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R. F. HORTON  
WINDOW SCREEN

2,860,700

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2 Sheets-Sheet 1

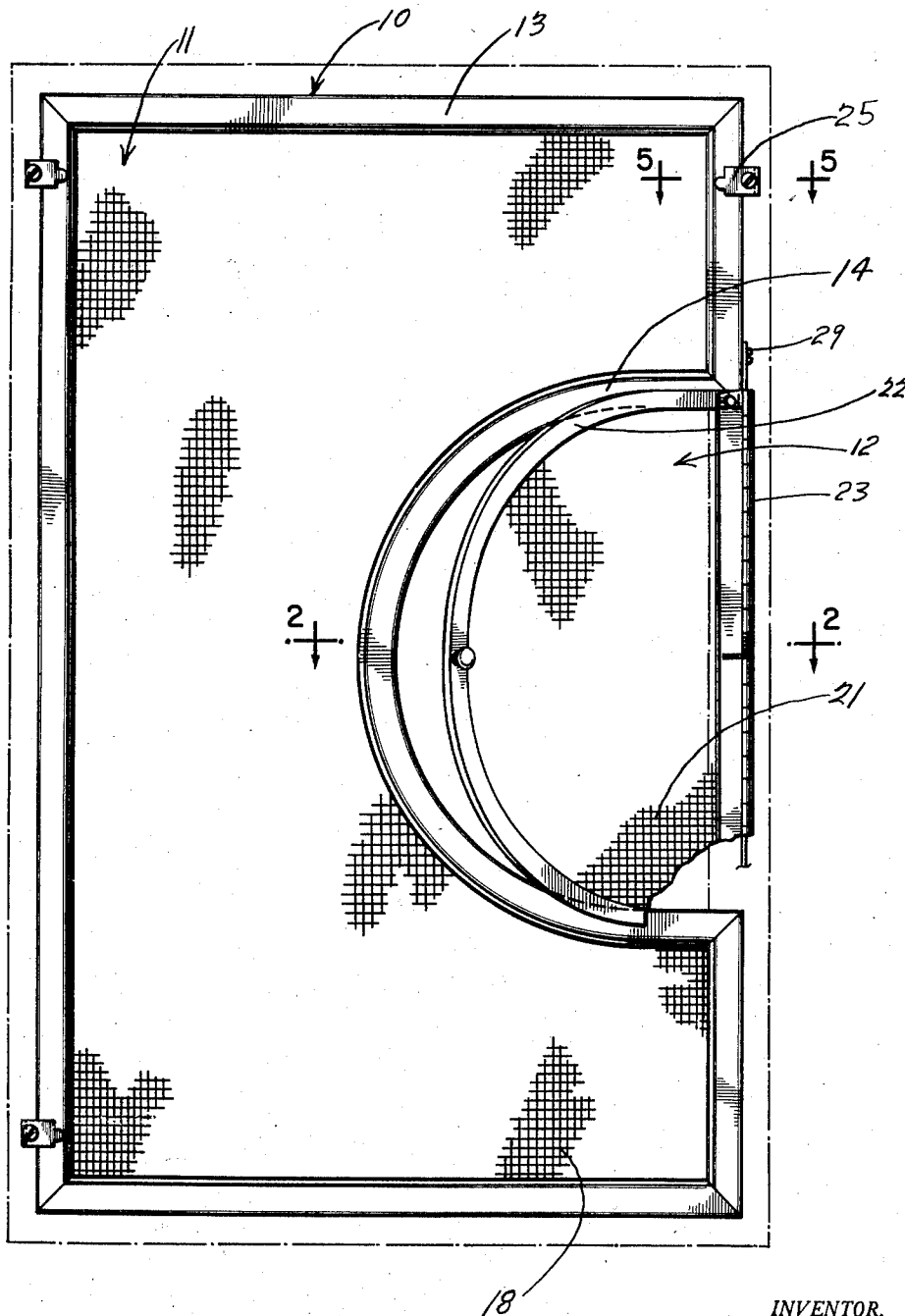


Fig. 1

INVENTOR.

BY Richard F. Horton  
*Barnes, Seed and Secret*

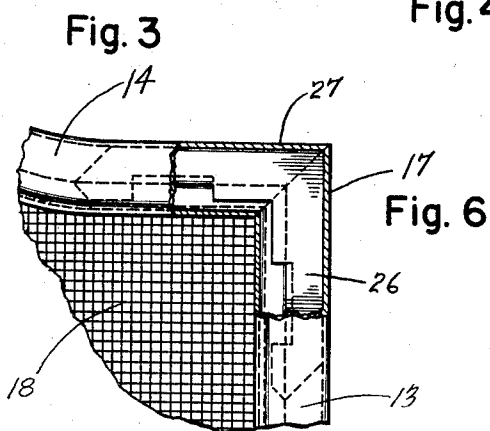
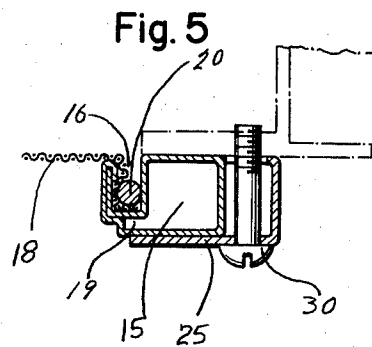
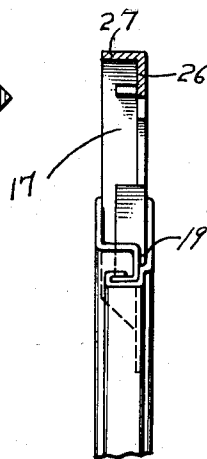
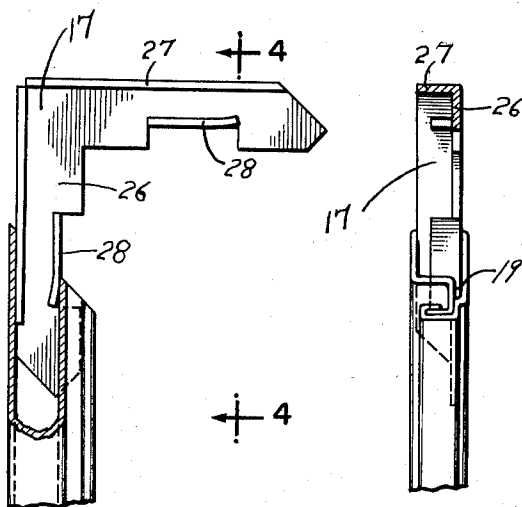
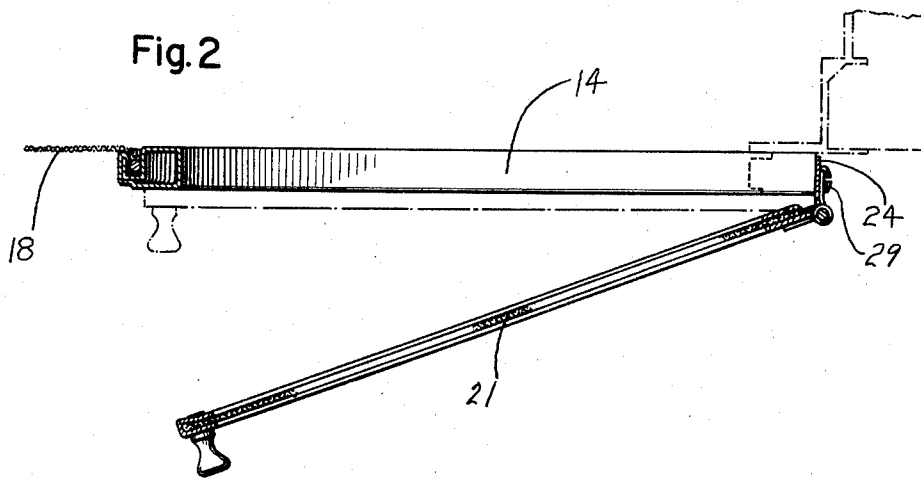
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INVENTOR.

Richard F. Horton

BY

*Barnes, Seed and Secest*

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## WINDOW SCREEN

Richard F. Horton, Seattle, Wash.

Application December 10, 1954, Serial No. 474,398

1 Claim. (Cl. 160—180)

This invention relates to a window screen and, more particularly, to a window screen for casement-type windows.

An object of this invention is the provision of a window screen having a passageway defined by the frame thereof and which passageway makes it possible to operate a window latch interposed between the screen and a window covered by the screen.

As an additional object this invention aims to provide a window screen which is unusually attractive in appearance.

A further and important object is the provision of a durable window screen which employs a minimum number of structural parts, is light in weight, and economical to manufacture.

Other more particular objects and advantages will, together with these general objects, appear and be understood in the course of the following description and claims, the invention consisting in the novel construction and in the adaptation and combination of parts hereinafter described and claimed.

In the accompanying drawings:

Figure 1 is a front elevational view of a window screen constructed in accordance with a preferred embodiment of the invention, and portraying, in partially opened condition, a wicket with which the screen is equipped.

Fig. 2 is a fragmentary transverse vertical section drawn to an enlarged scale on line 2—2 of Fig. 1.

Fig. 3 is an enlarged-scale fragmentary view shown partly in elevation and partly in section to detail the intersection between a brace and a frame channel employed in the present invention.

Fig. 4 is a detail sectional view taken on line 4—4 of Fig. 3.

Fig. 5 is a fragmentary transverse vertical section drawn to an enlarged scale on line 5—5 of Fig. 1; and

Fig. 6 is a fragmentary view shown partly in elevation and partly in section to detail the joinder of the channel pieces employed in the frame and strike.

In many of the popular casement type windows the window is divided into a stationary and permanently closed section and a movable section which is adapted to be opened. Inasmuch as the movable section of the window usually opens outwardly and away from the casement, a window screen, when employed, is mounted on the inside of the casement. The accessories, such as a cam latch or a casement-type latch, for use in opening and closing the window are also on the inside of the casement and, of necessity, are interposed between the screen and the window. As these accessories are comparatively large and protrude inwardly of the window provision must be made for that part of the screen adjacent to the accessories to clear the same and also for working said window hardware. Both of these provisions are usually taken care of by making the screen, similarly to the window, in two sections, a stationary section and a movable section with the movable section raised inwardly of the stationary section so as to clear the window

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hardware. In the conventional window screen provision for this movable part is attained by having a strike attached to the frame of the screen and which strike outlines an access opening through the screen for working the window attachments. This access opening is normally closed by the movable part of the screen. As contrasted with this conventional screen in which the strike is added to the frame, in my presently utilized screen the strike is part of the frame and also defines a passageway giving access for the working of the window accessories.

Proceeding now to describe the invention, it is seen that reference numeral 10 denotes a window screen having a relatively large stationary area 11 and in comparison therewith a relatively small movable area, namely, wicket 12. The screen, as common to most screens, comprises a frame 13, but unlike other screens includes the novel feature that its strike 14 is also an integral part of the frame and not a mere addition thereto. The frame is produced from channel stock with the majority of said frame straight channel, while the strike portion of such frame is curved to the approximate configuration of a half-circle. Said strike, as herein shown, is spaced equidistantly between the ends of the frame along one side and bends inwardly of the frame toward the other side thereof.

The channel stock is composed of sheet metal, aluminum by preference, which has been rolled to form a tube 15 and a channel 16, with both the tube and the channel extending longitudinally of the stock. In a transverse cross-sectional view of the channel stock the channel is of an approximate U-configuration so disposed that the throat thereof is exposed to a side of the stock and the tube is substantially a square with the exception that there is provided a connecting groove 19 underlying the base of the channel.

The individual channel stock pieces, both the straight sections and the curved strike, are joined by braces 17. These braces, as illustrated, are right angle members and are a stamping comprising a major leg 26 and a minor leg 27 with the two legs lying substantially at right angles to each other. The ends of the legs are cut on the bias, and the portions 28 of the major leg are caused to be bent upwardly substantially parallel with the minor leg so as to define a minor channel therebetween.

In preparing the individual frame members for assembly the ends of each member are cut at a 45° angle so that there is a miter joint at the juncture of adjacent members. The individual members are assembled into the frame with the channel running around the inside of the frame by inserting the braces into the end openings of the tube portions so that the outside edge of the brace's major leg rides in the groove 19 adjacent to the channel and the legs of the minor channel formed by the brace press firmly against the opposite walls of the tube so that the screen will be rigid.

After the individual frame members have been tightly pressed together the frame is ready to receive a section of screen mesh 18. A precut mesh is applied to the frame by laying the same on the frame with the peripheral edges thereof overlying the channels. Then a tube 20 or rod of flexible material such as aluminum or plastic is forced, along with the screen mesh, into the channel. The walls of the channel yield somewhat to accommodate the screen mesh and tube so that the two are firmly held in the channel by a spring grip.

The passageway in the window screen formed by the strike is covered by the wicket. This wicket comprises a section of screen mesh 21 whose edges are protected by strip metal 22 which has been rolled to have a deep narrow groove, and is held onto the mesh by crimping the sheet metal over the edges of the same. This wicket

is swingably mounted by a spring-loaded piano hinge 23 fastened to the frame by screws 29. As there is an opening at that part of the screen between the outer edge of the wicket and the side of the frame where the strike is I prefer that the stationary or butt leg 24 of the piano hinge be of approximately the same depth as the channel so as to effectively cover said opening, making it impossible for flies and the like to pass therethrough.

The strike, in addition to defining a passageway through the screen, also serves the function of spacing the wicket farther away from the window than the stationary part of the screen, and in this manner the wicket is assured of clearing window accessories interposed between the screen and the window.

The screen is attached to the casement by a bracket 25 comprising an L-shaped member having a long leg and a short leg. The long leg clamps over the frame and the short leg bears by its edge against the casement, illustrated by broken lines in the drawings. Said bracket is attached to the casement by a screw 30.

The advantages of the invention, it is thought, will have been clearly understood from the foregoing detailed description of the illustrated preferred embodiment. Minor changes will suggest themselves and may be resorted to without departing from the spirit of the invention, wherefore it is my intention that no limitations be implied and that the hereto annexed claims be given a scope fully commensurate with the broadest interpretation to which the employed language admits.

What I claim is:

In a window screen, a generally rectangular border frame providing a continuous border channel and modified from a rectangle by a re-entrant portion which forms an entry and has one of its faces for a wicket strike, a screen covering the opening defined by said frame and having its margin in said channel, rod means within said channel for retaining said margin of the screen therein, a hinge member spanning the mouth of said entry with co-planar portions projecting at each end therebeyond and having said end portions overlying and removably secured by screws to the border frame adjacent the ends of the re-entrant portion, a wicket hingedly connected to said hinge member, said wicket comprising a wicket screen for covering said entry and a wicket frame gripping the margin of said wicket screen, and spring means yieldingly urging said wicket frame into contact with said wicket strike.

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