

Sept. 30, 1958

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2,854,072

PLASTIC WICKET FOR SCREENS

Filed June 15, 1956

3 Sheets-Sheet 1

FIG. 2.

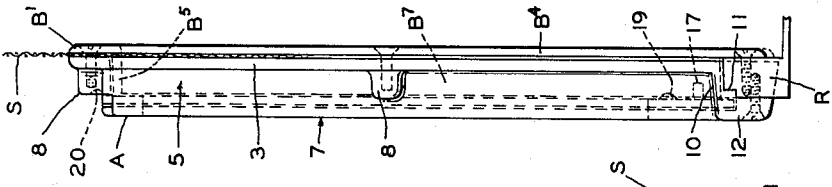
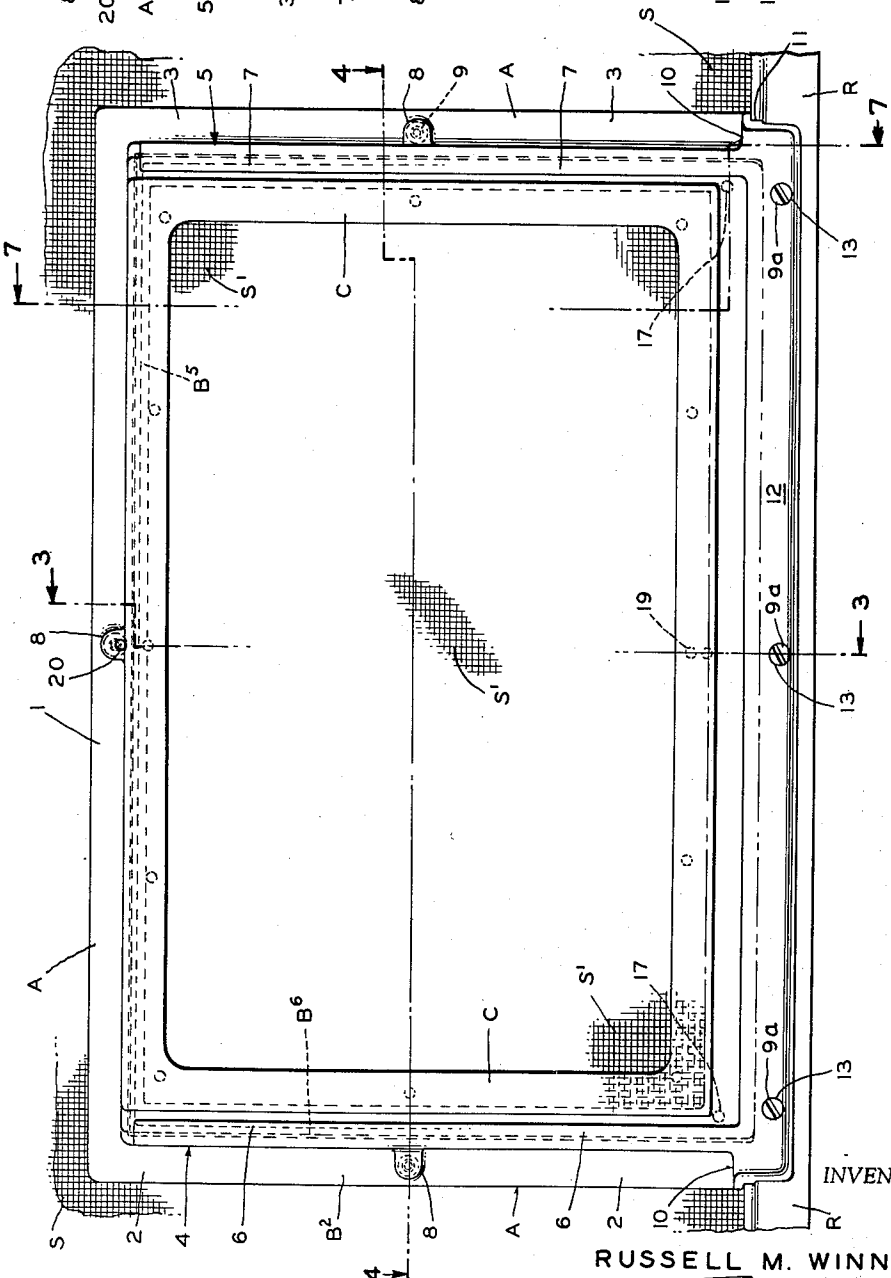
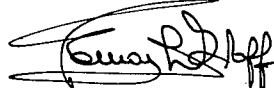


FIG. 1.



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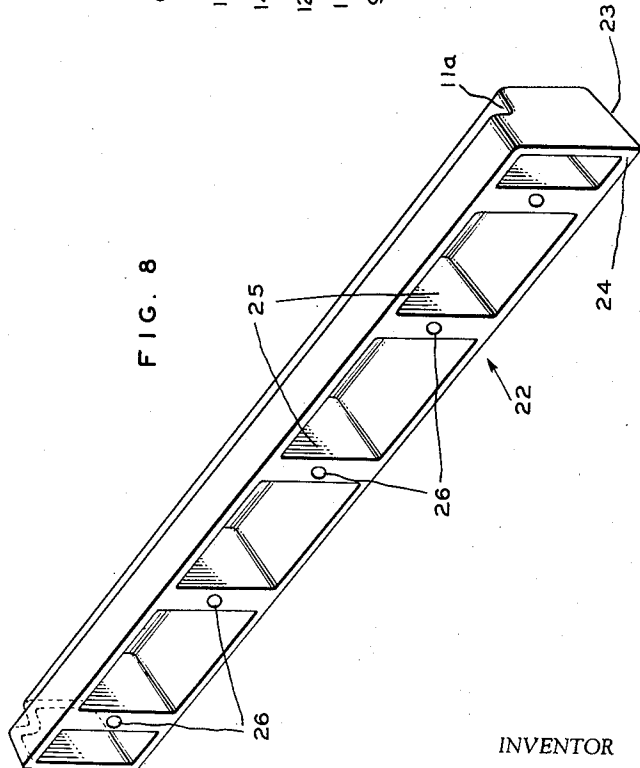
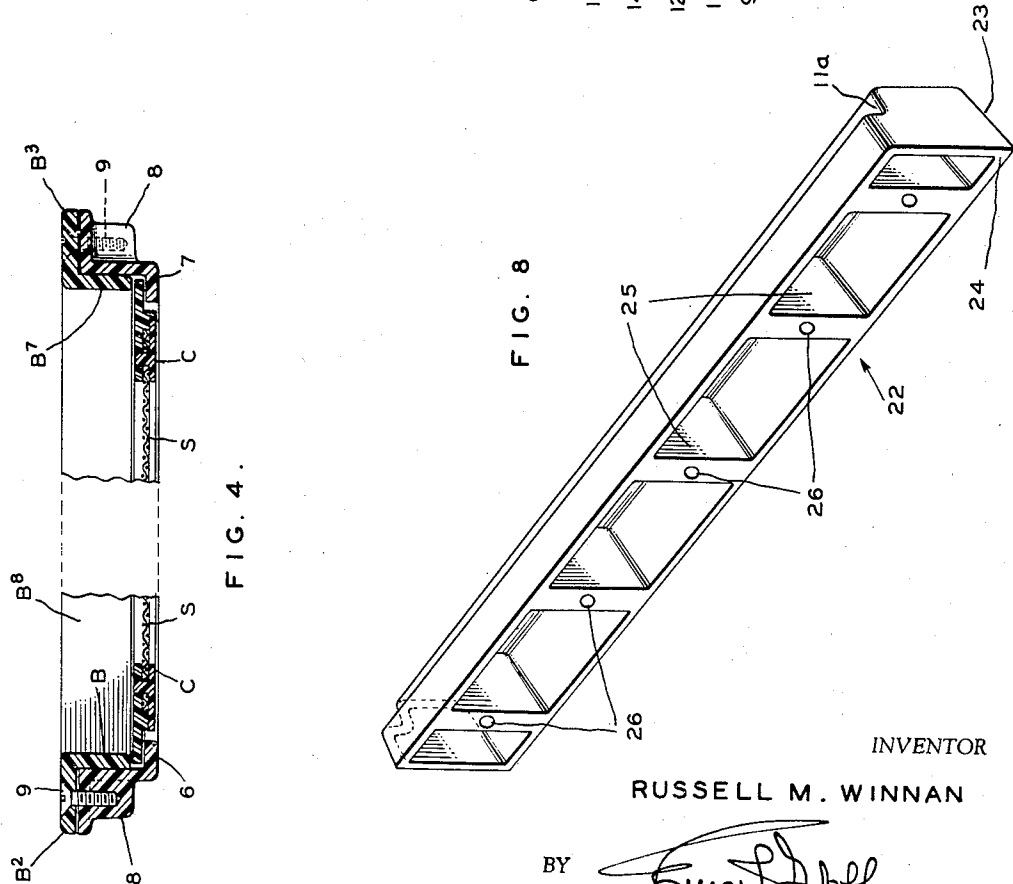
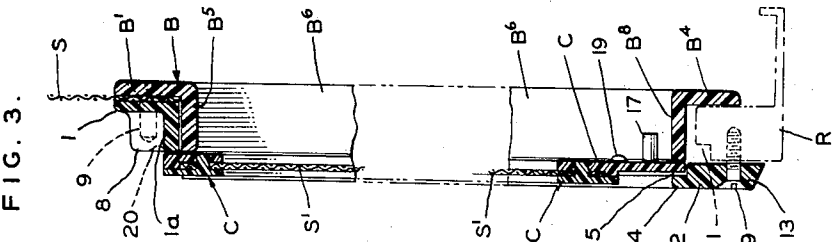
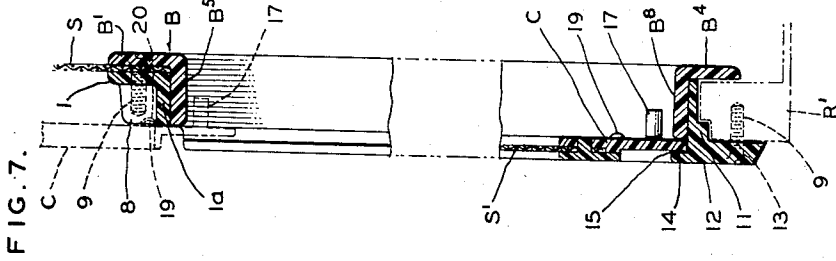
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3 Sheets-Sheet 3

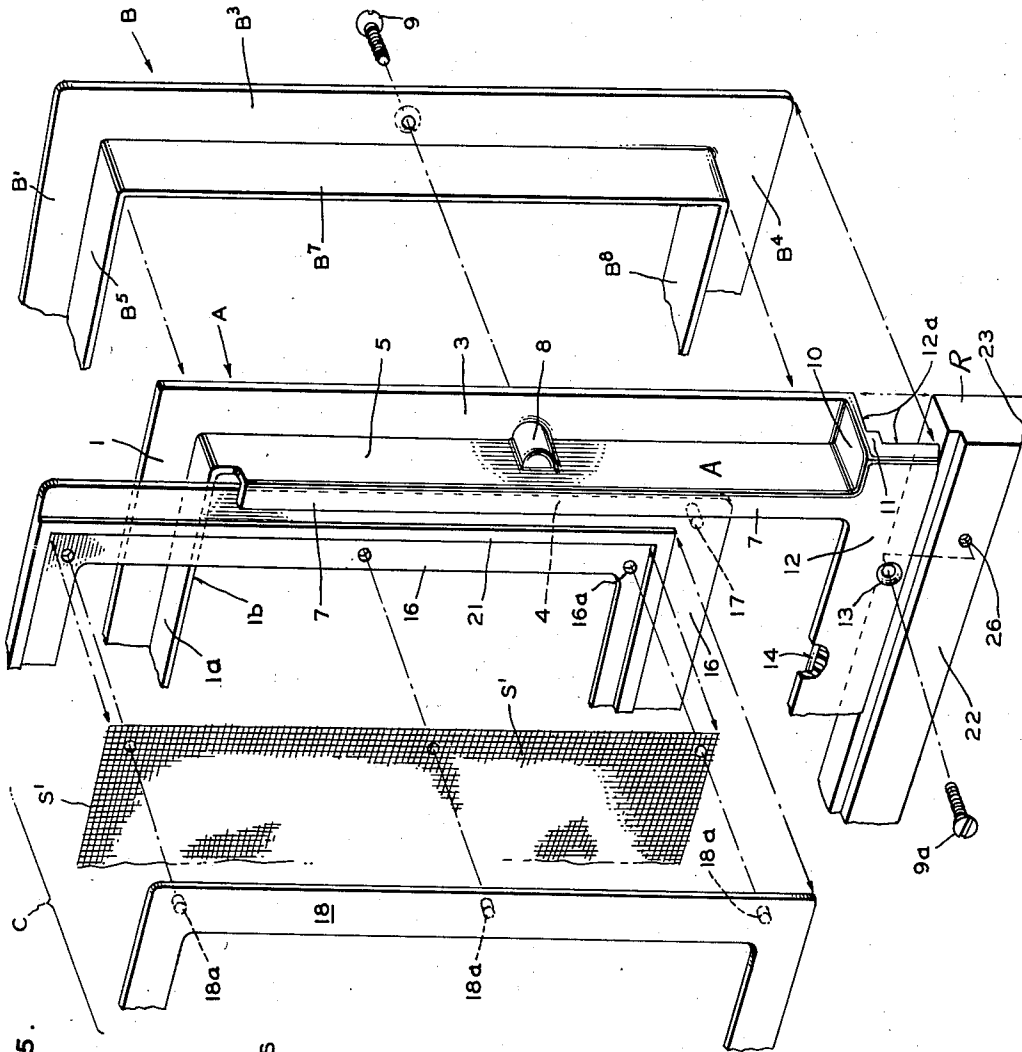


FIG. 5.

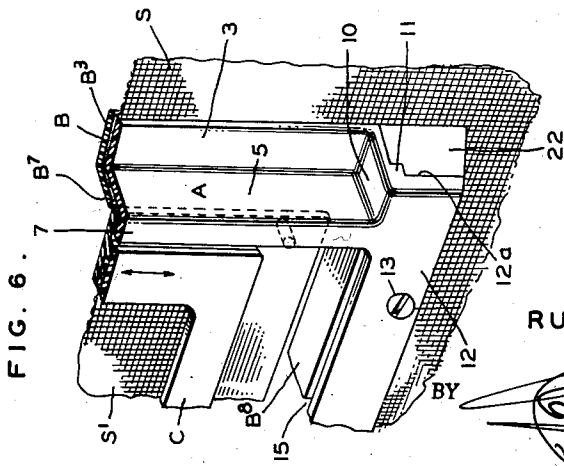
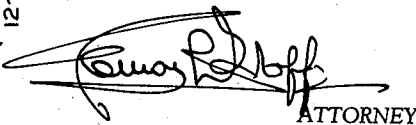


FIG. 6.

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1

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PLASTIC WICKET FOR SCREENS

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3 Claims. (Cl. 160—180)

This invention relates to an improvement in insect screens of the type for use in doors and windows, more particularly the latter, where it is desirable to provide means which may be readily opened and closed to have access to an operator, such for example as the operator frequently associated with awning type windows.

While it has been heretofore proposed to provide a wicket in window screens, nevertheless, it has been customary to make them of metal which requires a substantial structural support other than the screen frame because of its relative weight or bulk in relation to the screen cloth. Wickets made of metal require many parts and are, therefore, not only relatively heavy and costly to produce and install, but, at the same time the sliding wicket door after a period of use often oxidizes and has a tendency to bind in the frame guides.

Accordingly, a primary object of the invention is to provide a strong light-weight wicket comprising approximately six times less parts than a metal wicket, and preferably molded from appropriate plastic material, thereby enabling satisfactory use not only in connection with a selected one of the standard rails of the main screen frame, but, also where the wicket must be installed in an area of the screen cloth itself remote from the frame.

Another object of the invention is to make a wicket of a minimum number of parts each of which lends itself to standard commercial practices, such as injection molding, at a considerable saving in labor cost due to the use of a thermoplastic material requiring a very short molding cycle.

A further object of the invention is that by making the wicket parts of plastic material, the wicket can be marketed as a product in itself, apart from the original manufacture of the screen, thereby providing an economical and conventional means of providing a wicket in existing screens not so equipped.

A still further object of the invention is to provide a wicket whose parts are made of a plastic material which is susceptible to a wide range of ornamental treatment both as to configuration, color, and other factors which have esthetic appeal.

An additional and important object is to provide a wicket whose structural parts fit accurately together to conceal the cut edges of the screen cloth and also provide adequate mounting for the door.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which:

Fig. 1 is a front elevation of the wicket frame and door, when the wicket is applied to a rail of the frame.

Fig. 2 is an end elevation of Fig. 1.

Fig. 3 is a vertical cross sectional view taken on the line 3—3 of Fig. 1.

2

Fig. 4 is a horizontal cross sectional view on line 4—4 of Fig. 1 and taken at right angles to Fig. 3.

Fig. 5 is a more or less diagrammatic exploded perspective view of parts of the outer and inner mating frame sections and sliding door, before the parts are assembled.

Fig. 6 is a detail perspective view, partly in section, of one corner of the wicket frame and the filler strip when the wicket is mounted in the screen cloth and not connected to a rail.

Fig. 7 is a detail vertical cross section taken on line 7—7 of Fig. 1.

Fig. 8 is a detail perspective view of the filler block. Similar reference numerals designate corresponding parts in the several figures of the drawings.

As will be seen from the drawings, the wicket essentially comprises a two-part frame including a front or room side frame A and a back or outer frame B which are complementary in the sense that they fit together and embrace the adjacent edges of the screen cloth S therebetween. As will presently appear, the wicket also includes a door C which is preferably of the sliding type, but as will later appear may be hinged.

The back frame includes four co-planar screen cloth abutting flanges B¹—B², B³ and B⁴ having at their inner edges the right angularly disposed flanges B⁵, B⁶, B⁷, B⁸ which, as will be apparent from the drawings, telescopically fit within the complementary room side frame A.

Referring in detail to the front frame A (Figs. 1, 2, and 5), it will be observed that it includes three laterally disposed co-planar screen cloth abutting and covering flanges, namely, the top flange 1 and the opposite side flanges 2 and 3, the latter having the right angularly disposed vertical walls 4 and 5 which terminate in the in-turned guide flanges 6 and 7. These flanges form two lateral guides for the sliding door C (Fig. 5).

The top flange 1 is provided inwardly of its edge with a horizontal wall 1^a which connects at its ends with the vertical walls 4 and 5 but is of less width than said vertical walls to provide clearance for the sliding door C, and also to aline with the bottoms of the door guide channels formed by the guide flanges 6 and 7. Thus, the door can slide between the inner faces of the flanges 6 and 7 across the edge 1^b of wall 1^a (Fig. 5). The edges of the inwardly directed flanges B⁵—B⁸ of the back frame B lie in the same plane as the edge 1^b of wall 1^a, and, therefore, all of said flanges B⁵—B⁸ are shorter, that is, of less width than the side flanges 2 and 3 of the front frame A so that when front and back frames are assembled they will maintain adequate channel space for guiding the sliding door C.

The included angle of the flanges 1, 2 and 3 of frame A are provided at suitable locations with enlargements 8 for receiving fastening screws 9 which secure the flanges B¹—B² and B³ of the back frame B to the front frame as will be apparent from Figs. 1, 2, 4 and 5.

The bottom portions of side flanges 2 and 3 at their junction with the vertical walls 4 and 5 terminate in the substantially horizontal screen rail-width compensating walls 10 (Fig. 5) whose lower faces are in the same plane as the lower face of the bottom flange B⁸ of the back frame B. In the illustration shown, the inner ends of the walls 10 are provided with the shoulder portions 11 to snugly accommodate a given screen rail section. However, these portions may be omitted if a rail of different cross section is to support, in part, the wicket.

In the same plane as the guide flanges 6 and 7, the lower portion of the front frame A is provided with a horizontal attaching flange 12. As shown, this flange is spaced from the related lower flange B⁴ of the outer or back frame to fit over the inside face of the rail R of the screen frame, and it is provided with openings 13 to register with open-

ings in the rail to receive fastenings such as 9^a to secure the front frame to the screen.

The inside face of the flange 12 is provided with a recess or rabbet 14, (Figs. 3 and 7) whose inner vertical face is co-planar with the inside faces of the guide flanges 6 and 7 thereby to provide a slot 15 at the bottom of the guideway for receiving the lower edge of the door frame. The spaced flanges 12 and B⁴ provide in effect a socket or saddle 12^a (Fig. 5) for receiving the screen rail R, or alternately a filler block R', as will later appear.

The door C includes in its assembly, an open rectangular primary frame 16 having at one end, the offset lugs 17 for limiting the sliding movement of the door in the frame, and a secondary frame 18 which is of slightly smaller dimensions than the primary frame and serves to clamp the screen cloth S' for the door therebetween. The primary frame 16 is provided with a plurality of openings 16^a for receiving the lugs 18^a of the secondary frame so that when the two frame members are pressed together with the screen cloth therebetween, the latter will have its edges completely and securely covered and 16 and 17 are connected as a unit.

The exposed face of the lower portion of the primary frame 16 is provided at the same side as the openings 16^a with an offset latch button 19 whereby when the door is lifted, said button will snap into recess 20 in the rear of enlargement 8 and hold door in extreme open position to avoid manually holding door in open position.

The primary frame 16 is also provided on the face having the holes 16^a with a rectangular raised rib 21 which provides a recess to receive the screen cloth S' so that its edges are completely covered and there is no possibility of personal injury from the handling of the door.

Where it is desired to use the wicket on the screen cloth S at a point remote from a rail, the socket or saddle 12^a which would otherwise straddle a rail, receives the body 22 of the elongated filler block R'. As shown in Fig. 7 this filler is of substantially rectangular cross section with a recess 11^a for receiving the shoulder 11 of the frame A and its bottom face 23 is preferably formed at an angle as shown so that the screen cloth bearing face 24 adequately clamps the cloth. The plastic block is preferably hollow with a plurality of webs 25 which include the faces 24 having through holes 26 for receiving fastenings to securely and firmly hold the assembled wicket frame to the screen cloth S. Because of the light weight of the wicket assembly, the screen cloth is not subject to deformation due to the presence of the wicket, and since the door C slides easily its manipulation imposes no stress on the cloth.

The wicket assembly A, B, C may be used as a part of factory made screens, or it may be sold as a complete unit for application by a user to any window screen or door in previous use. In its use on a screen door, the latter may remain closed or even locked and the wicket used to pass small articles without opening the door sufficiently to invite an influx of insects.

In the factory operation the screen cloth S may be cut out where the wicket is to be installed by a die, while on the other hand as a "do it yourself" project the cut out may be made with a razor blade or sharp knife using a part of the assembly as a templet.

For example, assuming that the wicket is to be applied adjacent one rail of a window screen, either new or used, the window screen frame including the screen cloth should be placed on a horizontal surface with the inner or room side face up.

The room side frame A should then be placed over the screen with the rail saddle 12^a fitted over the rail and the outside flanges 2 and 3 against the screen cloth. With

the holes in the bottom attaching flange 12 as a guide, the screen rail R can be punctured with a suitable instrument and then the screws 9 can be put in place in the registering holes in the rail and the flange 12.

The screen frame may then be turned over and the inside corner edges of the top flange 1 and opposite side flanges 2 and 3 may be used as a templet to guide a sharp instrument such as a razor blade along the edges of the screen cloth to cut out a section thereof co-extensive with the flanges 1, 2 and 3 and the top of the bottom rail R.

Thereafter the door C may be slid in from the cut out portion of the screen cloth with the lugs 17 projecting upwardly.

The outer or back frame B may then be laid over the outer side of the rail R so that its cloth abutting flanges B'⁴ will cover the portions of the screen cloth adjacent the opening while the right angularly disposed flanges B⁵—B⁸ will telescopically fit into the related portion of the frame A. The back frame B may then be secured to the rail and to the flanges 1, 2 and 3 of the frame A by suitable fastenings, such for example as the screws 9 or 9^a.

In the event that the wicket is to be installed in an area of the screen cloth remote from the rail, the procedure above described is the same except that the socket or saddle 12^a will receive the elongated filler block 22.

I claim:

1. A wicket for insect screens including, in combination with the screen cloth having an access opening, a wicket frame assembly fitted in said opening for covering the cut and marginal edges of said opening comprising room-side and outer-side frame members each molded in one piece, and room-side member including screen cloth abutting flanges at the top and opposite sides and also including right angularly disposed top and side flanges disposed inwardly of the plane of the screen cloth, a bottom flange spaced inwardly from and parallel to the plane of the cloth abutting flanges, guide means formed in the said top and side flanges, an outer-side frame member including screen cloth abutting flanges and right angularly disposed inwardly directed flanges for telescopic engagement with the top and side flanges of the room-side member and covering said cut edges, said bottom flange of the room-side member cooperating with the related flange of the outer-side frame member to provide a filler receiving socket, means for securing the frame members together, and a door slidable in said guide means.

2. A wicket according to claim 1, wherein, the guide means is formed by inturned flanges on the side flanges of the room-side member, said inturned flanges terminating short of the said top flange to provide open ends for the guide means, and the inner edge of the bottom flange of the outer-side frame and the related inner edge of the bottom flange of the room-side member are spaced to provide a slot for receiving the bottom edge of the door.

3. A wicket according to claim 1, wherein the door is provided at the bottom of one side with offset lug means to engage the top angular flange of the outer-side member to limit the sliding movement of the door across the access opening.

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