

O. KARLSS.  
WINDOW SCREEN.  
APPLICATION FILED MAR. 4, 1912.

This technical drawing illustrates a window assembly with multiple panes and a mesh screen. The assembly is shown in a perspective view, with various components labeled with numbers. The main frame is labeled 6. The top pane is labeled 5. The middle pane is labeled 24. The bottom pane is labeled 12. A mesh screen is shown at the bottom, labeled 11. The assembly is mounted on a wall, indicated by the hatched area at the bottom. The drawing includes various fasteners and seals, labeled with numbers such as 15, 17, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Fig. 1 is a cross-sectional view of a mechanical assembly. A vertical shaft (3) passes through a housing (5). The shaft has a pin (1) at its lower end, which is connected to a chain (12). The chain is attached to a gear (11) mounted on a shaft (10). The gear is housed within a component (10). Other parts labeled include 8, 15, 16, 17, 18, and 19.

Witnesses  
Larson

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# UNITED STATES PATENT OFFICE.

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## WINDOW-SCREEN.

1,053,294.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, OSCAR KARLSS, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

This invention relates to window-screens which are connected to the sashes so that when the latter are opened the screen will be extended into the sash-opening of the window frame.

It is the object of the invention to provide in a screen of this kind, improved means for detachably connecting the same to the sash so that the latter may be opened with or without the screen.

The invention also has for its object to provide a fastening which, when the sash is closed, acts as a weather strip.

Other objects and advantages will be made manifest in the detailed description appearing hereinafter.

In order that the invention may be better understood, reference is had to the accompanying drawing forming a part of this specification, in which drawing,

Figure 1 is an elevation of a window showing the application of the invention, one of the sashes being shown partly open. Fig. 2 is a vertical section on the line 2—2 of Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 2.

Referring specifically to the drawing, 5 denotes the head, 6 the pulley-stiles, and 7 the sill of a window frame in which are mounted two sliding sashes. The bottom rail 8 of the lower sash has a longitudinal groove 9 extending throughout the entire length thereof, said groove being substantially semicircular in cross-section, and located in the bottom of the rail. In the sill 7 is a longitudinal recess 10 in which is mounted a spring roller 11 similar to an ordinary shade-roller, said roller carrying a sheet 12 of screen fabric, the free end of which passes out of the recess through a slit 13 extending from the recess and opening through the top of the sill. To the free end of the sheet is fastened a reinforcing member 14 extending throughout the entire width of the sheet and being secured thereto in any suitable manner. The member 14 is a metal strip bent into a substantially circular shape in cross-section and having a diameter which is greater than the width of

the slit 13 so that it cannot be drawn into said slit, but will extend across the top of the sill when the sheet is wound up on the spring roller. The cross sectional shape of the member 14, and the location of the groove 9 with respect to said member are such, that a portion of the latter seats in said groove when the lower sash is down and the remainder of the member seats in the slit 13, the outer portion of which latter is enlarged to accommodate the lower half of the circular portion of the member 14, and said member thus acts as a weatherstrip to exclude wind and rain.

The sheet 12 is adapted to be connected to the lower sash, so that when said sash is raised, the sheet will be drawn off the roller 11 and extended into the open space below the sash and thus serve as a screen. The following connection is provided for this purpose: In the bottom rail 8 are recesses 15 which open through the inner face thereof, and in the bottom of said rail are apertures 16 which extend from the groove 9 to the recesses 15. In each recess 15 is mounted a spring latch 17 which extends downward through the aperture 16 and has its head 18 located in the groove 9, so that when the member 14 enters said groove, the latch head snaps through an aperture 19 in said member, and thus locks the screen to the sash. The screen is now fastened to the sash and will unroll when the latter is opened. Upon disengaging the latches, the sash may be opened without taking the screen along.

The upper sash is also provided with a screen 20 as hereinbefore described, said screen being carried by a spring roller 21 mounted in a recess 22 in the head 5 of the window frame. The connection between the top rail 23 and the screen is the same as that between the bottom rail and the lower screen, a weatherstrip being therefore provided for the top rail also.

On the outer edge of one of the stiles 24 of the lower sash is mounted a ratchet bar 25 which is engageable by a spring latch 26 mounted in the adjacent stile 6 of the window frame, whereby the sash is locked. Similar means are provided for locking the upper sash.

By the structure herein described the usual sash-weights may be dispensed with. The lower sash is held in open or partly open position by the latch 26, and upon retracting

the latter, the sash automatically closes by its own weight and the tension of the spring roller 11 of the screen which is connected to the sash. The top sash is automatically closed by the spring roller 21 upon releasing the latch, said roller being provided with a spring or a number of springs of sufficient power to lift the sash.

I claim:

- 10 The combination with a window-frame and a sliding sash mounted thereon, said frame having a recess from which a slit opens through the frame, and the sash having a groove which is opposite the slit when the sash is closed, the sash also having recesses, and apertures extending from said recesses to the groove; of a roller mounted in the recess of the frame, a screen wound on the roller and passing out of the recess
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through the slit, a strip secured to the end 20 of the screen and fitting partly in the afore-said groove and partly in the slit when the sash is closed, said strip having keeper apertures, and spring latches mounted in the recesses of the sash and passing through the 25 apertures thereof into the groove, and engageable with the keeper apertures, the recesses in which the latches are mounted opening through one side of the sash to permit access to the latches for disengaging the 30 same from the keeper apertures.

In testimony whereof I affix my signature in presence of two witnesses.

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Witnesses:

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