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WINDOW SCREEN

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2 Sheets-Sheet 2

Fig. 3

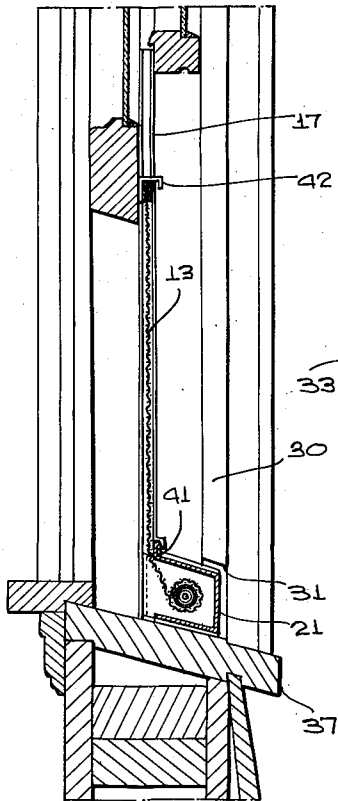


Fig. 7

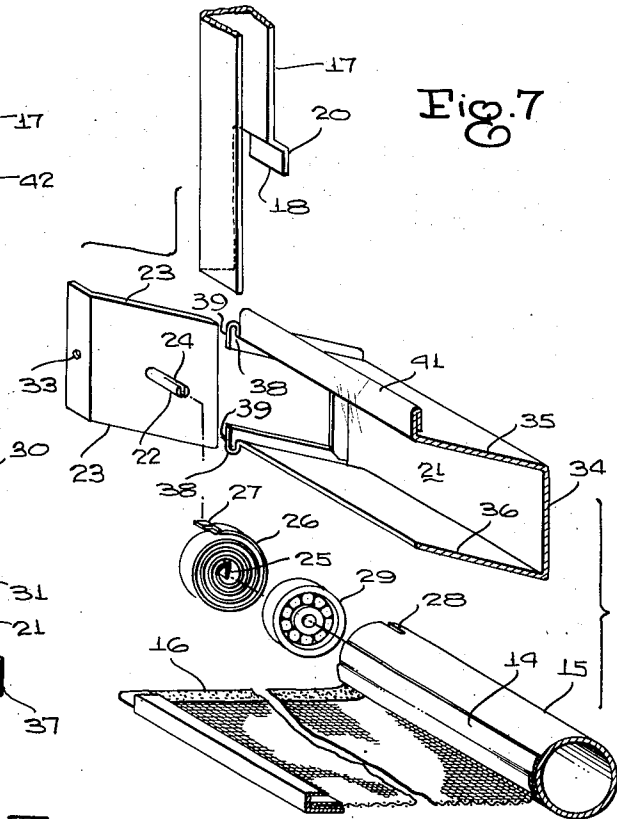
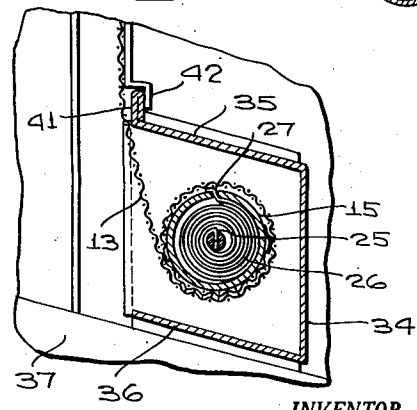
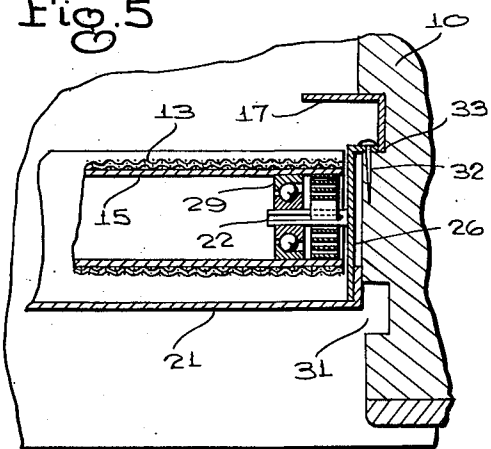


Fig. 6

Fig. 5



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## WINDOW SCREEN

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3 Claims. (Cl. 160—28)

The present invention relates to new and useful improvements in roller type window screens and in particular concerns itself with a roller screen having an easily accessible casing or housing which is locked in place against theft or accidental displacement when the sash of the window where it is used is in closed position.

The principal object of the present invention is to provide a simply constructed housing and roller mechanism to house and retract a screen of plastic or other flexible materials, and one which is weather-proof for the protection of the screen and roller when in non-use position.

Another object of the present invention is to provide a screen which is raised by movement of the lower sash of the window, but may be similarly secured to the window frame above the upper sash and attached thereto for movement downwards when the upper sash is lowered.

A further object of the present invention is to provide a window screen of the roller type which extends across the full window opening and one in which its channel guides on each side occupy little or no more space outwardly than the usual parting strips between the upper and lower sash.

A still further object of the present invention is to provide a housing for a roller screen which interlocks with the sash when in closed position, making impossible the removal of the housing from the frame, and providing therefore an additional safeguard against illegal entry through the window, the forcible removal of the housing or screen not being possible without the attendant noise and commotion which generally is a deterrent.

With the above objects and advantages in view and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially in the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a general plan view in elevation of an embodiment of the present invention installed attached to the lower sash in a window frame;

Figure 2 is a vertical view in cross section taken on line 2—2 of Figure 1;

Figure 3 is a side view in cross section taken on line 3—3 of Figure 1;

Figure 4 is a partial side view in cross section taken on line 4—4 of Figure 1;

Figure 5 is a partial vertical view in cross section taken on line 5—5 of Figure 1;

Figure 6 is an end view in cross section showing the interlocking parts when the window sash is in closed position, and

Figure 7 is an exploded view of related parts showing their interrelation and mode of attachment.

Referring in greater detail to the drawing in which like numbers indicate like parts throughout the several views, in Figure 1 a window frame is indicated at 10 and shows a lower sash 11 and an upper sash 12, the window sash 11 being raised and supporting along its lower end the

upper edge of a flexible screen 13, secured thereto by the screws 14, seen in side view in Figure 4.

The screen 13 is secured at its other end by cement or other means to the roller 15, seen most clearly in the exploded view of Figure 7, and has along one side edge 16 the plastic bonding or sizing which stiffens the edge and permits its more or less permanent rigid sliding movement in the side channel members 17 which extend upwardly and are of approximately the same width and height as the parting strip of the frame, which is removed to make space for the members 17, the lower end of which is especially formed, as seen in Figure 7, with an offset portion 18 having a forwardly bent tab 20 which overlies the lip 41 of the housing 21 for the purpose to be explained later.

The roller 15 is supported on a shaft 22, one at each end, which is solidly secured by its one end in the center of the bracket 23, the other or free end of the shaft 22 being longitudinally slotted as indicated at 24 to receive the inner end 25 of the coil spring 26, the outer end 27 of which is upwardly bent to form a tab which is engaged in the slot 28 in the roller 15. A bearing 29 in each end of the roller 15, although only one end of the roller is illustrated herein, is adjacent to the spring 26 and acts to support the roller on the shafts 22, it being a pressure fit between the roller and bearing and between the bearing and shaft, as is conventional.

The brackets 23, one on each side of the window frame in which the front guide strip 30 is cut away as indicated at 31 in Figure 3, are formed of sheet metal having one vertical edge bent outwardly to occupy the opening formed by the cutout portion 18, as seen most clearly in Figure 7, and are secured in the parting strip channel by a nail or screw 32 through the hole 33.

The housing 21 is seen to consist of a somewhat rectangular elongated housing having one vertical wall 34 and with its top panel 35 and bottom panel 36 in substantial parallelism, but sloping outwardly at the same angle as the sloping window sill 37, shown with somewhat an exaggerated slope in Figure 6. At each end of the housing 21, a slot 38 is formed by turning the end edges slightly outward as at 39 and then back on itself, the three slots thusly formed in the vertical wall 34 and each of the top and bottom panels 35, 36, respectively, receiving the edges of the brackets 23, and the downwardly turned end edge 39 of the bottom panel 36 supports the housing 21 slightly upwardly above the surface of the sill 37, for ventilation of the painted surface and evaporation of any entrapped moisture so common to surfaces exposed to the weather.

The housing 21 has its upper side edge of the top panel formed into an upstanding lip 41 which is received into the channel strip 42 which is positioned to overlie the upper end edge of the screen 13 but projects by its shorter side 43 outwardly enough to also overlie the lip 41 when the sash is lowered to closed position. It is understood that the dimensions of the housing, lip and placement of the channel strip 42 be such that the sash is completely lowered to a position where the conventional lock is operable, it then being obvious that the channel strip 42 locks the housing 21 on the brackets 23, preventing removal of the housing or the screen from its position, the channel strip 42 having apertures through which the screws 14 secure the screen to the sash, as stated above. The tab 20 on the lower end of the members 17 further locks the housing 21 to the brackets 23 and adds to the weather-proofing of the device.

It is understood that the spring is wound in the direction that will normally tend to move the screen back into the housing, and that other means may be used to secure the roller to the spring and the spring to the shaft, this illustration being of only one embodiment of the invention

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and other embodiments are contemplated and may be practiced without departing from the spirit and scope of the present invention as defined in the appended claims.

What is claimed is:

1. In combination, a window frame having vertical side members having lower ends, a sill extending between said lower ends, and a vertically slidable sash mounted on said vertical side members, said sash having a lower end and an outer side, a housing superimposed upon said sill and extending between said vertical side members, said housing having open ends, a top panel, an outer panel, and a bottom panel, and being devoid of an inner panel and being open at its inner side, said top panel and bottom panel having facing slots at the open ends of the housing, bracket plates secured to the frame side members at the lower ends of the side members near the sill at points outwardly of said sash, said bracket plates having upper and lower edges engaged removably in said facing slots with the bracket plates closing the open ends of the housing, a roller within the housing, means on the bracket plates mounting the roller at its ends, and a flexible screen circumposed on said roller and secured thereto at one end, the roller having another end extending through the open inner side of the housing, and means securing the said other end of the screen to the outer side of the sash at its lower end.

2. In combination, a window frame having vertical side members having lower ends, a sill extending between said lower ends, and a vertically slidable sash mounted on said vertical side members, said sash having a lower end and an outer side, a housing superimposed upon said sill and extending between said vertical side members, said housing having open ends, a top panel, an outer panel, and a bottom panel, and being devoid of an inner panel and being open at its inner side, said top panel and bottom panel having facing slots at the open ends of the housing, bracket plates secured to the frame side members at the lower ends of the side members near the sill at points outwardly of said sash, said bracket plates having upper and lower edges engaged removably in said facing slots with the bracket plates closing the open ends of the housing, a roller within the housing, means on the bracket plates mounting the roller at its ends, and a flexible screen circumposed on said roller and secured thereto at one end, the roller having another end extend-

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ing through the open inner side of the housing, and means securing the said other end of the screen to the outer side of the sash at its lower end, said securing means comprising an outwardly projecting flange terminating in a depending flange, and said top panel of the housing having an upstanding lip extending therealong over which said depending flange engages in a lowered position of said sash.

3. In combination, a window frame having vertical side members having lower ends, a sill extending between said lower ends, and a vertically slidable sash mounted on said vertical side members, said sash having a lower end and an outer side, a housing superimposed upon said sill and extending between said vertical side members, said housing having open ends, a top panel, an outer panel, and a bottom panel, and being devoid of an inner panel and being open at its inner side, said top panel and bottom panel having facing slots at the open ends of the housing, bracket plates secured to the frame side members at the lower ends of the side members near the sill at points outwardly of said sash, said bracket plates having upper and lower edges engaged removably in said facing slots with the bracket plates closing the open ends of the housing, a roller within the housing, means on the bracket plates mounting the roller at its ends, and a flexible screen circumposed on said roller and secured thereto at one end, the roller having another end extending through the open inner side of the housing, and means securing the said other end of the screen to the outer side of the sash at its lower end, said securing means comprising an outwardly projecting flange terminating in a depending flange, and said top panel of the housing having an upstanding lip extending therealong over which said depending flange engages in a lowered position of said sash, and a vertical channel guide secured to a frame side member above said housing, said screen having a side edge slidably engaged in the channel guide and the guide having a lower end provided with an outset tab engaged over the upstanding lip on the housing.

#### References Cited in the file of this patent

#### UNITED STATES PATENTS

1,177,434	Montgomery	Mar. 28, 1916
1,471,534	Smythe	Oct. 23, 1923
1,781,202	Stern	Nov. 11, 1930