J. D. AUGSBURGER.

SCREEN ROLLER.

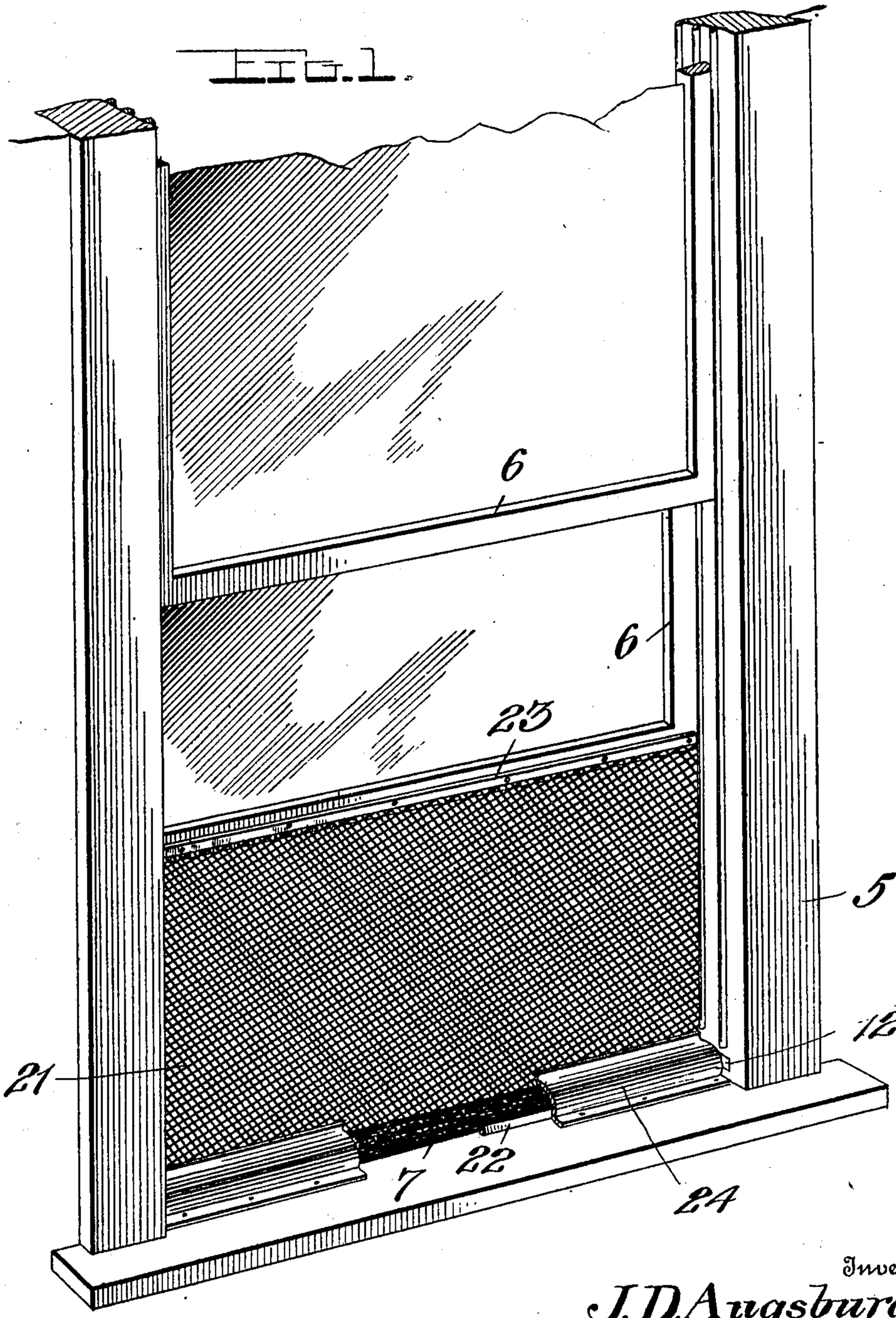
APPLICATION FILED JUNE 29, 1910.

970,456.

Patented Sept. 20, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

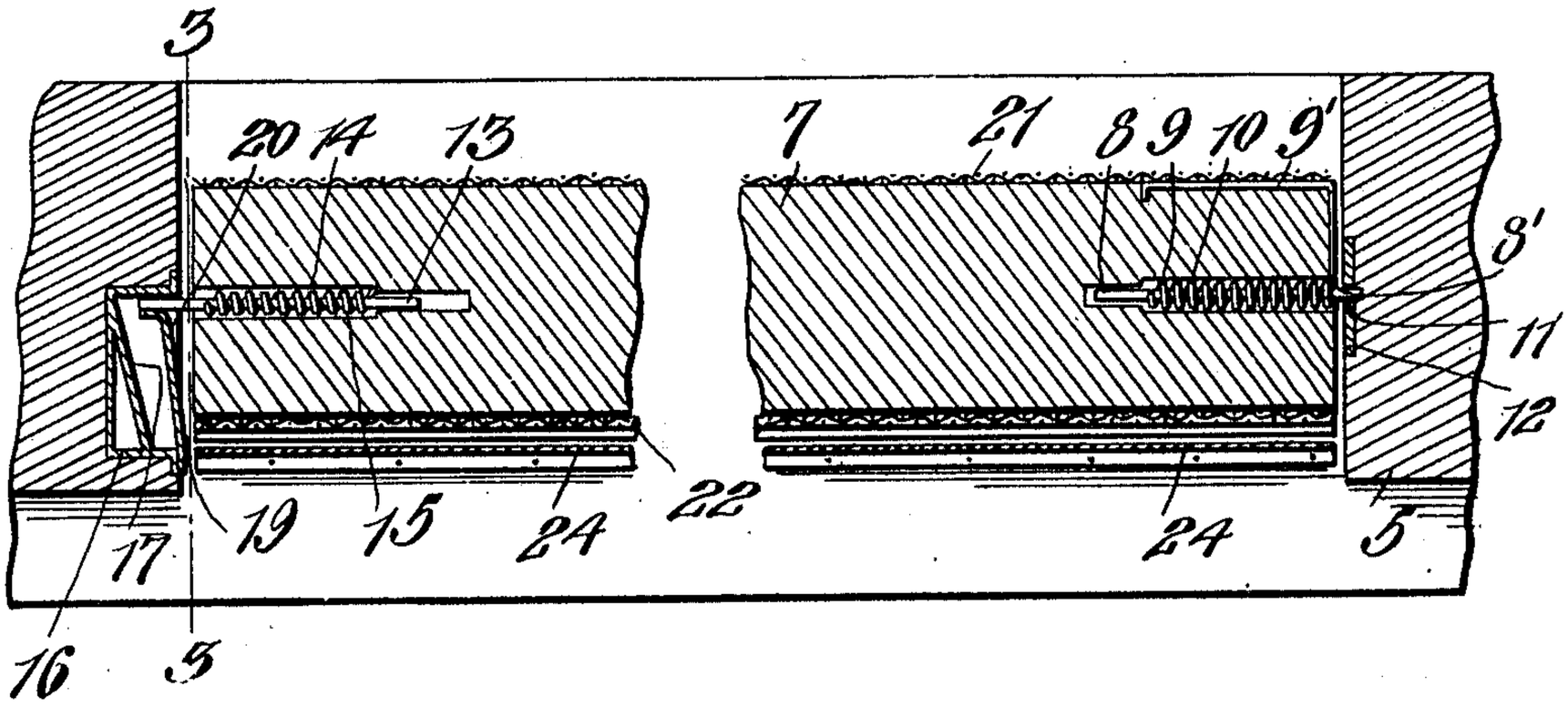


Fig. 3.

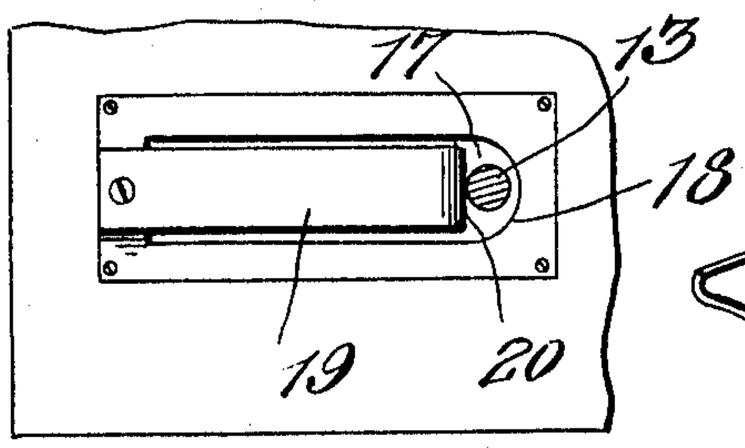


Fig. 5.

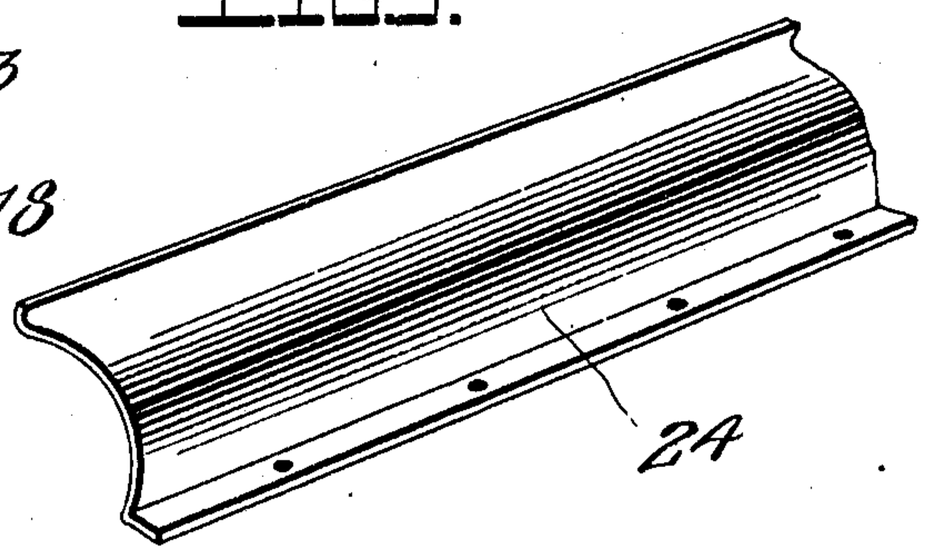
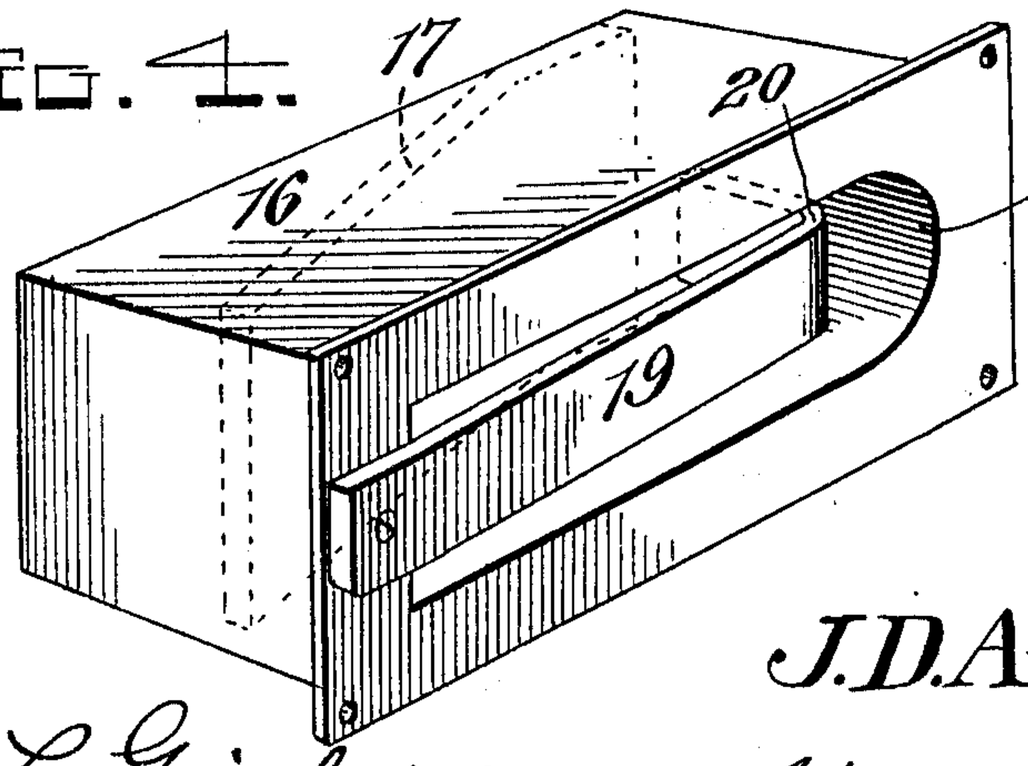


Fig. 4.



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UNITED STATES PATENT OFFICE.

JACOB D. AUGSBURGER, OF LINNGROVE, INDIANA.

SCREEN-ROLLER.

970,456. Specification of Letters Patent. **Patented Sept. 20, 1910.**

Application filed June 29, 1910. Serial No. 569,533.

To all whom it may concern

Be it known that I, JACOB D. AUGSBURGER, a citizen of the United States, residing at Linngrove, in the county of Adams and State of Indiana, have invented certain new and useful Improvements in Screen-Rollers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improved screen roller and has for its object to provide a device of this character which is very simple in construction and will when arranged in position for use effectually exclude flies or other insects from entering an apartment.

A further object is to provide new and novel means for mounting the screen roller in a window frame so that the same may be easily arranged therein or removed.

A still further object resides in the provision of means for allowing the easy rotary movement of the screen roller while at the same time all space through which the insects might enter is closed, said roller being provided with a protecting cover plate.

With these and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a window frame showing my improved screen roller arranged therein; Fig. 2 is an enlarged longitudinal section; Fig. 3 is a section taken on the line 3—3 of Fig. 2; Fig. 4 is a detail perspective view of the roller retaining member, and Fig. 5 is a detail fragmentary perspective view of the metallic weather strip.

Referring more particularly to the drawings 5 indicates the window frame in which the sashes 6 are mounted and arranged for relative movement. The screen roller 7 is arranged in the lower end of the frame immediately above the sill thereof. In one end of this roller the rod 8 is arranged and upon this rod there is a coiled spring 9. The opening 10 in the end of the roller in which the rod 8 is disposed is of considerably greater diameter than said rod to allow of the centrifugal contraction and expansion of said spring thereon. The end of the spring is extended upon one end of the roller and disposed on the periphery thereof as shown at 9′ and is secured thereto by means of suitable staples or other fastening devices. The end of the rod 8 is flattened as shown at 8′ and is adapted to be received in the rectangular opening 11 of the bracket plate 12. This plate is secured to one of the vertical side members of the window frame. In the other end of the roller 7 a longitudinally movable pin 13 is arranged. The bore 14 which is formed in the roller to receive this pin is diametrically enlarged as shown in Fig. 2 and upon the portion of the pin 13 which is disposed therein a spring 15 is coiled. One end of said spring is secured to the pin and the other end thereof to the roller at the inner end of the enlarged portion of the bore.

A roller holding or retaining device is arranged in the window frame 5 and comprises a rectangular sheet metal casing 16 which is disposed transversely of the vertical side member of said frame opposite to the bracket plate 12. This casing is formed with an interior diagonally extending wall 17 which forms the base of the walls of a longitudinal opening 18 provided in said casing. At one end of this opening a spring locking plate 19 is secured and is normally disposed in the same plane as the side of the casing. The free end of this plate is rounded and extended at right angles as shown at 20 into the opening 18 of the casing. This angularly extending end is spaced from the end of the opening 18 and in this space the end of the longitudinally movable pin 13 carried by the roller is adapted to be inserted. When thus arranged the pin 13 is held against displacement from the opening 18 by the end of the spring plate 19 bearing thereon. When it is desired to remove the screen roller from the window frame, it is only necessary to force the spring plate 19 inwardly and at the same time to pull the end of the roller outwardly from the frame.

It will be noted that the outer end of the pin 13 is rounded so that as the same engages with the end of the plate 19 said pin will be forced inwardly into the end of the roller and compress the spring 15. But slight pressure is therefore necessary to open the spring plate and after the roller has been removed the spring 15 returns the pin to its normal position.

The usual screen fabric 21 is wound upon the roller 7 and when the lower window

sash is lowered in the frame, a slight space remains between the roller and the frame sill. In order to prevent flies or other insects entering the room through this space, a triangular sheet metal rib 22 is secured to the sill and extends from one side of the frame to the other. One of the sloping sides of this rib is disposed closely upon the screen fabric and effectually prevents the entrance of flies or other insects. A bar or plate 23 secures the screen fabric 21 to the lower end of the lower window sash 6 and as the sash is raised it will be obvious that the fabric will be drawn from the roller 7 and completely close the open space below the sash thus preventing the entrance of flies while at the same time plenty of fresh air is admitted to the room or apartment.

In order to protect the screen from rain, a weather strip 24 is secured to the sill of the frame adjacent to the rib 22 and is curved to extend over the roller and the screen wound thereon. This cover or hood provides an additional means for preventing the entrance of flies and other insects.

From the foregoing it will be seen that I have provided a comparatively simple screen roller and means for mounting the same whereby it may be quickly and easily arranged in the window frame or removed. It will be obvious that if desired the roller may be arranged at the top of the frame and the screen secured to the top of the upper window sash if desired.

The device is extremely durable and efficient in use and may be constructed at a comparatively low cost.

The invention may be variously modified in its construction and is not limited to the exact details above set forth, the device being susceptible of considerable variation in form, proportion and the details of construction without departing from the essential feature or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

1. The combination with a window frame and sliding sashes therein, of a spring roller in said frame, a longitudinally movable spring controlled pin in one end of the roller, a rectangular sheet metal casing secured in one side of the frame and having an opening therein, a spring metal plate secured to said casing, the free end of said plate being extended into the opening and spaced from the end thereof, the pin carried by said roller being adapted for insertion into said space, the end of the plate bearing upon said pin to retain the roller in the frame, and a screen fabric on the roller secured at one end to one of the sashes.

2. The combination with a window frame and sashes arranged to slide therein, of a spring roller in said frame, a longitudinally movable pin arranged in one end of the roller, a spring on said pin yieldingly holding the same against movement, a rectangular sheet metal casing secured in one side of the window frame and extending transversely thereof, said casing having an intermediate inclined wall extending between its ends and forming the base of a longitudinal opening in the casing, a spring plate secured at one end to one end of the casing, the free end of said plate being disposed at right angles into the opening thereof and spaced from the end of said opening and from said inclined wall, the pin carried by said roller being adapted for insertion into said space for engagement by the end of said plate to retain the roller in position, a triangular-shaped rib arranged between the opposite sides of the casing and disposed adjacent to said roller, a sheet metal hood secured to the sill of the window frame extending over the roller, and a screen fabric adapted to be wound on said roller and secured at its end to one of the window sashes.

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

JACOB D. AUGSBURGER.

Witnesses:

SOL. STUCKEY,

JOHN C. AUGSBURGER.