C. H. HARGADINE.

COMBINED WINDOW GLASS AND SCREEN HOLDER.

APPLICATION FILED MAR. 10, 1919.

1,372,687.

Patented Mar. 29, 1921.

2 SHEETS—SHEET 1.

FIG. 1.

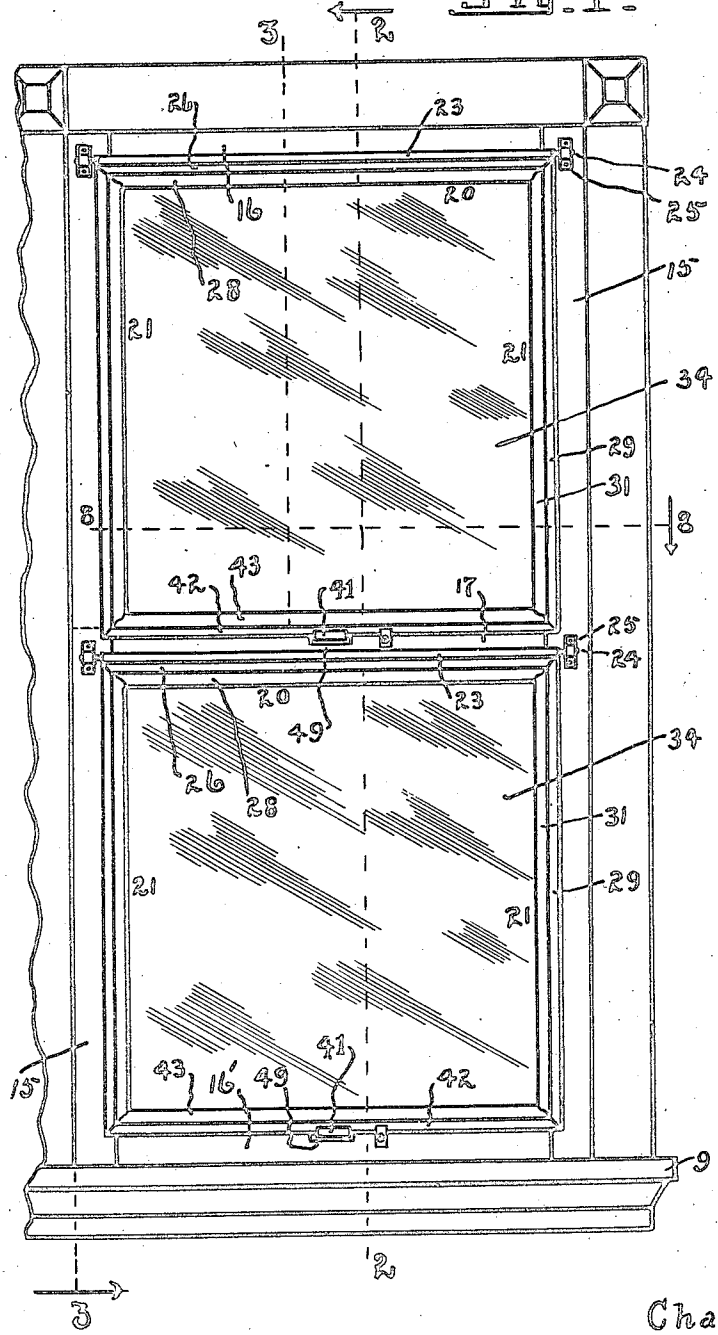
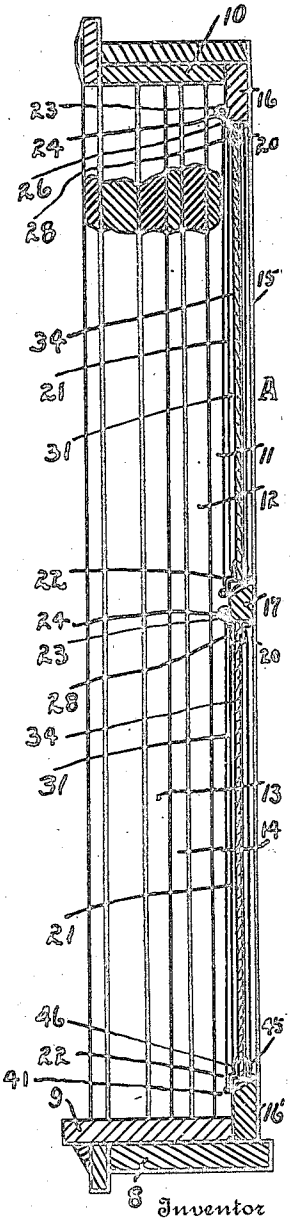


FIG. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

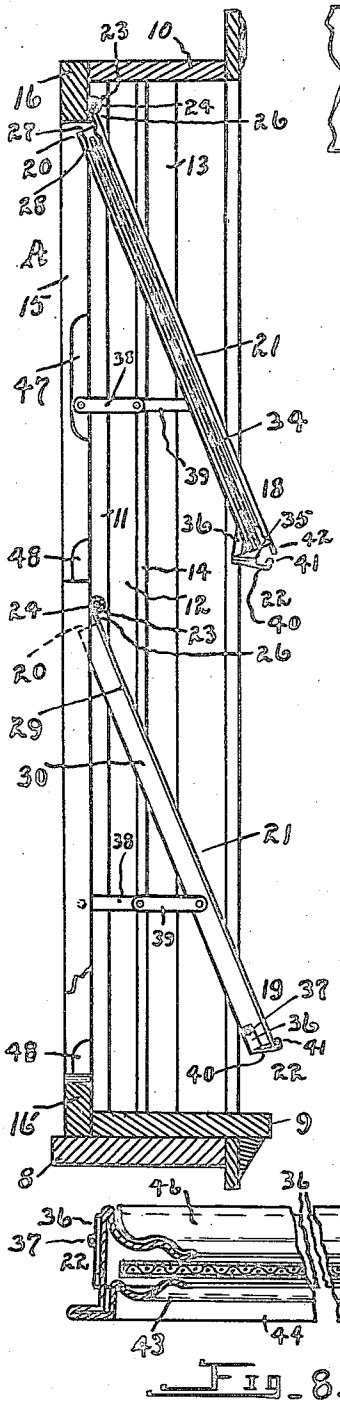


Fig. 4.

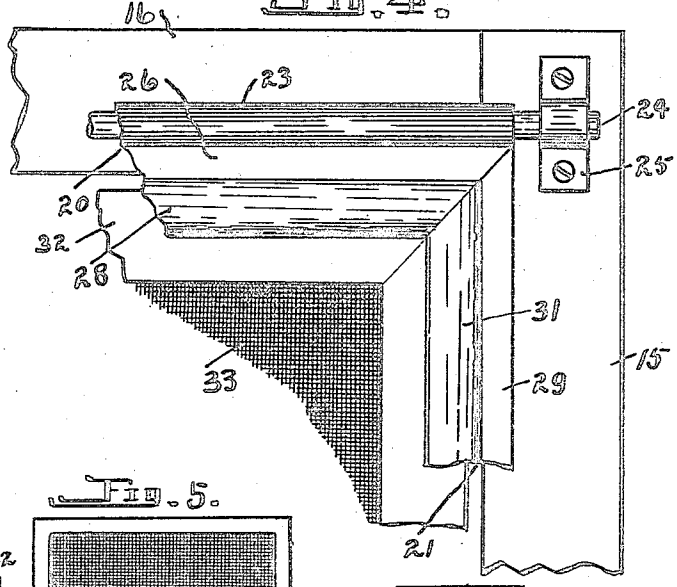
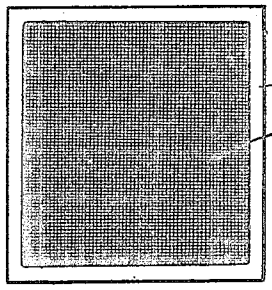


Fig. 5.



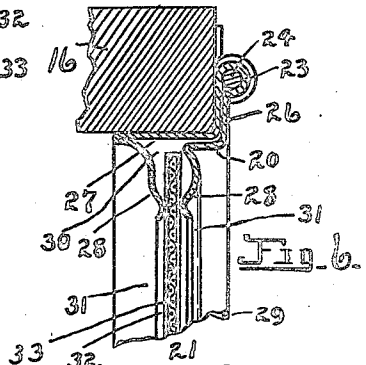


Fig. 6.

Fig. 7.



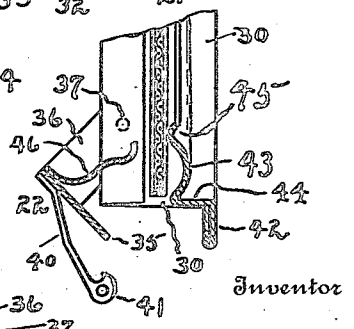


Fig. 8.

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UNITED STATES PATENT OFFICE.

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COMBINED WINDOW GLASS AND SCREEN HOLDER.

1,372,687. Specification of Letters Patent. Patented Mar. 29, 1921.

Application filed March 10, 1919. Serial No. 281,670.

To all whom it may concern:

Be it known that I, CHARLES H. HARGADINE, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Combined Window Glass and Screen Holders, of which the following is a specification.

This invention has for its object to provide rectangular frames for windows, said frames to be provided with secondary frames or movable holders for either window glass or screens, so that the first named frames may remain in the window openings permanently, to avoid the labor and inconvenience usually occasioned by their removal, said holders being conveniently arranged so that the screens may be removed readily and the window glass substituted for cold weather, and that, for summer, the glass may be removed for substitution of the screens.

The invention broadly includes the combination of the stationary, upright sash or frame having an upper and a lower rectangular opening, a pair of secondary rectangular frames mounted upon and adapted to have swinging movements to be disposed in said openings, each secondary frame including connected, metallic strips bent transversely to provide recesses disposed in a single plane and opening inwardly of its sides and top, whereby foraminous sheets or transparent plates may be inserted or removed, a locking member being provided consisting of a pivotally mounted, angular, metallic strip adapted to have a swinging movement to be disposed in the plane of the recesses below the bottom of a secondary frame to maintain a screen or plate in said recesses.

The invention consists of the novel construction, combination and arrangement of parts as described herein and claimed, and as illustrated in the accompanying drawing, wherein,—

Figure 1 is a view of the device in side elevation, glass plates being inserted in the holders, the view being from the inner side of a window opening, and the usual window sash being removed. Fig. 2 is a view of the same in longitudinal section, on line 2—2 of Fig. 1. Fig. 3 is a longitudinal section on line 3—3 of Fig. 1, the holders being swung inwardly and one of the locking members being swung to an open position.

Fig. 4 is an enlarged detail showing a part of a screen and its mounting. Fig. 5 is a side view of a screen, on a reduced scale. Fig. 6 is a broken away view of a holder and screen in vertical section. Fig. 7 is a side view of a glass plate. Fig. 8 is a broken away sectional view on line 8—8 of Fig. 1, looking to the lower end of a holder, a screen being shown in section.

Referring now to the drawing for a more particular description, the device may be used upon all kinds of buildings having ordinary window openings, and is illustrated in connection with certain parts usually employed, as the water table 8 which supports the window stool 9, and in this connection the head jamb 10 and blind stop 11 are also shown.

In the present instance the conventional window sash is not shown, but it will be understood that ordinary window sash may be slidably mounted in the channels 12 and 13, a parting strip being indicated at 14.

I provide rectangular frames A, each consisting of the pair of side strips 15, the pair of horizontal end strips 16 and 16′ and the horizontal strip 17 midway between the strips 16 and 16′, these strips preferably being constructed of wood and being connected by any suitable means.

The frames mentioned may be of any required length and width, and it will be understood that a frame thus provided may be disposed with its horizontal strip 16′ engaging the window stool 9, its horizontal strip 16 engaging the head jamb 10, its side strips abutting upon the blind stops 11 in such a manner that air currents therebetween will be practically excluded, and for uses of the invention, the frame mentioned should be permanently secured, since its removal will not be necessary.

As thus described, two rectangular areas or openings are provided, one being above and the other below the horizontal strip 17. I provide the pair of secondary frames or movable holders 18 and 19 (Fig. 3.), these being similar in structure in all respects, and of rectangular form to be disposed in the upper and lower openings of the first named frame, and each consisting of a horizontal

clasp-member 20, a pair of vertical clasp-members 21 and a locking-member 22.

Each member 20, as best shown in Figs. 4 and 6, consists of an elongated metallic strip bent transversely between its longitudinal edges to form a sleeve 23 for a mounting therein of a rod 24 to be mounted in a pair of staples 25 secured to the frame, the parts of said strip adjacent to the sleeve being disposed parallel to provide a web 26 for engaging the vertical inner side of a horizontal strip 16 or 17, and bent at right angles to the web to form a ledge 27 for engaging the lower side of a strip 16 or 17, the remaining parts of the metallic strip being bent toward each other to form a pair of resilient gripping members 28 and providing a recess therebetween for receiving a screen or a glass plate which may be inserted and which may be engaged by said members 28.

Each vertical clasp member 21, as best shown in Figs. 4 and 6, consists of an elongated, metallic strip bent transversely between its longitudinal edges to provide a rectilinear stop member 29 adapted to engage the face of a side strip 15, the parts adjacent to said stop 29 being bent at right angles thereto to form a wall 30 to be normally disposed closely adjacent to the inner side of said side strip, the remaining parts of the metallic strip being bent toward each other to form a pair of gripping-members 31, and as described, the adjacently disposed members 31 provide recesses for said horizontal clasp-members adapted to receive a glass plate or a screen, said recesses opening inwardly of each holder frame 18 and 19.

As clearly shown in the drawing, the ends of the clasp-member 20 will abut upon one of the ends of each clasp-member 21, and these abutting parts are connected, preferably by soldering, and when thus connected it is obvious that a continuous recess will be provided between the gripping-members mentioned for the top and two sides of the metallic, secondary frames, said recess being disposed in a single plane.

Numerals 32 indicate rectangular metallic sheaths for receiving the edge portions of foraminous sheets 33, preferably of wire gauze, the area for the screens thus provided being such that they may be disposed in engagement with the clasp-members, within the recesses mentioned.

Numerals 34 indicate plates of glass of rectangular form, the area of each corresponding to the area of a sheet 33 and its sheath, and it will be understood that the glass plates may be inserted in the movable holders 18 and 19 for use during the winter season, and that for use in the summer, the glass plates may be readily removed and the screens substituted, the frames A remaining as a fixture, this being the principal object to be attained.

By referring to Fig. 6 it will be seen that the locking-member 22, to perform its functions, coöperates with the vertical clasp-members 21, the latter being open at their lower ends, which feature permits glass plates or screens to be manually placed in the recesses mentioned, or to be removed therefrom.

The locking-member consists of a metallic strip 35 provided at its ends with arms 36, each pivotally mounted as indicated at 37 upon the outer, flat side of a wall 30, as best shown in Fig. 8, of a vertical clasp-member, adjacent to a rectilinear stop-member 29.

Numerals 38 and 39 indicate links arranged in pairs for each movable holder 18 and 19, the links of each pair being pivotally connected at their inner ends, the links 38 being pivotally mounted upon the side strips 15, and the links 39 of each pair being pivotally mounted upon the wall 30 of a normally vertical clasp-member 21 and it will be understood that when the strip 35 is swung outwardly from the clasp-member 43 which forms the bottom of a rectangular, secondary frame, a glass plate or a screen may be manually inserted between the members 31, and may have an upward, slidable movement until its upper end is disposed between members 28.

Each strip 35 is provided with a spring-plate or handle 40, having a terminal projection or catch 41, and in operation, after a glass plate or screen has been inserted as described, the locking-member is swung inwardly, the catch engaging the flange 42 of a transversely curved cross-plate or clasp-member 43.

Each transversely curved cross-plate or clasp-member 43 which provides a lower end of a secondary rectangular frame consists of a metallic strip bent near one of its longitudinal edges and folded upon itself to provide the flange 42, and is bent at right angles, transversely, to provide a rectilinear ledge 44 projecting inwardly from the flange 42, the remaining part of the strip being bent or curved transversely to provide a gripping-member 45, and the ends of each clasp-member 43 are secured, preferably by use of solder, to the lower, open ends of the clasp-members 21.

The metallic strip 35 is provided with an inwardly projecting wing 46, and when said strip is swung for engagement of its catch 41 with the flange 42, said curved wing 46 also swings for engagement with one side of a glass plate or a screen.

Numeral 47 indicates a recess formed in the side of a vertical strip 15, adapted to con-

tain the links 38 and 39, and each strip 15 is provided with two of said recesses, and when the holders 18 and 19 have been swung downwardly to their normal position the recesses will be covered by the flanges or stops 29. Also recesses 48 are formed in the inner sides of the strips 15 for containing the arms 36 of each locking-member, and recesses 49 are provided for containing the spring-plates 40 which project somewhat below and outwardly from the strips 35, said last named recesses being formed in the horizontal strips 16′ and 17 of the stationary frame.

It will be appreciated that since the frames A may remain as permanent fixtures, the labor and inconvenience attending the shifting of storm windows and screen frames twice each year, is a great advantage, and by use of the invention the glass may be more conveniently cleaned than the glass of ordinary storm windows.

It will be noted that members 26, 27, 29, 30 and 42 may engage the horizontal and vertical strips of the frame A in a manner tending to prevent dust from entering a building. While I have described details of construction, I do not wish to be understood as limiting myself to exactness in this respect, and minor details, as well as form, size and proportion of parts, may be changed as determined by the scope of the appended claim.

What I claim as my invention and desire to secure by Letters Patent is,—

The combination with a stationary frame having horizontally and vertically disposed strips, a pair of staples arranged at opposed sides of said frame, a supporting-rod engaging in the pair of staples, a horizontal, metallic strip bent transversely between its longitudinal edges to provide a sleeve for receiving the supporting-rod, a pair of vertical, metallic strips connected with the horizontal, metallic strip each being provided with a flange, each horizontal and vertical strip being bent transversely to lie parallel with a horizontal and a vertical face of the frame and providing opposed gripping-members for removably engaging a frame-member, and a pivotally mounted wing provided with a catch, said wing being adapted to have a movement for engaging the frame-member, its catch moving into engagement with said flange for maintaining said wing in engagement with said frame-member.

In testimony whereof, I have affixed my signature in presence of two witnesses.

CHARLES H. HARGADINE.

Witnesses:
HIRAM A. STURGES,
ARTHUR H. STURGES.