F. J. SIKOROVSKY.

COLLAPSIBLE SCREEN OR VENTILATOR.

APPLICATION FILED JUNE 19, 1919.

**1,332,924.**

Patented Mar. 9, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

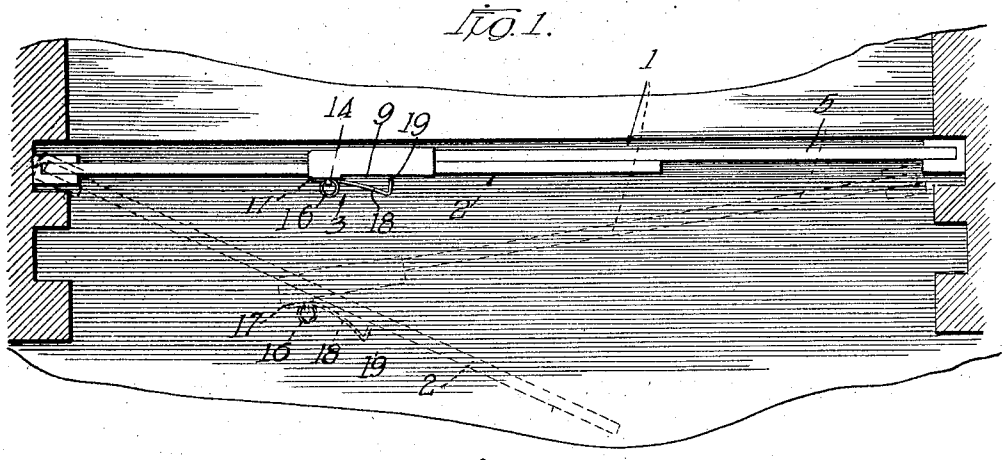



Fig. 2.

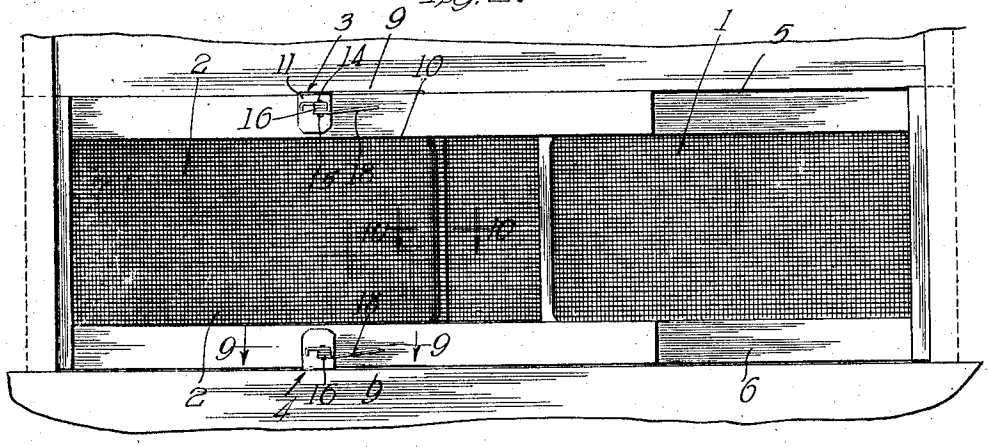



Fig. 3.

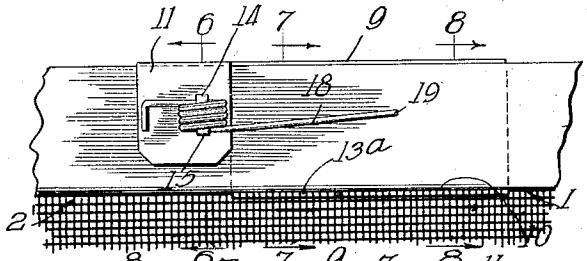
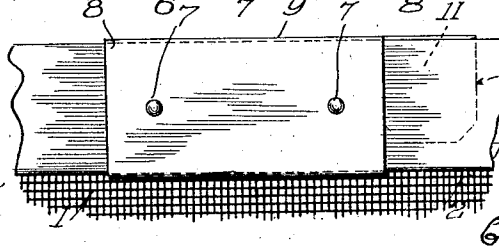



Fig. 4.




Witnesses:

Harry R. Whitehead

W. P. Kilroy

Inventor:

Frank J. Sikorovsky

By Miller,

Chindahl & Parker

Attys

F. J. SIKOROVSKY.

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2 SHEETS—SHEET 2.

Fig. 5.

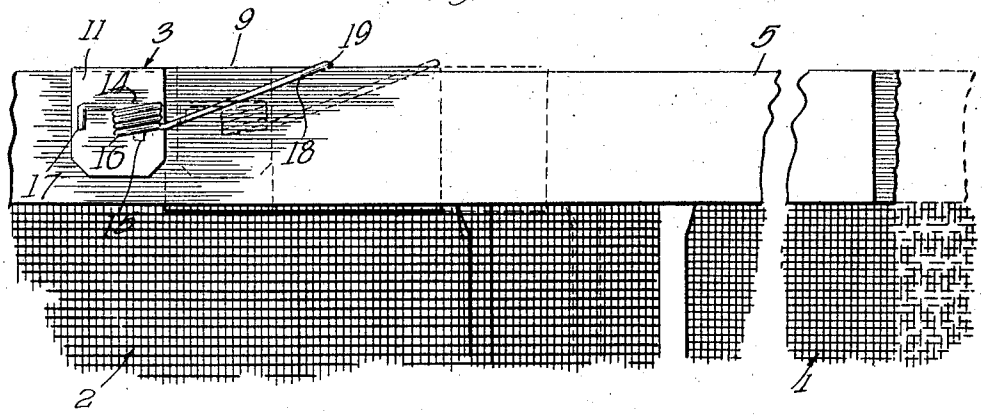



Fig. 6.

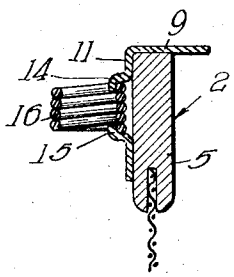



Fig. 7.

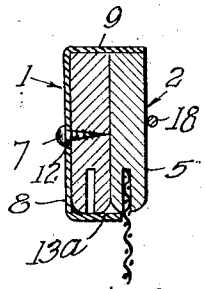



Fig. 8.

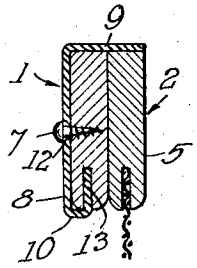



Fig. 9.

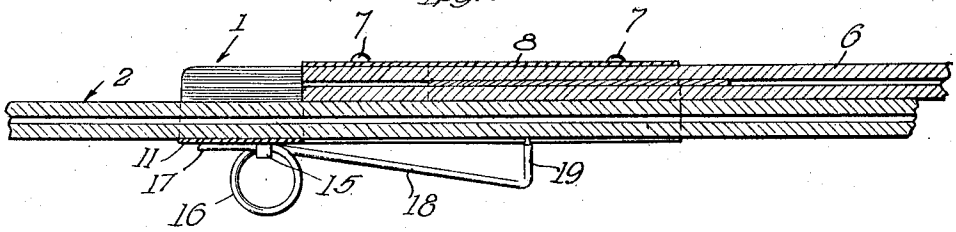



Fig. 10.

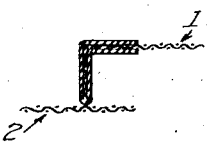
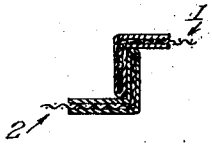



Fig. 11.




Witnesses:

Harry P. L. White

W. P. Kilroy

Inventor:

Frank J. Sikorovsky

By Miller Chindahl Parker

Attys

# UNITED STATES PATENT OFFICE.

FRANK J. SIKOROVSKY, OF CHICAGO, ILLINOIS.

## COLLAPSIBLE SCREEN OR VENTILATOR.

1,332,924. Specification of Letters Patent. Patented Mar. 9, 1920.

Application filed June 19, 1919. Serial No. 305,377.

*To all whom it may concern:*

Be it known that I, FRANK J. SIKOROVSKY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Collapsible Screens or Ventilators, of which the following is a specification.

This invention relates to an extensible window screen or ventilator of the type comprising a frame filled with suitable screening material and adapted to have its ends engaged in the grooves of a window casing beneath a window. With the screens of this type heretofore known, it has been necessary to slide the sections endwise with relation to each other in inserting or withdrawing the screen. Inasmuch as said screens are usually cheaply made structures, it is often difficult to slide the sections relative to each other particularly in damp weather when the usual tongue and groove connections between the sections become swelled.

It is a general object of my invention to produce an extensible screen which may be readily adapted for any width of window and which may be readily withdrawn from or inserted into the window without the necessity of sliding the sections of the screen endwise in relation to each other. This general object I accomplish by providing means which allow not only a relative longitudinal adjustment of the screen sections but also permit of the relative pivotal movement of the sections and it is this pivotal movement which is utilized in the insertion or withdrawal of the screen.

Another object of the invention is to provide means which normally holds the sections against relative longitudinal movement and tends to hold the sections in parallel relationship but which is yieldable to allow the relative pivotal movement of the sections necessary to the insertion and withdrawal of the screen.

Further objects, and objects relating to the details of construction of the device will be fully set forth in the following description.

In the drawings, Figure 1 is a top view of one embodiment of the invention showing the screen in position in a window, the dotted lines showing one position of the screen sections when being removed from or inserted into a window. Fig. 2 is a side view of the parts shown in Fig. 1. Fig. 3 is an enlarged fragmental side view of the fastening bracket showing the screen sections locked against movement by the spring retainer. Fig. 4 is an enlarged fragmental view of the opposite side of the fastening bracket. Fig. 5 is an enlarged fragmental view of the screen showing the retainer as released from the screen section frame and illustrating in dotted lines an adjustment of the screen. Fig. 6 is a vertical sectional view of the fastening bracket and retainer taken on line 6—6 of Fig. 3. Fig. 7 is a vertical sectional view taken on line 7—7 of Fig. 3. Fig. 8 is a vertical sectional view taken on line 8—8 of Fig. 3. Fig. 9 is an enlarged horizontal sectional view, partly broken away, taken on line 9—9 of Fig. 2 and looking in the direction of the arrows. Fig. 10 is a horizontal sectional view taken on line 10—10 of Fig. 2. Fig. 11 is a section similar to Fig. 10, but showing the vertical sheet-metal end pieces of two screen sections in contact.

In the preferred embodiment herein shown of my invention, the numeral 1 designates one screen section and 2 indicates the other screen section. The screen sections are slidably connected in overlapping relation to each other by means of sheet-metal brackets 3 and 4, and are preferably arranged to slide lengthwise with relation to each other in order that any horizontal adjustment desired may be obtained. The brackets 3 and 4 are located on the upper and lower frame members 5 and 6, respectively, of the screen section 1 at the inner end thereof, and are secured to said frame members by any suitable fastening means, such as screws 7.

The brackets 3 and 4 are preferably made of sheet metal, and in the present instance each consists of the single piece of metal comprising a base portion 8 having angular flanges 9 and 10 along its upper and lower edges which overlie the edges of the frame piece of the other screen section. The flange 9 is located at the outer edge of the screen frame and one end of said flange projects beyond the end of the frame section and is provided with an angular extension 11 lying in a vertical plane along the side face of the frame bar of the other screen section. The screen section 2 slides in a guideway provided by the flanges 9 and 10 and the extensions 11 of the two brackets, and inasmuch as

the extensions 11 are offset with relation to the bases 8 of the brackets the screen section 2 may have a pivotal or swinging movement around the end of the screen section 1 in addition to the relative sliding movements of the sections, as will be seen from an examination of Figs. 1 and 9. The base portion 8 is provided with screw holes 12 for fastening the bracket to the frame of the screen section. The flange 10, lying on the inner side of the frame member 5 is bent upon itself about half its length at 13 (Fig. 8) so as to engage between the frame member and the retaining strip which also holds the screening in place. The opposite flange 9, together with the portion 13ª of the flange 10, serves as a guide for the frame of the screen section 2. Two lugs 14 and 15 formed on the extension 11 of the bracket serve to hold a coiled spring 16 tightly in place thereon; one end 17 of the spring resting on the extension, the other end 18 thereof extending substantially in a horizontal plane and bent to form a hook 19 to engage with a screen section.

The extension 11 of the bracket is made integral with the projecting portion of the flange 9, hence the base portion 8 and the inner edge of the extension 11 lie in substantially the same vertical plane, (Figs. 3 and 4). Consequently when pressure is applied on the side opposite the springs, the screen sections will collapse between the base portion 8 and the inner edge of the extension 11.

The operation of the device is as follows: To adjust the screen sections to the length desired, first raise the hook 19 of the spring 16 and place it over the flange 9, as shown in Fig. 5. Then adjust the screen sections as desired. When the adjustment of the screen section is completed, place the spring hook 19 on top of the other screen section, the spring pressure causing the point of the hook to sink into the frame member (Fig. 2), thus tightly locking the sections together. Should it be desired to remove the screen as a whole from the window, grasp the screen near the middle thereof and exert a lateral pull. The force exerted overcomes the resistance of the springs 16 mounted on the brackets and the screen collapses in the middle portion thereof and is readily removed from the window. (See Fig. 1.)

While I have herein disclosed the preferred embodiment of my invention in considerable particularity for the sake of clearness, I recognize that various alternatives will occur to persons skilled in this art, and I, therefore, do not confine my invention to the present disclosure, but aim to cover in the appended claims all modifications and equivalents falling within the scope of the invention.

I claim as my invention:

1. A window screen or ventilator having, in combination, two sections in overlapping relation, means for holding said sections together and allowing both relative slidable and relative pivotal movement between the two sections, and means for locking the sections against relative sliding movement without interfering with the pivotal movement thereof.

2. A window screen or ventilator having, in combination, two sections, means mounted on the frame of one section and engaging the frame of the other section for holding the sections together and allowing both relative slidable and relative pivotal movement of the sections and means carried by said securing means for locking the sections against sliding movement while allowing the relative pivotal movement thereof.

3. A window screen or ventilator having, in combination, two sections in overlapping relation, and a pair of brackets mounted on the inner end of one section and engaging the other section to slidably secure the sections together, said brackets having overhanging end portions allowing the two screen sections to have a relative pivotal movement to facilitate insertion of the screen into and its withdrawal from a window.

4. A window screen having, in combination, two slidable screen sections, brackets mounted on one of the sections and slidably connecting said two sections together, and a means mounted on the bracket adapted to hold the screen sections in a fixed position, but permitting collapsing of the screen.

5. A window screen or ventilator having, in combination, two slidable screen sections, brackets mounted on one of the sections and slidably connecting said two sections together, and a spring mounted on the bracket adapted to hold the screen sections in a fixed position, said brackets being adapted to permit swinging movement of the screen sections.

6. A window screen or ventilator having, in combination, two relatively slidable sections, means for connecting said sections together to allow both relative sliding and relative pivotal movement thereof and means tending to hold said sections in their normal parallel relation.

7. A window screen or ventilator having, in combination, two relatively slidable sections, means for connecting said sections together to allow both sliding and relative pivotal movement thereof and yieldable means acting to lock said sections against relative slidable movement without interfering with their relative pivotal movement, said means normally tending to hold said sections in their parallel relation.

8. A window screen or ventilator having, in combination, a plurality of sections overlapping each other and each comprising a frame filled with screen material, a pair of

brackets fixed on the inner end of one frame and having portions projecting from such inner end and embracing the frame of the other section to secure the sections together and allow both relative slidable and relative pivotal movement of the sections, and means acting to lock the sections against sliding movement and to hold the sections in parallel relation, said means being yieldable to allow pivotal movement of the sections to facilitate insertion and withdrawal of the screen from a window.

9. A window screen having in combination, two screen sections, a bracket rigidly mounted on one of the sections, said bracket having angular flanges, a base portion and an extension attached to one of the flanges, a spring mounted on the extension of said bracket and having a hook adapted to be forced into a screen section frame by the spring to hold the screen sections in fixed relative position, the bracket permitting collapsing movement of the sections at the junction thereof, while the sections are held in fixed position by the hook.

10. A window ventilator having, in combination, two screen sections, brackets mounted on one screen section, springs mounted on the brackets adapted to hold a screen section in the same plane as the other section by spring pressure by allowing the screen sections to collapse when sufficient pressure is exerted to overcome the resistance of said spring.

11. A sheet metal bracket for collapsible window screens having in combination, a base portion, two flanges and an extension, one of said flanges extending beyond the base portion and opposite flange, the other flange being bent upon itself part of its length, the extension being integral with the first mentioned flange, and a spring having a hook mounted on the extension.

In testimony whereof, I have hereunto set my hand.

FRANK J. SIKOROVSKY.

Correction in Letters Patent No. 1,332,924.

It is hereby certified that in Letters Patent No. 1,332,924, granted March 9, 1920, upon the application of Frank J. Sikorovsky, of Chicago, Illinois, for an improvement in "Collapsible Screens or Ventilators," an error appears in the printed specification requiring correction as follows: Page 3, line 31, claim 10, for the word "by" read *but;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 23d day of March, A. D., 1920.

[SEAL.]

M. H. COULSTON,

*Acting Commissioner of Patents.*

Cl. 156—38.