Aug. 22, 1950 V. DI MARZO 2,519,638

ROLLABLE TYPE SCREEN ASSEMBLY

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FIG. 1

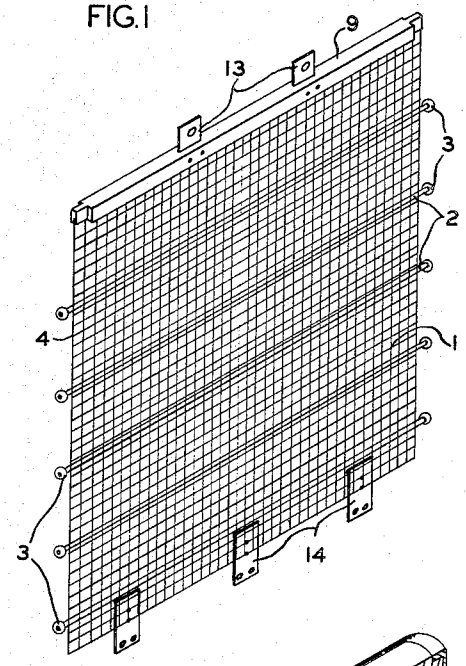


FIG. 6

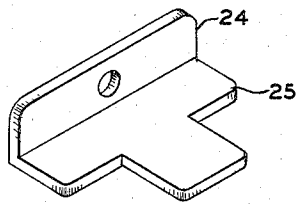


FIG. 4

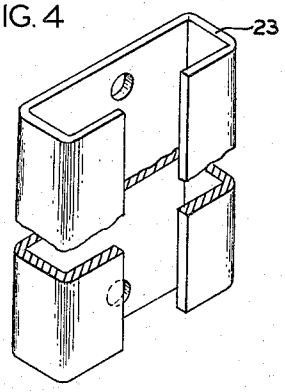


FIG. 2

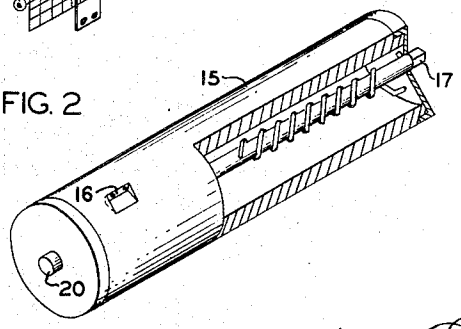


FIG. 5

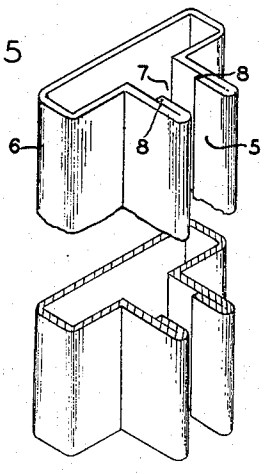
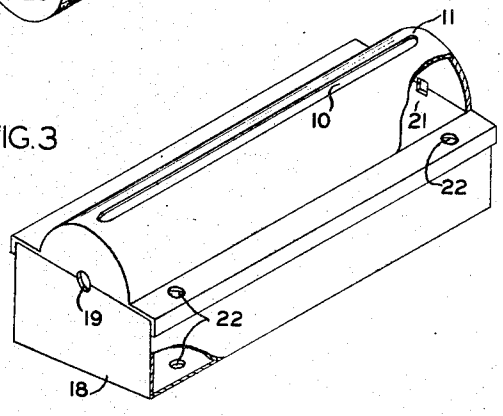


FIG. 3



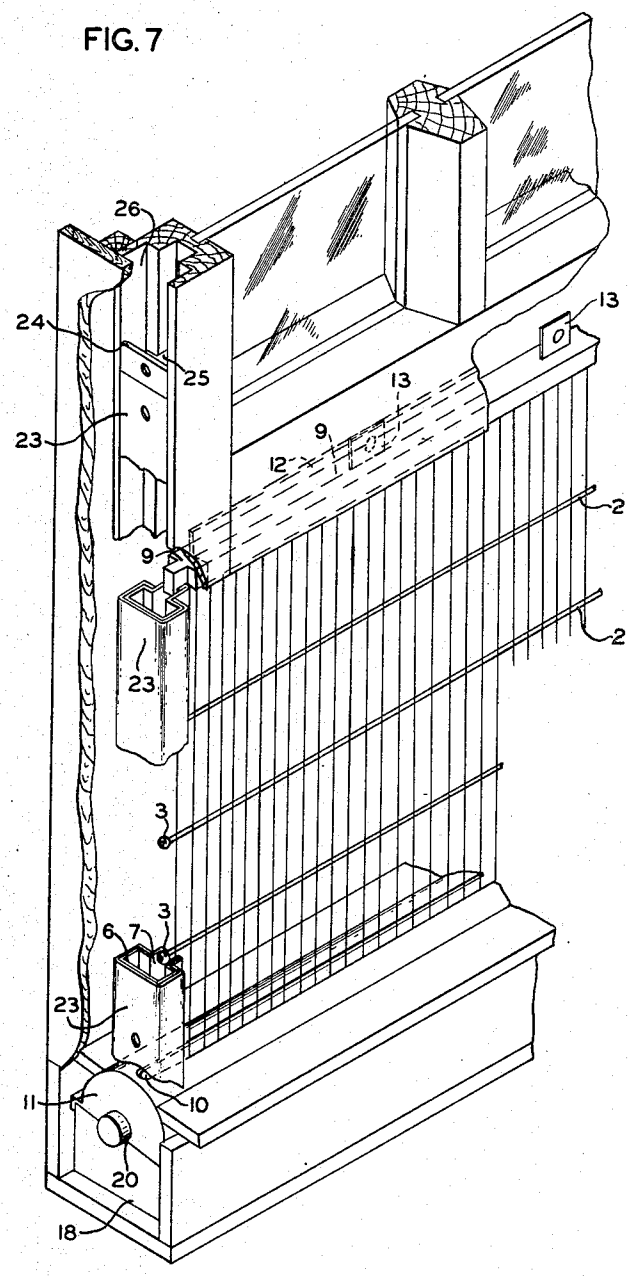
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FIG. 7



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Patented Aug. 22, 1950

2,519,638

UNITED STATES PATENT OFFICE

2,519,638

ROLLABLE TYPE SCREEN ASSEMBLY

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Application November 26, 1946, Serial No. 712,348

2 Claims. (Cl. 160—28)

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This invention relates to a rollable type screen assembly that is adapted to operate in conjunction with sliding windows or the double-hung type window sash. It is of a type wherein one end of a screen attaches to a spring roller encased in a receptacle which is either built into or affixed to the base of a window sill, while the other end of the screen attaches to the bottom of a window sash. The screen is tensioned vertically by the opposed down pulling of the spring roller from the window sash. The screen is tensioned laterally at the sides by means of beads adapted to work or roll in runways fitted to each side of the window frame.

The object of this invention is to serve both as a screen to exclude insects and such from open windows and also as weather stripping when the window is in a closed position. Other advantages of this invention will appear as this specification proceeds with a detailed description and by reference to the accompanying drawings wherein

Figure 1 is a plan view of the screen section.

Figure 2 is a partly open wide view of the self-winding spring roller.

Figure 3 represents the spring roller housing.

Figures 4, 5 and 6 illustrate the runway assembly wherein Figure 4 is a jacket to receive the runway. Figure 5 is the runway itself and Figure 6 is a stop lid that tops the runway when assembled in the jacket.

Figure 7 is a composite partly cut-out perspective view shopping the fully assembled invention with particular attention directed to the position of the screen edge and beads in the runway recess.

Referring in detail to the invention:

In the screen section Figure 1 the screen 1 is fashioned of flexible screening material into which at spaced intervals relatively rigid horizontal rods, stout threads or wires 2 are interwoven. At the extremities of these rods small beads 3 of firm material are affixed. When the screen edge 4 is fitted into the path 5 of the runway 6 these beads become positioned in the recess 7 and are held in place by the edges 8 of the inwardly folded portions of runway 6 (see Figure 7). It is preferable, though not essential that these beads be of the rotatable type to permit greater ease of movement and rollability of the screen assembly as it is raised and lowered. Referring further to Figure 1, the screen 1 is fitted at its top end with a fairly rigid shaft 9 that is narrowed at its extremities and widened throughout its middle portion. This shaft is narrow at its ends to permit

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its insertion in the path 5 of the runway as shown in Figure 7; it is wider in between the ends to prevent its slipping through slot 10 of the housing cover 11. When the screen is assembled for operation this shaft fits within a groove 12 of the window sash and is held in place by tabs 13 which attach to the window sash within groove 12. At the bottom of this screen section 1 are means 14 for fastening the screen to the spring roller 15 at 16.

Now, with respect to the spring roller in Figure 2—in construction this is similar to the ordinary window shade roller except that it does not have any locking or pawl attachment for the spring inasmuch as this attachment is not necessary since the screen assembly is at all times tensioned by its attachment to the sash and by the opposed pulling of the spring roller. The roller has several wells 16 for fastening the screen to the roller. These wells 16 are, however, not essential and the screen may be attached to the roller by clips or some other suitable method. Pin 17 is flat as in the ordinary shade roller and serves the same purpose. This spring roller is made to fit within the housing or receptacle represented by Figure 3.

The housing assembly represented by Figure 3 comprises a cover 11 and box 18. At one end is a hole 19 to receive pin 20 of the spring roller. This hole 19 has its lower half in the box 18 and its upper half in the cover 11. At the other end of this housing is a slit 21 made to receive pin 17. This slit, like hole 19, is constructed partly in the box and partly in the cover. Running along the top of cover 11 is a slot 10. The purpose of this slot is for the passage of screen 1 from the roller contained within the housing assembly. The housing assembly is provided with openings 22 for fastening the cover to the box 18 and securing both to the base of a window sill. In the fully assembled invention this housing together with a screen and roller attached may be built into the base of the window frame as shown in Figure 7 in newly constructed window frames, or, as is preferable it may be simply fastened to the base of the ordinary window sill.

In describing Figures 4, 5 and 6 reference is directed to the drawings for the general shape of these parts. Figure 4 is a jacket 23 made of rigid material adapted to fit in the slideway wherein the window sash rides. Figure 5 is a runway 6—or guide of rigid material and is fashioned so as to fit within jacket 23. The runway 6 is shaped as illustrated in the drawing Figure 5 and is so constructed as to receive the screen edge 4 and the

narrow ends of shaft 9, while the runway recess 7 is made to receive beads 3 of screen section 1. Figure 6 is simply a stop or lid in the form of a right angle having a vertical side 24 which is made to fit in the slideway of the window frame, and a base 25 which is shaped to conform to the contour of the jacket Figure 4 and the runway Figure 5. This Figure 6 serves as a lid or stop to prevent the runway 6 from slipping upward out of the jacket 23 due to friction or rubbing arising with the raising of the window sash.

The use and assembly of this invention is relatively simple. In explaining this it is desirable that reference be made to all the drawings and principally to the composite drawing Figure 7. In putting it together the lower end of the screen section is passed through slot 10 of the housing cover 11 and is attached and rolled about the spring roller 15. The spring roller is then placed in position in box 18 with cover 11 on the top of the box. The housing assembly is then secured to the base of the window sill. Jacket 23 is affixed to the slideway of the window frame, runway 6 is inserted down into the jacket and lid Figure 6 is secured in place over the jacket and runway in the slideway of the window frame. The screen is then raised with the shaft ends and screen edge in the path 5 of the runway 6, and with its beads 3 in the recess of the runway. Tabs 13 are secured within a groove made in the base of the window sash. The apparatus is now ready for operation.

Simply raising the sash to which the screen is attached will screen the window to the extent that the sash is raised.

It is to be noted at this point that the window sash has a vertical groove 26 to permit the sash to close down, over and about the runway assembly. This groove is only wide enough to fit about the runway assembly with as little play as possible and is long enough to receive the runway assembly as it rises into the groove upon the closing of the window sash. It is this groove that permits the runway assembly to serve as weather stripping at the sides when the window is in a closed position.

This vertical groove is not, however, essential to the use of this invention as it may be used without such a groove by affixing the apparatus to that portion of the sill beneath the upper window and by attaching the top of the screen section to the sash of the upper window. When used in this manner the portion of the window opening opposite the lower window has a fixed screen.

It is also to be noted that the purpose of the groove at the bottom of the sash as shown in Figure 7 is to hold the tabs and shaft of the screen section with the end that when the window sash is in a closed position the shaft within the groove will serve as weather stripping. However, it is not essential to the operation of this invention that the screen section attach to the bottom of the sash in the manner described, as other methods obvious to those skilled in the art may be used to attach the screen section to the window sash and accomplish all or some of the objects of this invention.

Variations in this invention obvious to those skilled in the art may be made in actual practice without departing from the essentials of this invention as claimed.

I claim:

1. In a roll screen structure of the character described a runway guide for the rotatable beads and side edge of a roll screen comprising in combination a runway, a jacket about and holding such runway slidable therein, and a lid covering the top of the jacket to prevent the runway from sliding out at the top of the jacket.

2. In a rollable type screen assembly, a screen structure having means at one end for attaching it to a spring roller, having means at the other end for attaching it to a window sash, and further having spaced transverse stiffening rods in said screen structure, said rods having rotatable beads at the extremities thereof, in combination with a guide runway assembly having a jacket holder and made up of an integral piece of material to forming adjacent right angles, the free ends of each right angle rising in the center and then folding inwardly, forming a recess, said beads being workable in said recess and a stop lid atop such runway and jacket, all substantially as shown and described.

VINCENT DI MARZO.

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