screen, or for similar purposes, comprising a bracket and a cooperating hanger, the bracket having a slotted arm portion, and the hanger having an opening to receive said arm and a tongue in the opening to enter the bracket arm slot.

2. A support for a screen, or for similar purposes, comprising a bracket and a cooperating hanger, the bracket having a slotted arm portion, and the hanger having an opening to receive said arm and a tongue in the opening to enter the bracket arm slot, the bracket arm slot also including a widened outer portion and the hanger tongue having a widened lower end dimensioned to pass therethrough but not to pass through the main inward portion of the bracket slot.

3. A support for a screen, or for similar purposes, comprising a bracket and a cooperating hanger, the bracket having a plate portion for attachment to a casing structure, and projecting angularly therefrom, a slotted arm portion and the hanger having an opening to receive said arm and a tongue in the opening to enter the bracket arm slot.

4. A support for a screen, or for similar purposes, comprising a bracket and a cooperating hanger, the bracket having a slotted arm portion, and the hanger having an opening to receive said arm and a tongue in the opening to enter the bracket arm slot, and the bracket arm also having a depressed socket portion to receive a cross piece at the upper end of the hanger opening.

5. A support for a screen, or for similar purposes, comprising a bracket and a cooperating hanger, the bracket having a slotted arm portion, and the hanger having an opening to receive said arm and a tongue in the opening to enter the bracket arm slot, the bracket arm slot also including a widened outer portion and the hanger tongue having a widened lower end dimensioned to pass therethrough but not to pass through the main inward portion of the bracket slot, and the bracket arm also having a depressed socket portion to receive a cross piece at the upper end of the hanger opening.

6. A support for a screen, or for similar purposes, comprising a bracket and a cooperating hanger, the bracket having a slotted arm portion, and the hanger having an opening to receive said arm and a tongue in the opening to enter the bracket arm slot, and the bracket arm also having a depressed socket portion to receive a cross piece at the upper end of the hanger opening, and an outer portion projecting substantially horizontally from the socket portion.

7. A support for a screen, or for similar purposes, comprising a bracket and a cooperating hanger, the bracket having a slotted arm portion, and the hanger having an opening to receive said arm and a tongue in the opening to enter the bracket arm slot, and the bracket arm also having a depressed socket portion to receive a cross piece at the upper end of the hanger opening, and an outer portion projecting substantially horizontally from the socket portion, the narrow portion of the bracket slot being co-extensive with said socket portion.

8. A support for a screen, or for similar purposes, comprising a sheet metal bracket and a cooperating sheet metal hanger, the bracket having a slotted arm portion, and the hanger having an opening to receive said arm and a tongue in the opening to enter the bracket arm slot.

In testimony whereof I affix my signature.

ARTHUR E. LYONS.