C. S. JOHANSON.

COMBINATION WINDOW, SCREEN, AND AWNING.

APPLICATION FILED MAR. 30, 1916.

1,209,164.

Patented Dec. 19, 1916.

3 SHEETS—SHEET 1.

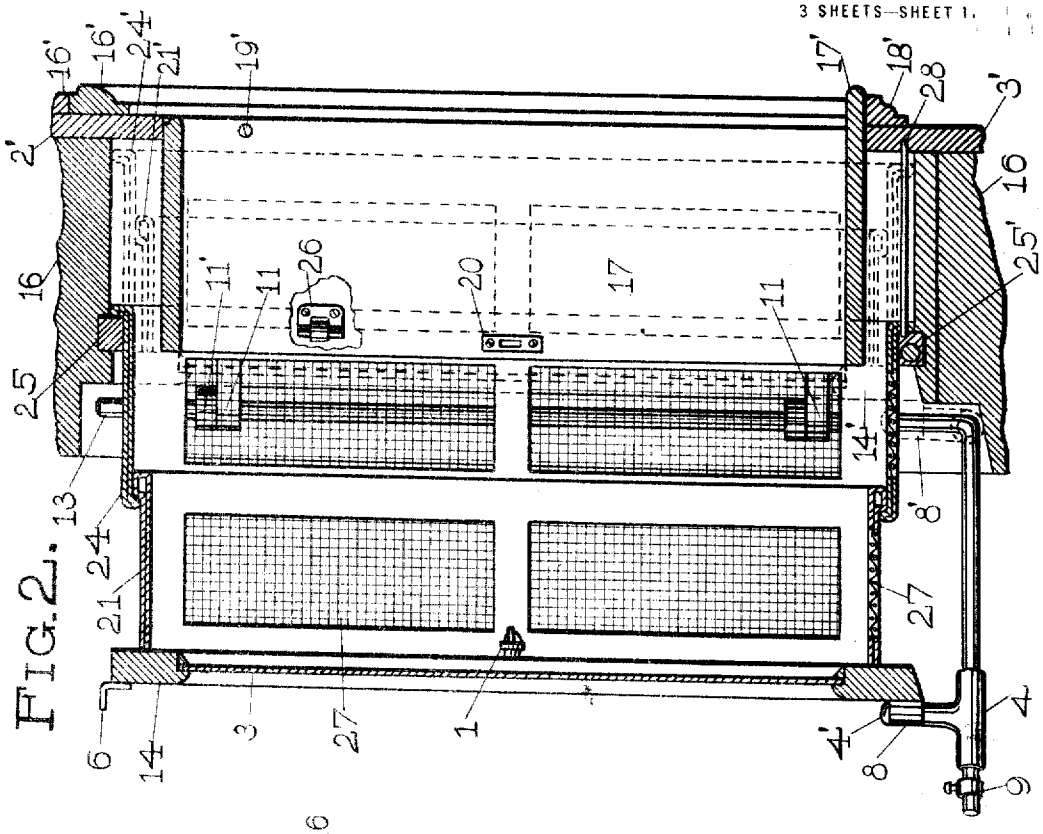


FIG. 2.

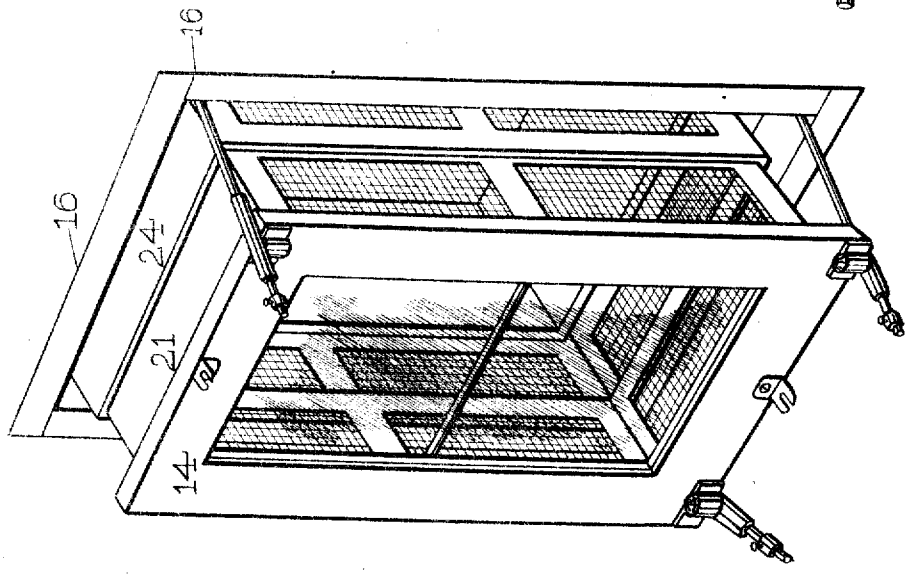


FIG. 1.

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3 SHEETS—SHEET 2.

FIG. 3.

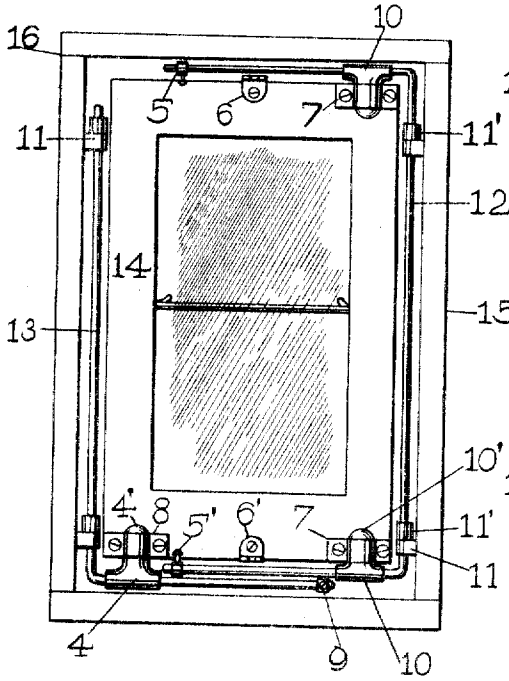


FIG. 4.

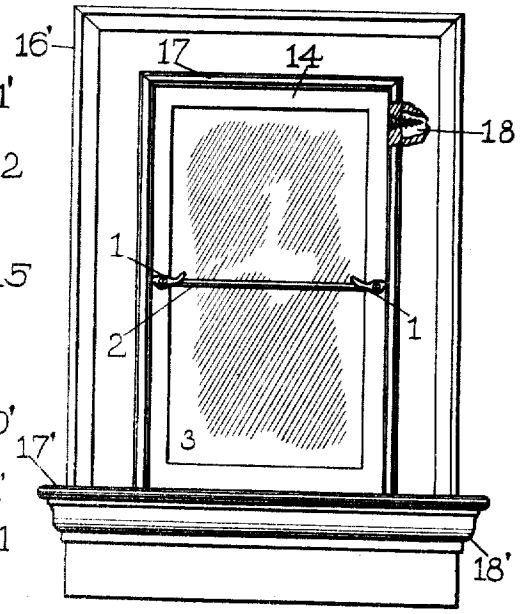


FIG. 5.

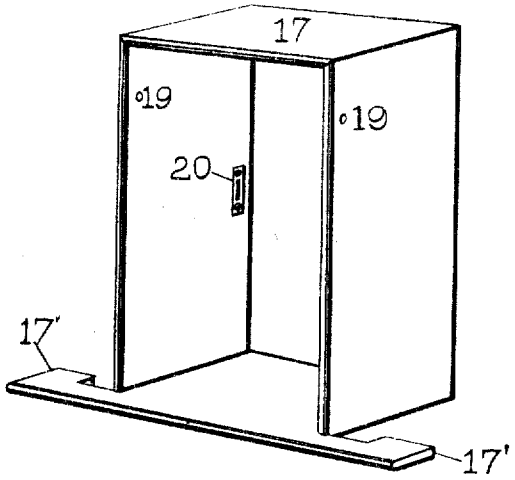


FIG. 6.

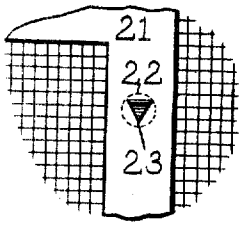


FIG. 7.

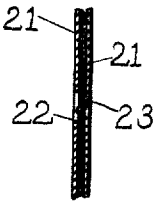


FIG. 8.

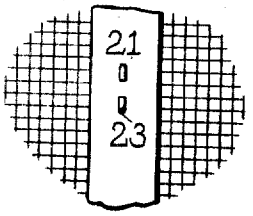
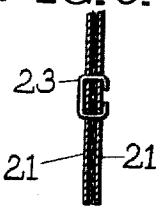


FIG. 9.



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3 SHEETS—SHEET 3.

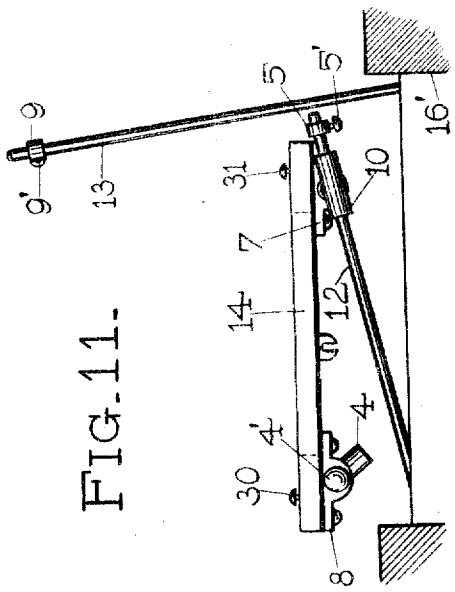


FIG. 11.

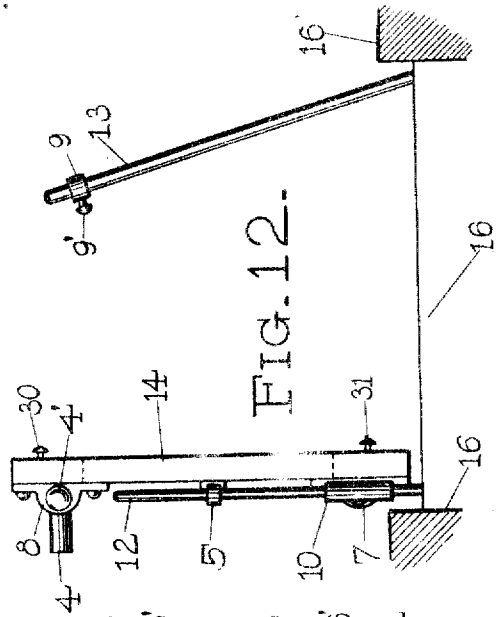


FIG. 12.

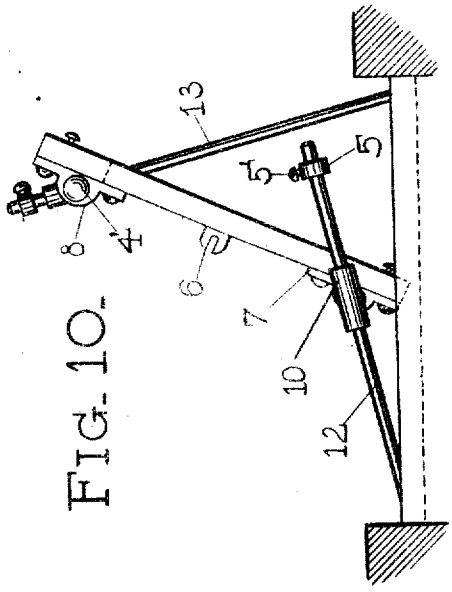


FIG. 10.

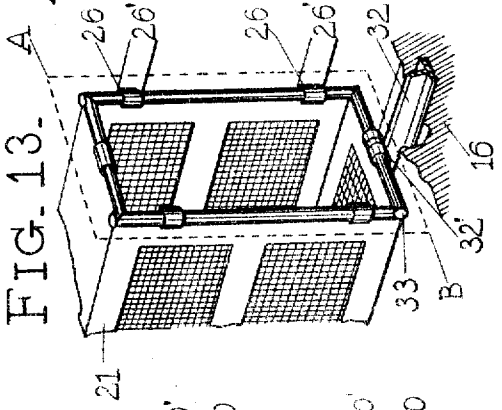


FIG. 13.

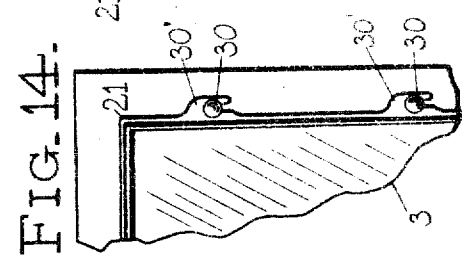


FIG. 14.

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COMBINATION WINDOW, SCREEN, AND AWNING.

1,209,164. Specification of Letters Patent. Patented Dec. 19, 1916.

Application filed March 30, 1916. Serial No. 87,780.

To all whom it may concern:

Be it known that I, CARL SEVERIN JOHANSON, a citizen of the United States, and resident of 92 Walnut street, Montclair, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Combination Windows, Screens, and Awnings, of which the following is a specification.

The purpose of this invention is to provide a window equipped with concealed screens and an awning.

One advantage of the invention is to have a window wherein it is possible to use screens without obstructing the sash or raising the same.

Another advantage is to have a window wherein the screens are normally concealed within the sides and bottom of the window frame.

Another advantage is to have a window wherein the inner visible frame is removable for the purpose of repairing the screens.

Another advantage is to have a window wherein the sash is secured to a set of telescoping and screen bearing frames, the screens coming into useful positions upon pushing said sash outward to a set limit.

Another advantage is to have a window wherein a set of telescoping frames are supported and guided in limited outward movement by means of oppositely hinged sliding members engaging sleeves mounted on the sash of said window.

Another advantage is to have a window wherein the sash may be disengaged from depending parts so as to permit the swinging or securing of said sash in any position, even to the extent of the reversal of the same.

Other advantages and possibilities will become apparent as the specification proceeds.

Referring to the drawings, like parts are noted by the same numerals throughout.

Figure 1 is an outside perspective of an apparatus embodying this invention, in protracted or extended position. Fig. 2 is a central and vertical cross sectional view of the same apparatus. Fig. 3 is an exterior view of Fig. 1 with all parts in collapsed or retracted position. Fig. 4 is an interior view of Fig. 3. Fig. 5 is a perspective view of parts 17 and 17′ of Figs. 2 and 4. Fig. 6 is a view of a small section of screen and frame 24 or 21 of Fig. 2. Fig. 7 is a vertical cross sectional view of Fig. 6. Fig. 8 is a similar view to Fig. 6. Fig. 9 is a vertical cross sectional view of Fig. 8. Fig. 10 is a top view of sash 14 of Fig. 2 and relative positions of members 12 and 13. Fig. 11 is a similar view. Fig. 12 is a similar view. Fig. 13 is a modification. Fig. 14 is a section of sash 14 of Figs. 2, 3 and 4.

The window as a means of ventilation and illumination has ever offered a problem to make of it as perfect a medium of both as can be possible. Several difficulties have always presented themselves to be taken into consideration.

The desire to secure ventilation usually necessitates opening the window and then either bearing instant invasion by swarms of insects or else placing in the opening a light obstructing screen. The screens have always been a sore nuisance but apparently a necessary evil, it being more necessary to keep out insects and to cut off some light than to go without ventilation. It is proposed, however, to combine in this invention a window with normally concealed and invisible screens wherein the screens and sash never exchange places relatively.

As it is often found highly useful to have an awning on ordinary windows, although involving more or less trouble in adjusting the same, it has been entirely feasible, in the practice of my invention to introduce a construction answering the purpose of an awning and a rain shield as well.

Returning to the drawings, in Fig. 1, we have the sash 14 mounted on the telescoping screen frames 21 and 24, further shown in Fig. 2, where one of the swinging guide members 13 is seen. A portion of the sash is shown in Fig. 14 as a rear view illustrating the detachable mounting of sash 14 on screen frame 21, the slotted extensions 30′ being adapted to slip under the heads of screws 30, 30, to retain the same.

The apparatus consists primarily of the removable inner casing 17, further shown in Figs. 4 and 5; outer frame or casing 16, 16; stops 25 and 25′; screen frames 21 and 24 having imperforate tops serving as a rain shield or awning, the screen portions 27 occupying the sides and bottoms of the same frames; and the sash 14 containing glass 3, the sash being supported by single guide member 13 and double guide member 12,

illustrated in Figs. 1, 3, 10, 11 and 12. Blocks 7, 7 and 8, are screwed or secured to sash 14 in positions shown and pivoted sleeves 4, 10 and 10 are centered in said blocks, the arms of swinging guide members 12 and 13 passing slidably through said sleeves.

All of the mentioned parts are found in retracted and inactive position in Fig. 3. The swinging or hinged guide members 12 and 13 gradually swing apart into positions illustrated in Fig. 1 when the stops 1 and 1 are released from the slots in plates 20, 20, as shown in Figs. 2, 4 and 5, and the rod 2 is pushed from within so as to project the sash and telescoping frames 21, 24, outward to the position in Figs. 1 and 2.

In operating the window into protracted or retracted positions as shown in Figs. 1, 2, 3 and 4, it is, of course, noted that the sleeves 4 and 10, etc., will slide outward or inward uniformly on the horizontal arms of guides 12 and 13 while these latter assume converging or diverging positions, respectively.

In Figs. 2 and 3, the collars 11′, 11′, limit and retain the hinged guide members 12 and 13 in position in the supports 11, 11. On the ends of these guides are collars 5, 5 and 9 secured by screws 5′, 5′ and 9′, respectively, for preventing the sleeves 4, 10 and 10 from slipping off. The sleeves are secured to the pivots 4′, 10′, etc., so as to be inseparable from, though swiveling on or under, the swivel blocks 7, 7 and 8.

In Fig. 2 we have the vertical cross section of Fig. 3 indicated by the dotted lines, 14′ being the receded sash 14 and 8′ the swivel blocks 8. The screen frames 21 and 24 telescope into positions 21′ and 24′, the rod 28 being a central guide for the frames, extending between board 3′ and stop 25′, the concealed rollers, one shown beneath the telescoping frames in cross section and 26 being designed to reduce friction and help guide the mentioned frames.

A modification of frame 21 is seen in Fig. 13, where rods like 33 run through the shaped edges of the frame and are shafts upon which rotate the rollers 32′, 26 and 26, the others not being noted. Roller 32′ runs on rail 32 which rests in substructure 16, and rollers 26 and 26 run against guides 26′, 26′, while the other rollers are similarly guided though not so shown. Dotted rectangle A—B denotes the relative position of a sash on this frame.

The inner frame 17 as shown in Figs. 2, 4 and 5, is secured in the window frame proper, 2′, 3′ and 16′, by means of screws 19′, one being shown at section 18 in Fig. 4, the holes 19, 19 being illustrated in Fig. 5. The extensions 17′, 17′, of the sill fit in on the sides of trim 16′ and above molding 18′, the screws and these extensions causing a suspended position of the said frame 17. It is in effect, a removable sleeve, permitting access to all the screens and inner parts of the window when removed.

In Figs. 6 and 7 we have a simple method of securing the screens proper in the frames 21 or 24. It will be noted that these frames are formed of doubled sheet metal, as in Fig. 2, and so bent as to make it impossible for them to be pushed out too far or separated. In Figs. 6 and 7, 22 is a hole in the lower metal registering with the tongue 23, which latter is depressed toward the hole in order to engage the meshes of the screen.

Another method is shown in Figs. 8 and 9. Here two pairs of registering holes are spaced apart and a link 23 of wire run through the holes, as shown, and the ends bent over. In these two methods, of course, the securing units or means are placed in regularly spaced positions all over the screen frames 21 and 24.

In order to add to the utility of the window still further, the means of separating the sash 14 from the screen frames, as explained of Fig. 14, the position indicated in Fig. 10 is shown as one of many possibilities while both guides 12 and 13 are still connected to the sash. When, however, the screw 9′ is loosened so as to permit the release of collar 9 and sleeve 4, the complete reversal of sash 14 is possible as shown in Fig. 11. This permits easy access to the outer face of glass 3 for cleaning the same. If, however, it is desired to cause the window to swing as though hinged rigidly, it is only necessary to turn collars 5 and 5 so that screws 5′ and 5′ slip into the slots in angle cleats 6, 6′, and to secure the screws thus, when any position like that indicated by Fig. 12 is possible, the sash then swinging rigidly supported by guide 12.

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

1. A window including a frame, and a plurality of telescopic collapsible members comprising frames to the outermost of which is secured a sash, substantially as described.

2. A window including a sash, a series of telescopic members secured to said sash, and a frame concealing said telescoping members, substantially as described.

3. A window including a frame and a sash, and a series of telescoping members comprising frames constructed to envelop aforesaid frame when in collapsed or telescoped position, substantially as described.

4. A window comprising a window casing and an inner frame suspended within said casing; a series of telescoping frames secured within said casing and adapted to be outwardly extended in the space between said casing and said inner frame, and to be concealed by said inner frame when in tele-

scoped or collapsed position, substantially as described.

5. A window casing including an inner suspended frame or casing constructed to conceal a series of telescoping frames adapted to be extended or collapsed about the same, said inner suspended frame being detachable and having extensions to the sides for securing it in position, substantially as described.

6. A window including a window casing and a sash, a series of telescoping frames supported in said casing and adapted to be extended outward therefrom, said sash being secured to the outermost of said frames and occupying the entire open area in the forward or outer extremity thereof; and there being a plurality of open areas upon the sides of said frames and corresponding screens occupying said areas, substantially as described.

7. A window including a casing and a frame or sash adapted to be projected therefrom, and means for uniformly guiding the same in reciprocal movement and means for supporting the same, said means comprising a pair of hinged members, one in either side of said casing provided with horizontal arms or rods adapted to slide through sleeves on said frame or sash in such manner as to cause the arms of one of said hinged members to converge or diverge in relation to the arms of the other member upon corresponding projection or withdrawal of said sash from or into said window casing, substantially as described.

8. A window including a sash or frame adapted to be projected therefrom, a pair of hinged members having horizontal arms, sleeves secured to said sash adapted to fit and slide on said arms; limiting means on said arms comprising collars with set-screws; and a pair of hooks or slotted brackets on said sash adapted to be engaged and secured by set-screws of the collars on the arms of one of said hinged guide members, so as to permit the sash to swing rigidly on the one guide member as upon a hinge, substantially as described.

9. A window including a window casing, a plurality of extensible telescoping members comprising screen or sash bearing frames movably secured in said casing, a sash secured to the outermost of said movable frames, and an inner detachable frame suspended in said casing and extending out into said telescoping members providing by its outer disengaged end an inner stop or abutment for said sash, substantially as described.

Signed at 132 Nassau street, in the borough of Manhattan, in the county of New York, city and State of New York, this 29th day of March, A. D. 1916.

CARL SEVERIN JOHANSON.

Witnesses:
OLAF F. FORSSBERG,
HILDA C. E. FORSSBERG.