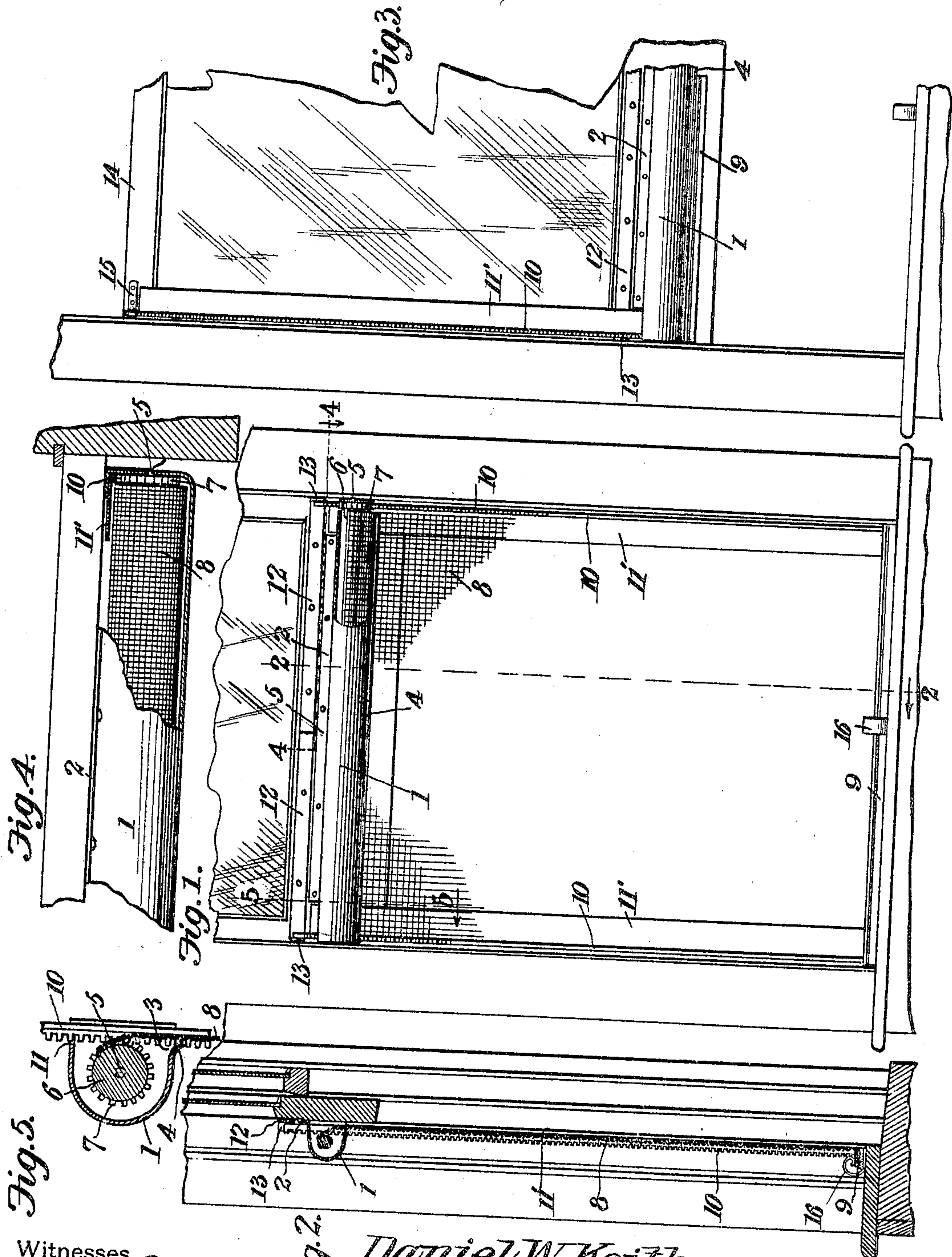


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D. W. KEITH.
WINDOW SCREEN.

APPLICATION FILED SEPT. 6, 1905.



Witnesses
E. J. Hunt
Wm. Ruggers

Daniel W. Keith, Inventor.
by *C. A. Snow & Co.* Attorneys

UNITED STATES PATENT OFFICE.

DANIEL WESLEY KEITH, OF KEITHVILLE, LOUISIANA.

WINDOW-SCREEN.

No. 812,850.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed September 6, 1905. Serial No. 277,152.

To all whom it may concern:

Be it known that I, DANIEL WESLEY KEITH, a citizen of the United States, residing at Keithville, in the parish of Caddo and State of Louisiana, have invented a new and useful Window-Screen, of which the following is a specification.

This invention relates to window-screens, such as are used for the purpose of excluding insects; and it has particular reference to that class of screens which are adapted to be wound upon a roller connected with a window-sash, so that when the window is open the screen will be unwound from the roller, and vice versa.

The objects of the present invention are to simplify and improve the construction and operation of devices of the class referred to; and with these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a front elevation of the lower portion of a window-casing, the bottom of which is equipped with the improved screen, said bottom sash being shown in a raised position. Fig. 2 is a vertical sectional view taken on the plane indicated by the line 2 2 in Fig. 1. Fig. 3 is a front elevation showing the bottom sash partly raised without unrolling the screen. Fig. 4 is a sectional view, enlarged, taken on the plane indicated by the line 4 4 in Fig. 1 and showing in plan the screen-casing, a portion of which has been broken away. Fig. 5 is a sectional view, enlarged, taken on the plane indicated by the line 5 5 in Fig. 1.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

In carrying this invention into practical operation, a casing, 1 of suitable shape and

dimensions, is provided, said casing being preferably constructed of sheet metal and provided at one edge with a flange 2 for the reception of means, such as nails or screws, whereby it may be secured in position upon a sash-rail. In the accompanying drawings it has been shown applied to the bottom rail of a lower sash, and the fastening-flange is at the upper edge of the casing. If the casing or fixture is applied to an upper sash, its position will be reversed, as will be readily understood. The casing is provided at the edge opposite to the fastening-flange with a slot or opening 3, over which a curved lid, as 4, projects. The ends of the casing afford bearings for the ends of a shaft 5, carrying a roller 6 and provided adjacent to the ends of said roller with spur wheels or pinions 7. A screen 8, made of foraminous flexible material, such as wire-gauze, is attached to and adapted to be wound upon the roller 6, and the free edge of said screen is attached to a cleat 9, which may not be drawn through the slot 3. To the ends of the cleat 9 are secured a pair of rack-bars 10 10, that extend through slots 11 in the ends of the casing 1, and beneath said rack-bars, are secured a pair of strips 11', of sheet metal, which extend back of the casing and which constitute fenders or guards to prevent insects from entering between the edges of the screen and the window-casing. These fenders may be secured in position when the device is applied to the window in order to compensate for the slight variation in width of various casings supposed to be of standard size, such variation being frequently caused by unequal shrinkage. Said fenders will thus serve to fill any possible space between the rack-bars and the sides of the window-casing. Additional fender-strips 12 overlapping one another at their inner ends are secured to the sash-rail adjacent to the securing-flange of the screen-casing, said fender-strips being provided with up-turned hooks 13 at their outer ends, which extend under the fender-strips 11 and draft-bars 10 to prevent said strips and bars from spreading. The sash-rail 14, opposite to that with which the screen-casing is connected, is provided with loops or guards 15 for the reception of the free ends of the rack-bars when the screen is rolled.

Upon the sill of the window-casing is secured a catch 16, adapted to engage and to hold the cleat 9 at the free edge of the screen when said cleat rests upon the sill.

When the bottom sash, to which the device has been applied, is raised while the cleat 9 is in engagement with the catch 16, the roller will be rotated by the pinions 7 engaging the rack-bars 10, thus unwinding the screen to the height to which the sash is raised. When the sash is lowered, the screen is wound upon the roller. When it is not desired to use the screen, the catch 16 is simply disengaged from the cleat 9, and then when the sash is raised it will carry with it the entire casing, containing the screen-roller, together with the cleat 9, the rack-bars 10, fenders 11' and related parts, as will be clearly seen in Fig. 3 of the drawings.

Having thus described the invention, what is claimed is—

1. A screen-casing having an attaching-flange at one edge and a slot at the opposite edge, a roller supported for rotation in said casing and having spur-wheels at the ends thereof, a flexible screen upon the roller, a cleat at the free edge of the screen, and rack-bars connected with said cleat and extending through the screen-casing in engagement with the spur-wheels.
2. A screen-casing having a slot, a roller supported for rotation in said casing and provided with spur-wheels, a screen connected with the roller and extending through the slot, a cleat at the free edge of the screen, rack-bars connected with the cleat and projecting through the casing in engagement with the spur-wheels, and fenders connected with the casing beneath the rack-bars.
3. The combination with a window-sash, of a screen-casing connected therewith having a slot, a roller supported for rotation in said casing and having spur-wheels, a screen connected with the roller and extending

through the slot in the casing, a cleat connected with the free edge of the screen, rack-bars connected with the cleat and projecting through the casing in engagement with the spur-wheels, and means for detachably connecting the cleat with the window-casing.

4. The combination with a window-sash, of a screen-casing connected therewith and having a slot, a roller supported for rotation in said casing and having spur-wheels, a flexible screen connected with the roller and extending through the slot in the casing, a cleat connected with the free edge of the screen, rack-bars connected with the cleat and projecting through the casing in engagement with the spur-wheels, fender-strips connected with the cleat and extending beneath the rack-bars and between the screen-casing and the sash-rail upon which the latter is mounted, and auxiliary overlapping fender members having upturned ends engaging the fender-strips and the rack-bars.

5. The combination with a window-sash, a casing connected therewith, a screen-carrying roller in said casing, a cleat at the free edge of the screen, and spur-wheels upon the screen-carrying roller; of rack-bars connected with the cleat and projecting through the casing in engagement with the spur-wheels, and loops or guards for the reception of the free ends of the rack-bars upon the rail of the sash opposite to that with which the screen-casing is connected.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

DANIEL WESLEY KEITH.

Witnesses:

S. O. WILLIAMS,
J. P. FLOURNOY, Sr.