

No. 619,198.

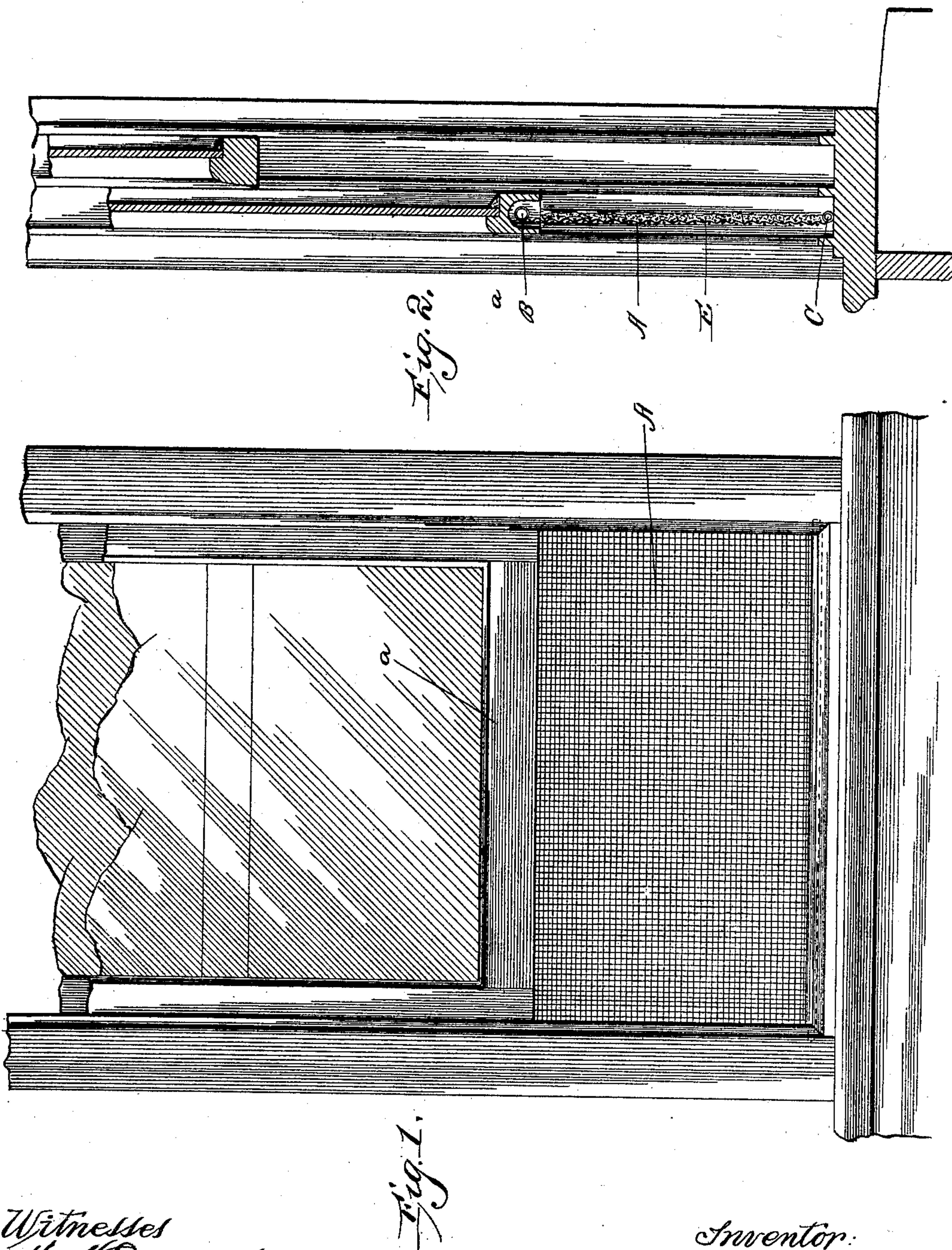
Patented Feb. 7, 1899.

E. E. MALLORY.
WINDOW SCREEN.

(Application filed Jan. 31, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
Wm. Edwards Jr.
J. P. Mothershead

Inventor:
Ernest E. Mallory
By *Edson Bros.*
Attorneys:—

UNITED STATES PATENT OFFICE.

ERNEST E. MALLORY, OF WEST UNITY, OHIO, ASSIGNOR OF ONE-HALF TO
GEORGE SMITH, OF SAME PLACE.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 619,198, dated February 7, 1899.

Application filed January 31, 1898. Serial No. 668,620. (No model.)

To all whom it may concern:

Be it known that I, ERNEST E. MALLORY, a citizen of the United States, residing at West Unity, in the county of Williams and State of Ohio, have invented certain new and useful Improvements in Window-Screens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in window-screens, more especially that class wherein the screen is extended and folded as the window is raised or opened and lowered or closed, respectively.

It has for its object, among other things, to provide for the ready lateral adjustment of the screen to adapt it to different-sized windows, either already constructed or otherwise, to effect the ready removal and replacing of the screen-roll for changing screen or adjusting tension of its spring, to facilitate and simplify the temporary securing of the lower or sill end of the screen, to provide for the holding of the screen-roll and its actuating-spring in common in the bottom rail of the sash, to conveniently secure the screen to its roll and bottom rod or bar, to effectively guard the screen along its lateral loose edges, and to provide for the ready attachment and removal of the spring-coiled journal of the screen-roll and the ready removal of the latter from the sash.

The invention therefore consists of the sundry combination of parts and their arrangement and construction, substantially as hereinafter more fully disclosed, and specifically pointed out in the claims.

In the accompanying drawings, illustrating the preferred form of carrying out my invention, Figure 1 is a front view showing it as applied for use extended. Fig. 2 is a section thereof. Fig. 3 is a longitudinal section taken through the screen-roll. Fig. 4 is a detail view of a modification of the angular spring-coiled journal-bearing and its bracket. Fig. 5 is a longitudinal section of the screen securing or weighting rod and the spring-clip

or fastening for the screen thereto. Fig. 6 is the preferred form of the removable bearing-plate for the journal and the securing device therefor. Fig. 7 is a view of one end of the rod, showing the bolt and thumb-button. Fig. 8 is a transverse section through the upper screen-roll and screen attached. Fig. 9 is an enlarged transverse section through the weighting-rod. Fig. 10 is a horizontal section showing the application of the brush-guards. Fig. 11 is a detailed perspective view of a portion of the guard applied, and Fig. 12 is an end view of the end-plate casting.

Latitude will herein be allowed as to details, as they may be varied without departing from the spirit or principles of my invention and the same yet remain intact.

A refers to the screen, of some suitable limp material, as fine meshed gauze and the like, connected at the top and bottom to a roll B and a weighting or securing rod or bar C, respectively, preferably by segmental spring-clips *b c*, adapted to be sprung over the top and bottom edges of said screen and upon said roll and rod, respectively, thus conveniently and effectively securing the screen thereto.

The roll B is hollow and the lower sash-rail *a* is recessed or hollowed out to receive said roll and form a housing therefor and the screen when rolled, and through said roll extends a rod or journal D, with its cylindrical end forming a gudgeon *d*, entering an inwardly-projecting corresponding bearing or boss *e'* upon an end-plate casting *e*, secured to said lower sash-rail. The opposite end of the rod or journal D is angular and enters a corresponding bearing or socket *f'*, cast with a removable plate *f*, let into lateral pockets or sockets *f''*, formed in that end-plate casting *f'''* of the lower sash-rail to permit its ready removal, as will be appreciated. This end-plate casting and the aforesaid removable plate are each provided in their lower edges, near the front side, with a notch or recess *f''''*, placed in alinement to receive and thus obviate withdrawal of the screen-weighting rod-securing bolts (hereinafter described) to take

them out of the way when the sash is closed down upon the sill. The removable bearing-plate f is held in place preferably by a bolt f^5 , suitably supported upon a horizontal portion or flange of the end-plate casting f^3 , and has one end adapted to engage an opening f^6 in said bearing-plate f , and thus secure the latter, and its other end provided with a thumb or finger piece f^7 , projecting downward through a slot f^8 in said flange to provide for its convenient manipulation.

Upon the rod or journal D is arranged a preferably coiled or helical spring g , one end being suitably secured to said rod or journal and the other end terminating in a longitudinal portion or terminal g' , adapted to lie in a parallel slot g^2 in a loose sleeve g^3 , slipped on the rod or journal D for a portion of its thickness, the remaining thickness of said terminal g' adapted to engage a coincident slot g^4 in the roll B, thus effecting a detachable connection between said spring and roll, the convenience of which will be readily appreciated. The aforesaid sleeve g^3 is prevented from slipping endwise on the journal D by a small band firmly fastened to journal D, as shown in Fig. 3. Thus the roll B and the journal D are kept in right relation to each other endwise. The sleeve g^3 and the point at which the opposite end of spring is fastened to the journal are far enough apart to stretch the spring endwise a little.

In the ends of the rod or bar C, preferably hollow, as one way of connecting said rod or bar to the window-frame, are arranged bolts or slides h , adapted to engage coincident sockets or holes in said window-frame and having thumb or finger pieces h' projecting through longitudinal slots h^2 in said rod to permit of their ready manipulation.

Suitably secured to the inner sides of the window-frame in grooves produced in the jambs are guards E, preferably in the form of fibers or bristles arranged brush fashion or singly in a row compactly together and ranging along the lateral edges of the screen to guard those otherwise unprotected points and yet obviating the attachment of the screen to the sides of the window-frame, as required in this class of window-screens. Said grooves are made a little wider than the body of the fibers or bristles, thereby affording room for the fibers or bristles to retreat when the window-sash is closed.

The screen is rolled up and the tension applied by turning the bearing-plate f three or four times. Then after having properly adjusted the opposite end of journal in its bearing or boss the plate f is slipped or placed into the pockets or sockets in the end-plate casting f^3 .

The lateral adjustment of the screen to accommodate it to different-sized windows is effected by accordingly varying the length

of the roll B and journal D, the cutting to be done from the cylindrical end of said journal and the adjacent end of said roll.

In the modification illustrated in Fig. 4 is shown another form of removable bearing-plate A' for one end of the roll journal or rod, with its upper edge provided with a projection a' , and having pivoted to its one side a dog or latch a^2 , jointly adapted to hold said plate in place. The projection a' engages the end-plate casting, and the latch a^2 is adapted to engage said bearing-plate and said end-plate casting in a fixed position.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a window-screen, the combination of the slotted screen-roll, the fixed journal or rod extending therethrough, the loose slotted sleeve arranged on said rod or journal, the spring arranged on and secured to said rod or journal, and having one terminal portion engaging the slots of said roll and said sleeve, respectively, substantially as set forth.

2. In a window-screen, the combination of the screen-roll, the rod or journal having spring connection with said screen-roll, the end-plate casting, the slidably-removable bearing-plate, a sliding bolt secured to the end-plate casting and adapted to lock the bearing-plate in position, as described, and means for conveniently manipulating said bolt, for the purpose and substantially as described.

3. In a window-screen, the combination of the screen-roll, the rod or journal extending therethrough, and having spring connection with said roll, the removable bearing-plate for said rod or journal, the end-plate casting having lateral sockets or pockets to receive said removable bearing-plate, and means to retain said bearing-plate in place and to readily permit its release or removal, substantially as set forth.

4. In a window-screen, the combination of the screen, its suspending-roll and spring-encircled rod or journal and bottom securing or weighting rod, and the end-plate castings having alined notches or recesses in their lower edges to receive said bottom-securing rod for the purpose set forth.

5. In a window-screen, the combination, with the screen proper, of a window-frame having grooves in its inner sides and along the vertical edges of said screen, and a guard fixed in each of said grooves, said guard consisting of a strip having bristles or fibers secured in, and arranged on, said strip and adapted to extend beyond the faces of said grooves, substantially as described.

6. In a window-screen, the combination of a hollow slotted roll, a rod therein, a loose slotted sleeve arranged on said rod, a spring arranged on and secured to said rod and hav-

ing one end engaging the slots of said roll
and sleeve, with an end casting having a boss
adapted to project into one end of the roll
and receive one end of the rod, and an end
5 casting at the opposite end of the roll having
an inner slot upon its end and a removable
plate having a socket for engagement with
the angular end of said rod and adapted to

be received by said inner slot, substantially
as described.

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

ERNEST E. MALLORY.

Witnesses:

J. H. MILLER,
GEO. C. RINGS.