F. J. & J. R. BALDWIN.

ADJUSTABLE VENTILATOR.

APPLICATION FILED JAN. 21, 1911.

997,947. Patented July 18, 1911.

2 SHEETS—SHEET 1.

FIG. 1.

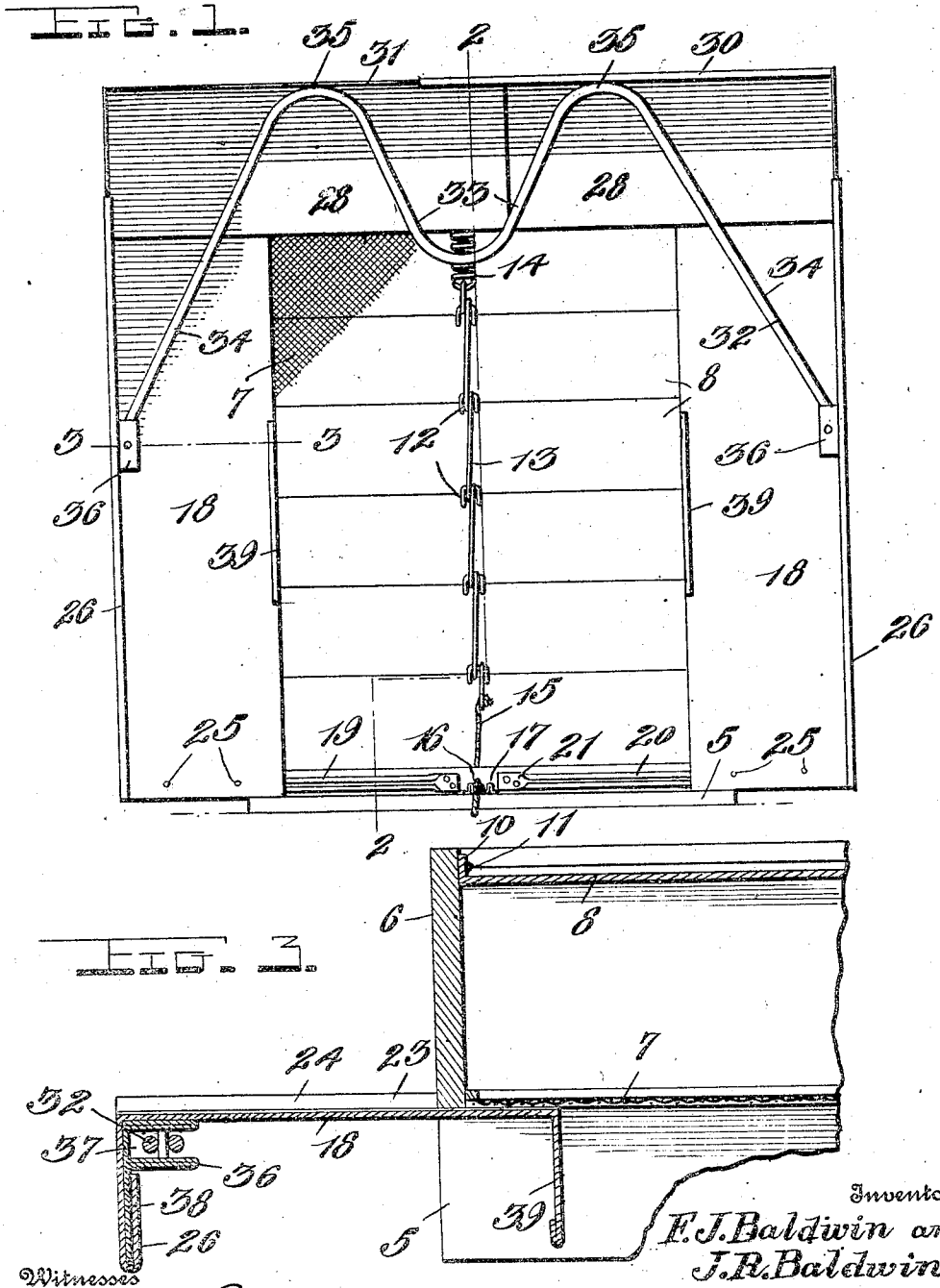

FIG. 2.

Witnesses

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2 SHEETS—SHEET 2.

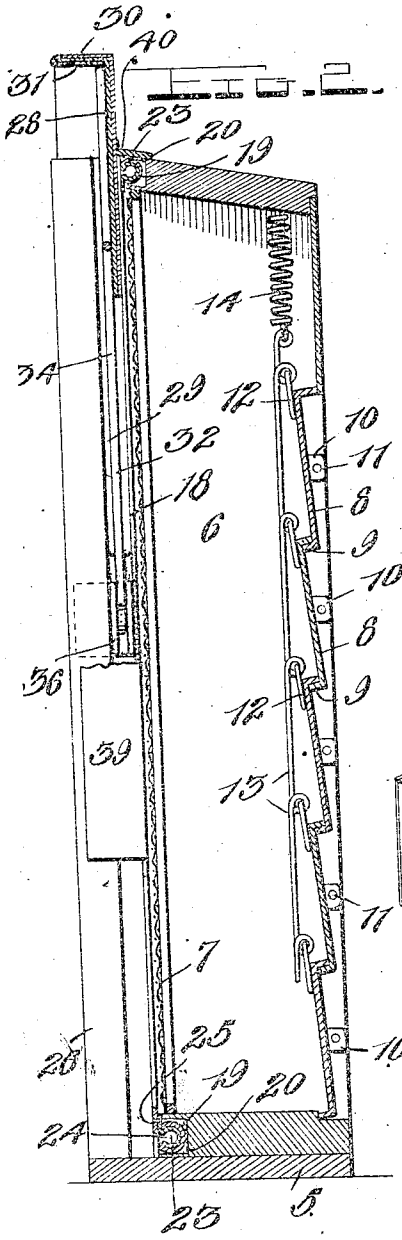

FIG. 2.

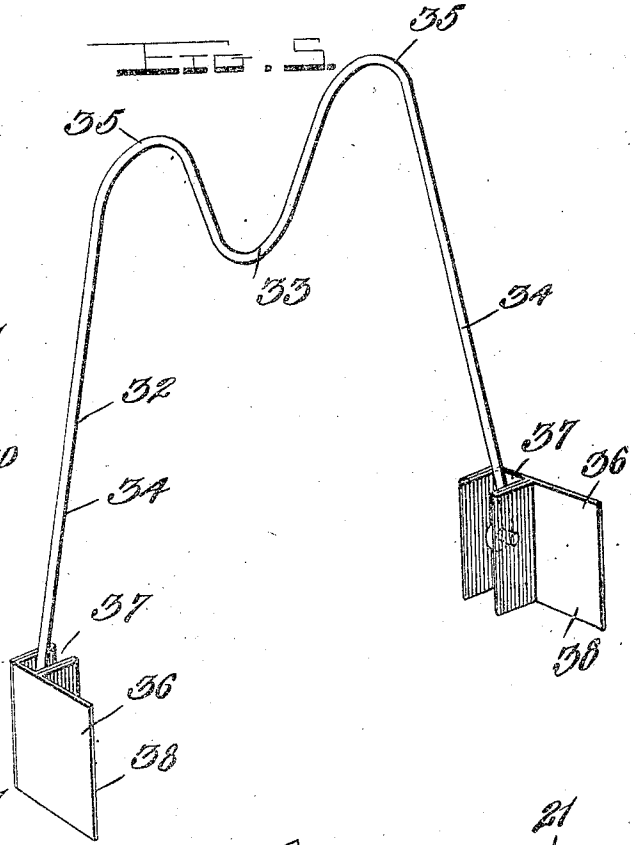

FIG. 5.

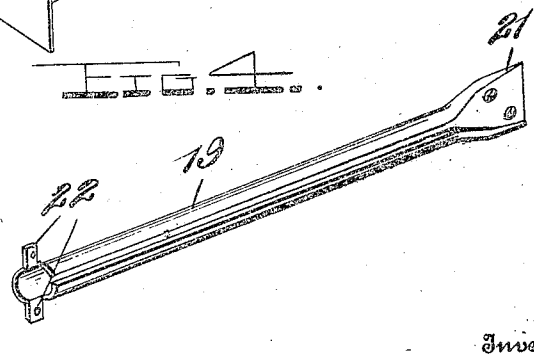

FIG. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

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ADJUSTABLE VENTILATOR.

997,947. Specification of Letters Patent. Patented July 18, 1911.

Application filed January 21, 1911. Serial No. 603,918.

To all whom it may concern:

Be it known that we, FRANK J. BALDWIN and JERUB R. BALDWIN, citizens of the United States, residing at Galion, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Adjustable Ventilators, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to combination window screens and shutters and has for its object to provide means for fitting the same into window frames of various dimensions.

Another object of the invention resides in the provision of a very simple and compact arrangement of parts mounted upon the frame of the screen and adjustable with relation to each other, and means for yieldingly holding said parts in their adjusted positions.

A further object of our invention is to provide adjustable side plates and a top plate vertically adjustable upon the side plates, said top plate being formed in two sections for lateral movement with the side plates, and means slidably mounted upon the side plates and engaging the sections of the adjustable top plate to hold the same and said side plates yieldingly in their adjusted positions.

Still another object of the invention is to provide an adjustable frame of simple and extremely durable construction whereby the proper amount of ventilation may be obtained.

With the above 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 an elevation of a combined window screen and shutter constructed in accordance with our invention; Fig. 2 is a section taken on the line 2—2 of Fig. 1; Fig. 3 is a section taken on the line 3—3 of Fig. 1; Fig. 4 is a detail perspective view of one of the guides for the adjustable side plates; and Fig. 5 is a detail perspective view of the holding spring.

Referring in detail to the drawings 5 designates a sill upon which the frame 6 is rigidly mounted. Upon one side of this frame and to the edges thereof the screen wire 7 is secured and between the vertical sides of the frame 6 a plurality of shutters 8 are mounted. These shutters are preferably of sheet metal construction and have their longitudinal edges flanged as indicated at 9 for engagement upon each other to provide a practically water-tight connection. An ear 10 is formed upon each end of the shutters through which the pivots 11 fixed in the sides of the frame 6 are disposed. To the inner sides of the shutters 8 and midway of their length, the eyes 12 are secured. A rod 13 is formed with a plurality of loops through which these eyes are disposed. The upper end of this rod is connected to one end of a spring 14, the other end of said spring being secured to the top of the frame 6. This spring normally acts to hold the shutters closed. An operating cord 15 is connected to the lower end of the rod 13 and extends through an opening 16 in the base portion of the frame 6. Upon the sill 5 a corrugated plate 17 is fixed and the operating cord 15 is adapted to be inserted between the corrugations of this plate, the opposite walls of the corrugations clamping upon the operating cord retaining the shutters in their adjusted positions.

In order to permit of the arrangement of the device in window frames of various sizes, we provide the vertical side plates 18 which extend substantially the entire height of the frame 6.

In the edge of the upper and lower horizontal frame members, the guides 19 are disposed. These guides are constructed from sheet metal bent into substantially tubular form. The horizontal frame members are provided with the longitudinal grooves 20 to receive the tubular guides. One end of the guide members is flattened as indicated at 21 and is countersunk in the edge of the frame member and lies flush therewith. The other end of the tubular guide is formed with the oppositely disposed ears 22 which are also engaged upon the edge of the frame and secured thereto by means of suitable screws or other fastening devices. To the upper and lower ends of the side plates 18, the slide members 23 are secured. These members are also formed from sheet metal and are bent to provide the tubular portions 24 of slightly less diameter than the tubular guides in which they are adapted to be received and moved. The remainder of the plates from which the members 23 are formed provide an attaching flange whereby the slide may be rigidly secured to the ad-

justable side plates by means of the rivets 25 the heads of which are countersunk in the faces of said plates for a purpose which will be obvious from the following description.

The outer longitudinal edges of the plates 18 are bent at right angles and have their edges turned inwardly to form the guide ways 26. The flange extensions 29 of the top plates 28 are engaged upon the angular edges of the plates 18 and beneath the turned over edge thereof between which and the edge portion of the plate the flanges of the top sections are adapted to move. These top section plates 28 are movable upon each other, one of said plates having the flange on its upper longitudinal edge bent to form a U-shaped guide 20 to receive the horizontal flange 31 on the other of said top plates. In order to hold the side plates against inward movement when the device is properly arranged in the window frame and to secure the top plate sections in their adjusted positions, we provide the spring rod 32 which is bent into the form shown in Fig. 1 to provide the U-shaped intermediate portion 33 and the curved oppositely extending end portions 34. The connecting bend 35 which unites the U-shaped intermediate portion and the end portions of the rod bears upon the top section plates 28, the tension which is exerted by the curved outwardly bowed end portions of said rod firmly holding the top section plates against accidental movement after they have been adjusted. The extremities of the spring rod 32 are pivotally mounted in the U-shaped slides 36. These slides are each formed from a sheet metal plate bent upon itself to provide the channel portion 37 and the flange 38 which is disposed beneath the turned over edge of the side flanges of the plates 18. As the end portions of the rod 32 have a tendency to spring outwardly, they act to force the side plates 18 apart and hold the same in close engagement with the opposite sides of the window frame. Upon the inner edges of the plates 18 the flanges 39 are formed and are adapted to be grasped by the operator to move the plates inwardly against the tension of the spring rod 32 when it is desired to remove the device from the window.

Upon the upper horizontal frame member a weather strip 40 is secured of rubber or other suitable material and engages closely with the top section plates 28 so as to prevent entrance of water between the same and the frame.

In the use of our invention, in order to arrange the device in the window frame, the side plates 18 are forced inwardly against the tension of the spring rod 32 and the entire device is then positioned beneath the upper window sash. Upon release of the plates 18, the spring 32 forces the same outwardly into engagement in the rabbeted side members of the window frame in which the sash moves. The operator now slides the spring rod 32 downwardly and moves the top section plates 28 upwardly into the desired position. The rod 32 is then again adjusted to engage upon the plates 28 and hold the same in their elevated positions. The window sash is then moved downwardly upon the top flanges of the plate sections 28, or if desired the sash may be first adjusted and the plates 28 moved upwardly against the under side thereof. In this manner the desired amount of ventilation of the apartment may be easily and quickly obtained.

From the foregoing it is thought that the construction and manner of operation of our improved adjustable ventilator will be readily understood. The adjustable parts are preferably constructed of sheet metal and may be manufactured at a comparatively low cost. As the necessity for using screws or bolts to hold the relatively adjustable sections in position is dispensed with, it will be obvious that the device may be very quickly adjusted to change the temperature of the room or apartment.

While we have shown and described the preferred construction and arrangement of the various parts, it will be understood that the device is susceptible of considerable modification without departing from the essential feature or sacrificing any of the advantages of the invention.

Having thus described the invention what is claimed is:—

1. The combination with a frame, of vertical side plates laterally adjustable upon said frame, top plates mounted upon said side plates and vertically movable with relation thereto, and a resilient holding member adjustably mounted upon the side plates and engaging said top plates to yieldingly retain the same in their adjusted positions, substantially as and for the purpose set forth.

2. The combination with a frame, guides arranged upon the top and bottom of said frame, side plates adjustable upon the frame, means carried by said side plates movable in said guides to adjustably support said plates, top plates vertically movable on the side plates, said top plates being also movable upon each other in the lateral adjustment of said side plates, guides formed on said side plates, and a holding element adjustable in said guides engaging said top plates to yieldingly hold the same in their adjusted positions, substantially as and for the purpose set forth.

3. The combination with a frame, tubular guides secured to the upper and lower ends of said frame, vertical side plates, slide members secured to the upper and lower ends of the side plates and movably disposed in said guides, top plates movable upon each

other and vertically adjustable with relation to said side plates, and a resilient rod adjustably mounted at its ends upon said side plates to engage said top plates and yieldingly retain the same in their adjusted positions, substantially as and for the purpose set forth.

4. The combination with a frame, of laterally adjustable side plates mounted upon the upper and lower ends of said frame, guides formed on the outer edges of said plates, top plates vertically movable in said guides, said plates being also movable with relation to each other in the lateral adjustment of the side plates, a resilient rod having its ends mounted in the guides on said side plates for vertical movement, the intermediate portion of said rod bearing upon the top plates to yieldingly retain the same in their adjusted positions, substantially as and for the purpose set forth.

5. The combination with a frame, of vertical side plates laterally adjustable upon said frame, a guide formed on the outer edge of each of said side plates, top plates mounted in said guides for vertical adjustment, said top plates being relatively movable in the lateral adjustment of the side plates, a resilient rod having a U-shaped intermediate portion bearing upon said top plates to yieldingly retain the same in their adjusted positions, and slide members pivotally arranged upon the ends of said rod and mounted in the guides of said side plates whereby said rod may be vertically adjusted to release the top plates, substantially as and for the purpose set forth.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

FRANK J. BALDWIN.
JERUB R. BALDWIN.

Witnesses:
M. C. WALTERS,
ETTA M. BUSINGER.