

F. A. FERGUSON.
VENTILATING SCREEN FOR WINDOWS.
APPLICATION FILED SEPT. 23, 1920.

1,372,128.

Patented Mar. 22, 1921.

Fig. 2.

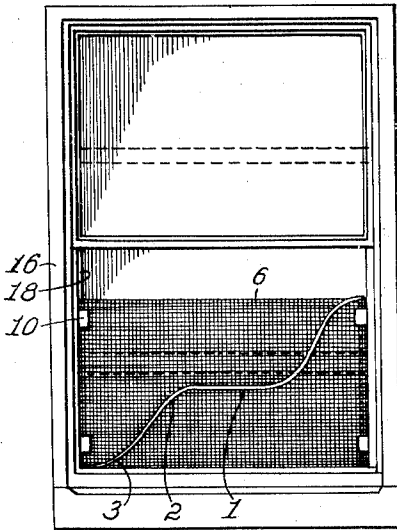


Fig. 3.

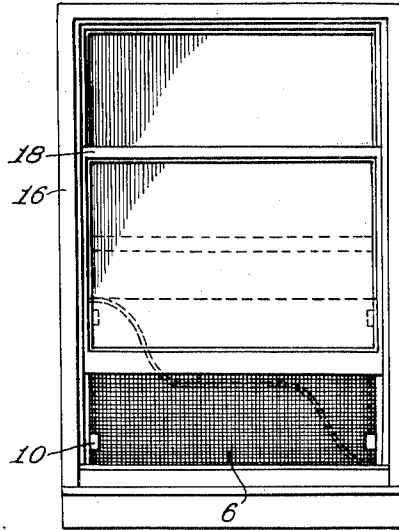


Fig. 1.

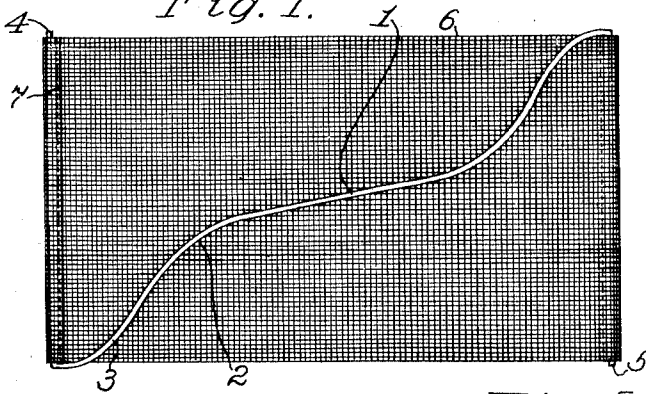


Fig. 6.

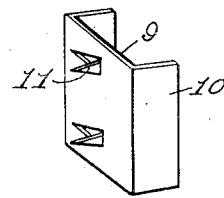


Fig. 4.

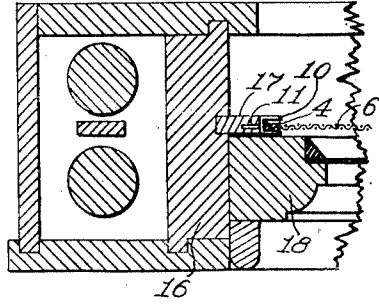


Fig. 5.

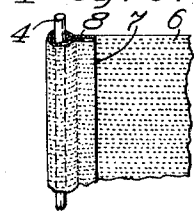
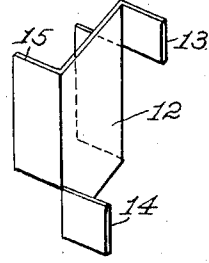


Fig. 7.



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UNITED STATES PATENT OFFICE.

FRANK A. FERGUSON, OF WATERLOO, IOWA.

VENTILATING-SCREEN FOR WINDOWS.

1,372,128.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK A. FERGUSON, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Ventilating-Screens for Windows, of which the following is a specification.

My invention relates to improvements in ventilating screens for windows, and the object of my improvement is to supply simple, inexpensive, and convenient means of this kind, including an improved single piece resilient holding-device for the ventilating screen, with other means for releasably securing the combined holder and screen within a window casing.

This object I have accomplished by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which Figure 1 is a side elevation of my combined resilient holder and foraminated ventilator screen; Figs. 2 and 3 are respectively elevations of opposite faces of a window casing, its movable sashes and one of my improved ventilating screens properly mounted within the casing, the screen being shown on a reduced scale; Fig. 4 is a fragmental, horizontal sectional view of a window casing and of my improved ventilator screen as mounted upon the weather-strips therein; Fig. 5 is a fragmentary elevation in perspective of said screen, in which a portion of the reinforced tubularly overlapped end is shown inclosing an end member of the elastic rod holding device; and Figs. 6 and 7 are respectively enlarged perspective views of varied securing clips or fastening devices for mounting the ends of the ventilator screen upon said weather strips.

Similar numerals of reference denote corresponding parts throughout the several views.

Referring first to said Fig. 1, the numeral 6 denotes a flat ventilator screen made of finely meshed or foraminated material, preferably flexible, and which may be finely netted wire or porous textile material, such as thin muslin, which will permit transpiration of air, but obviating drafts. As shown in said Fig. 5, opposite ends of said screen are tubularly overlapped at 7, and preferably have one or more thicknesses of reinforcing fabric 8, likewise tubularly folded therein to contain removably the end

members 4 and 5 of a single rod elastic holding device 1.

The holding device is a single elastic rod bent at the same distance from each extremity to provide spaced oppositely directed substantially parallel straight end members 4 and 5. The intermediate part of said rod extends in a substantially diagonal direction from one member to the other, and a part of its middle 1 is preferably straight and when not under tension, is slightly inclined to the medial longitudinal line of the ventilator screen 6. The straight part 1 is united with the end members 4 and 5 by parts shaped with contrary curves or flexures 2 and 3. This is the preferred embodiment of the holding device, but it is evident that the contour of the intermediate parts of the rod may be considerably varied without departing from this invention. When the overlapped or tubular parts 7-8 or the ventilator screen 6 are slidably mounted upon said end members 4 and 5, which is preferably effected at a time when the flexed intermediate parts 1, 2, and 3 are somewhat elastically contracted by the use of endwise pressure upon the holding device, the screen may be removably mounted within a window casing 16. In mounting the screen within said casing, the covered end members 4 and 5 are placed in contacting juxtaposition with the vertical weather-strip 17, or within certain releasable fastening devices to be hereinafter described. In this operation, the flexed diagonal rod parts 1, 2 and 3 are placed under elastic contracting compression before being released between and against said weather strips, which they then engage with reactive elastic pressure sufficing to keep them in place under ordinary conditions. This elasticity is due to the contractility of the flexures 2 and 3 and the resiliency of the end members 4 and 5. When the holding device is thus in place, the straight middle part 1 is substantially longitudinally directed and affords a stiffening member.

To prevent dislodging of the device, by reason of unusual stresses upon it angularly, I have provided securing means mounted upon said weather strips. In case the weather strips 17 are of wood, any suitable engaging means for the end members 4 and 5 may be used, such as the exemplification of Fig. 6. This consists of a small rectangular plate 9 having its ends 10 bent

in the same direction, and having partially cut out pointed tongues 11 bent in an opposite direction to be driven into the weather strip to direct the parts 10 inwardly relative to the casing. The end members 4 and 5 may then be sprung sufficiently to seat them within the trough of the said fastening devices as shown in Fig. 2.

In Fig. 7 is shown a modification wherein a rectangular plate 12 has end parts 15 bent in the same direction to be mounted upon a metal weather strip, with end portions 13 and 14 respectively at opposite ends of said parts 15 bent in an opposite direction thereto to serve as holding lugs or members for the end members 4 and 5. It is obvious that any other species of releasable securing means may be employed for the purpose without departing from my invention.

It will be observed that, as shown in said Figs. 2 and 3, my improved combination of resilient holding means and ventilator screen may be mounted within any part above or below of the window casing, as desired, and that the sash 18 may be movable relative thereto to any width of opening as desired, without interfering with the screen. The device is therefore suitable for use in all weathers and temperatures, and serves to gently ventilate an apartment without causing drafts, keeping out dust and insects,

while also serving the purpose of a shade in lessening the intensity of entering light.

The holding device may be varied in length to fit differently spaced jambs, by merely manually flattening or increasing the curvatures of its flexures 2 and 3 in bending the rod appropriately at these places.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. A device of the character described, comprising a substantially N-shaped elastic body with sinuously curved inclined medial member, and a flexible longitudinally extensible web whose ends are secured upon the end members of said body under lengthwise tension.

2. A device of the character described, comprising a substantially N-shaped elastic body whose inclined medial member is shaped for adjustable distortion to vary the effective length of the body, a flexible web mounted on the end members of said body removably, and U-shaped clips to releasably receive said end members having fastening means thereon for securing them to opposite jambs of a window-casing or other structure.

Signed at Waterloo, Iowa, this 4th day of Sept. 1920.

FRANK A. FERGUSON.