April 7, 1931. J. J. KAMINSKI ET AL 1,800,080

WINDOW SCREEN

Filed Oct. 30, 1929

Fig. 1.

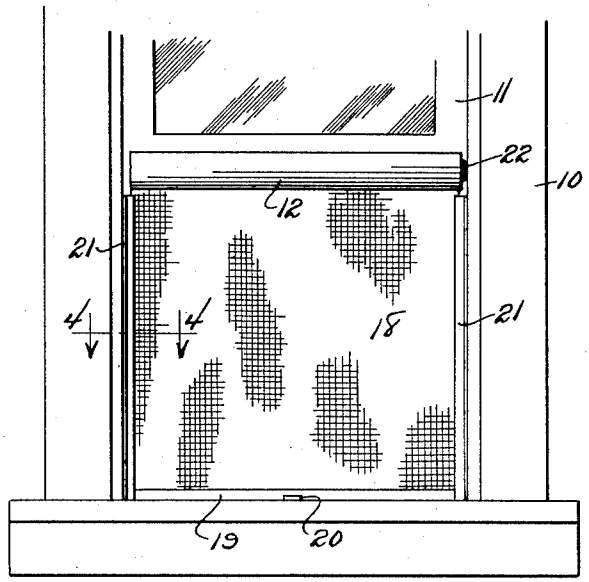



Fig. 2.

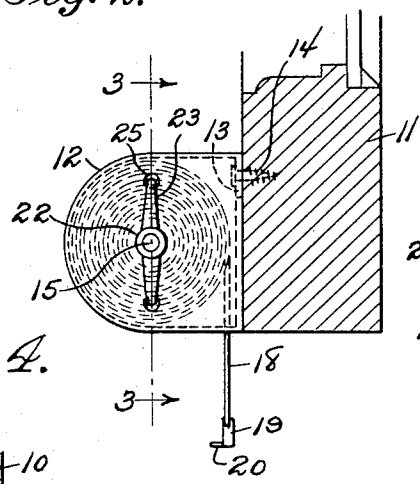



Fig. 3.

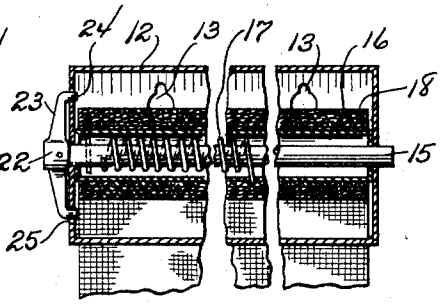
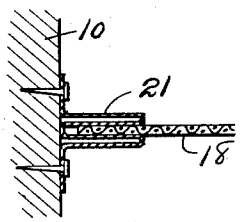



Fig. 4.




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Patented Apr. 7, 1931 1,800,080

# UNITED STATES PATENT OFFICE

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## WINDOW SCREEN

Application filed October 30, 1929. Serial No. 403,567.

This invention relates to window screens of the roller type, wherein a screen is arranged within a housing upon a spring roller and unwound therefrom to close a window opening.

An object of the present invention is the provision of a screen of the above type having novel means for mounting and attaching the screen in position for use, together with novel means for tensioning the spring of the roller and holding said spring under tension.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is an elevation showing a fragmentary portion of a window with the invention applied.

Figure 2 is an end view of the invention per se, a portion of the lower sash being shown in section.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is an enlarged fragmentary section on the line 4—4 of Figure 1.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates a portion of a window frame and 11 a portion of the lower sash. In the form of the invention shown in Figues 1 to 4 inclusive, a housing 12 is removably attached to the bottom of the lower sash and for this purpose, the housing is provided with spaced keyhole slots 13 which engage over headed screws or like elements 14 which are carried by the sash 11.

Rotatably mounted in the housing 12 is a shaft 15 and spaced from and rotatable upon this shaft is a sleeve defining a hollow roller 16. A coiled spring 17 has one of its ends secured to the shaft 15 and its opposite end secured to the roller 16, so that relative rotation of the roller and shaft will tension the spring.

A screen 18 is wound upon the roller 17 and passes through a slot which extends longitudinally of the housing 12. This screen carries at its outer end a bar 19 and this bar carries a fastening element 20 which is adapted to engage a suitable fastening element carried by the sill of the window frame. Transversely channel-shaped guides 21 are secured to opposite sides of the frame 10 to receive the side edges of the screen 18 so as to guide the latter and hold the screen in place.

The screen may be detachably secured to the sash 11 by engaging the housing over the headed screws 14 and pulling the screen downward with its side edges arranged within the guides 21. The outer edge of the screen is then detachably secured to the window sill. When not in use, the screen is retracted within the housing under the tension of the spring 17.

In order to properly tension the spring and hold the same under tension, the shaft 15 has secured to one end a collar 22. This collar is provided with oppositely extending arms 23 having inwardly extending extremities or pins 24 at their ends. These inwardly extending extremities or pins are adapted for removable insertion in openings 25 provided in the end of the housing 12. Normally, the pins 24 are engaged within the openings so as to prevent rotation of the shaft 15. However, when it is desired, to tension the spring the shaft 15 is pulled outward so that the pins will be disengaged from the housing, the arms 23 serving as a finger piece for conveniently rotating the shaft. These arms, thus perform the double purpose of providing a finger piece to rotate the shaft and means for holding the shaft against rotation.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:

1. In a tensioning device, a housing having a longitudinally disposed slot therein, a shaft mounted for rotation within the hous-

ing, a hollow roller spaced from and rotatable about the shaft, and adapted to have a flexible member wound thereon for passage through the slot of the housing, a coiled spring connecting the roller and shaft to rotate the roller in one direction, and means rigid with the shaft and detachably engageable directly with the housing to tension the spring.

2. In a tensioning device, a housing having a longitudinally disposed slot therein, a shaft mounted for rotation within the housing, a hollow roller spaced from and rotatable about the shaft, and adapted to have a flexible member wound thereon for passage through the slot of the housing, a coiled spring connecting the roller and shaft to rotate the roller in one direction, an arm rigid with the shaft upon the outside of the housing to rotate said shaft and tension the spring, and means providing a direct interlocking engagement of the arm with the housing to hold the shaft against rotation.

3. In a tensioning device, a housing having a longitudinally disposed slot therein, a shaft mounted for rotary and longitudinal sliding movement within the housing, a hollow roller spaced from and rotatable about the shaft and adapted to have a flexible member wound thereon for passage through the slot of the housing, a coiled spring connecting the roller and shaft to rotate the roller in one direction, and combined means mounted upon the shaft to lock the same to the housing and provide a finger piece to move the shaft longitudinally to unlock said shaft from said housing.

In testimony whereof we affix our signatures.

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JOSEPH McHALL.