No. 648,646. Patented May 1, 1900.

C. C. WHEELER.

WINDOW SASH.

(Application filed Jan. 4, 1900.)

(No Model.)

Fig. 1.

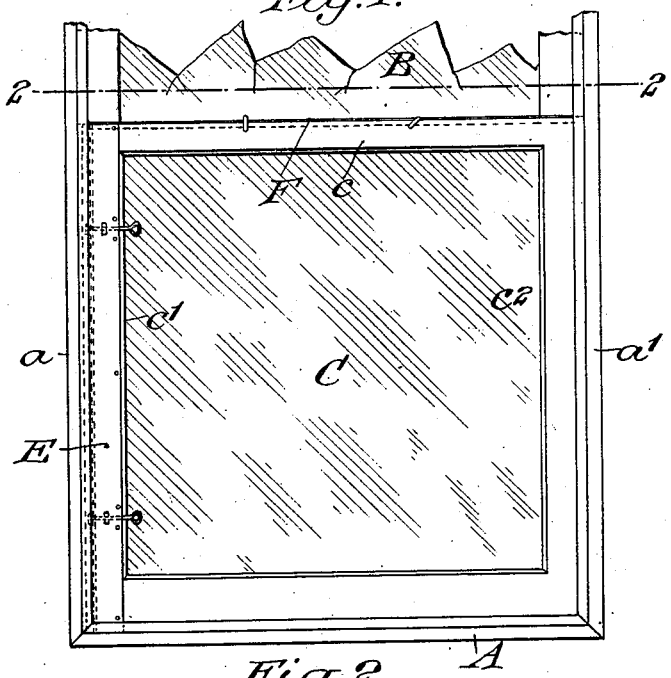

Fig. 2.

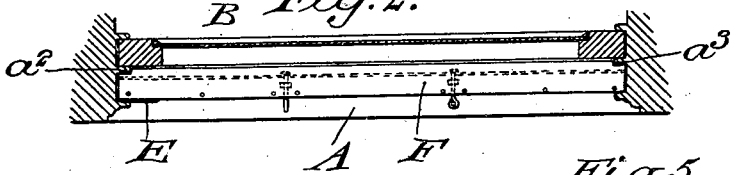

Fig. 5.

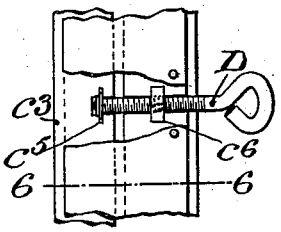

Fig. 3.

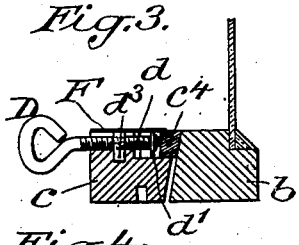

Fig. 6.

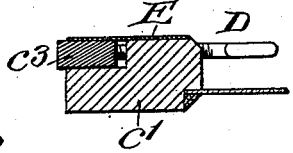

Fig. 4.

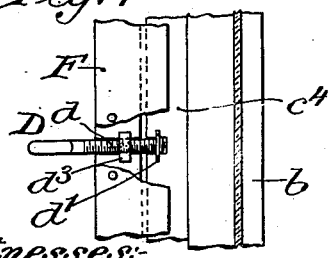

Fig. 7.

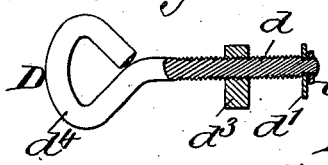

Fig. 8.

Witnesses:-
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UNITED STATES PATENT OFFICE.

CHARLES C. WHEELER, OF HOLLAND, MICHIGAN.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 648,646, dated May 1, 1900.

Application filed January 4, 1900. Serial No. 311. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. WHEELER, a citizen of the United States, and a resident of Holland, in the county of Ottawa and State of Michigan, have invented a new and useful Window-Sash, of which the following is a specification.

My invention relates to window-sashes, one object being to provide certain improvements in the application, structure, and arrangement of the means for locking the window-sash in different positions, the said changes in structure being directed to improvements in the structure set forth and claimed in my former patent, No. 511,106, dated December 19, 1893, in which a movable section is located along one of the stiles of a sash, which section is fitted to be positively moved toward and away from the side of a window-frame.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is an inside view of a portion of a window-frame with my improvements applied to the lower window-sash therein. Fig. 2 is a transverse section taken in the plane of the line 2 2 of Fig. 1. Fig. 3 is an enlarged detail sectional view through the top rail of the lower sash and bottom rail of the upper sash at that point where one of the adjusting-screws is located. Fig. 4 is a detail top plan view of a portion of the same. Fig. 5 is a detail view of a portion of one of the stiles of the lower window-sash, its movable section, and one of the adjusting-screws for operating the movable section, a portion of the protecting-strip which overlaps the movable section being broken away to show the adjusting-screw in full lines. Fig. 6 is a transverse section taken in the plane of the line 6 6 of Fig. 5. Fig. 7 is an enlarged detail side view, partially in section, of the adjusting-screw and its attached parts; and Fig. 8 is an end view of the same.

The sill of the window-frame is denoted by A and the sides of the window-frame by $a\,a'$, which frame may be of any well-known or approved construction, having the usual vertical grooves or runs for the upper and lower window-sashes B and C. The top rail of the lower sash is denoted by c and the two stiles thereof by $c'\,c^2$. The bottom rail of the upper sash B is denoted by b.

The inside outer edge of one of the lower sash-stiles—the stile c', for example—is cut away to form a seat for a movable section c^3, which movable section may be positively moved bodily toward and away from the side a of the window-frame by means of a plurality of adjusting-screws D, in the present instance two of which adjusting-screws are shown, one being located a short distance above the bottom of the sash and the other a short distance below the top of the sash. This movable section and its adjusting means may be located along both stiles of the lower sash, or it may be located along one or both stiles of the upper sash, if so desired. The outside upper edge of the top rail c of the lower sash is similarly cut away to form a seat for a movable section c^4, which movable section is positively moved toward and away from the inner face of the lower rail b of the upper sash by means of a plurality of adjusting-screws D, in the present instance two of which screws are shown engaging the movable section at such points at short distances from each side of its middle portion as will under pressure exerted by said screws produce an outward curving of said movable section c^4 when resisted by the rail b. The ends of the movable section c^4 extend to the outer edges of the central vertical parting-strips $a^2\,a^3$ of the window-frame, so as to permit the lower sash to freely slide up and down within its runways without interfering with the inward and outward bodily movement of the said movable section.

A thin protecting-strip E, of metal, wood, or other suitable material, is secured along the inner face of the stile c' of the lower sash, which strip extends over the inner face of the movable section c^3 and also hides practically all of the shanks of the adjusting-screws D. A similar protecting-strip F is secured along the top of the upper rail c of the lower sash, which strip F also overlaps the upper face of the movable section c^4 and effectually covers the shanks of the adjusting-screws D.

The structure and arrangement of the adjusting-screws D, whereby the screw is engaged with the movable section and the sash stile or rail, is as follows: The end of the screw-threaded shank d of the adjusting-screw is reduced, upon which reduced end is mounted a loose collar d' and a fixed small

washer d^2, beyond which small washer the end of the shank is spread or upset for permanently securing the loose collar d' thereon. Before the collar d' is secured in position upon the shank a nut d^3 is engaged with the screw-threaded shank.

The adjusting-screws located along the stile of the sash for moving the movable section c^3 bodily toward and away therefrom in the plane of the sash are embedded in the stile and movable section as near the inner face of the stile as possible, so as to permit the handles d^4 of the adjusting-screws being manipulated without coming in contact with the window-pane. The loose collar d' is inserted into a cross-slit c^5 in the movable section c^3, and the nut d^3 is embedded into a cross-socket c^6, so that when the screw D is turned the movable section is positively forced toward and away from the stile c'. The nut D^3 is tapped out of center, so as to bring its opening nearer the inner face of the stile c' of the sash for the purpose hereinabove set forth of bringing the screw farther away from the window-pane.

The adjusting-screws D, which are embedded in the top rail c and the movable section c^4, are quite similar to the adjusting-screws located along the side stiles, the only difference being that as the screws along the top rail are turned they positively move the movable section c^4 bodily toward and away from the top rail in a direction at right angles to the plane of the sash. The nuts d^3 for the adjusting-screws at the top of the lower sash need not be tapped out of center, as there is no object in so doing.

By means of the structure hereinabove set forth I am enabled when the window is closed to fasten both sashes snugly in position, so as to prevent the lower sash from being raised or the upper sash from being dropped from the outside; also, to render the window practically dust-proof and air-tight, and therefore more nearly weatherproof, also preventing its rattling, or, having opened either sash to any point desirable for ventilation, I am enabled to lock either sash securely against intrusion from outside or against accidents to children or careless persons from inside, at the same time preventing its rattling. Also I accomplish great economy in first labor of fitting the sash to the window-frame, for the workman, knowing that he can fall back upon the movable section adjustable to minor errors and imperfections in the window-frame, can make the sash to fit loosely with entire indifference to changes in the weather, which later would destroy the niceties of fit in the ordinary sash.

The movable section c^3 is forced by the adjusting-screws against the side frame a within the runway of the lower sash. The top movable section c^4 may be forced outwardly by the adjusting-screws snugly against the inner face of the lower rail b of the upper sash. It will thus be seen that the said movable sections also serve as efficient weather-strips.

When it is desired to raise the window, the several adjusting devices are unscrewed, thus drawing the top movable section away from the upper sash and the side movable sections away from the frame. After the window is raised to the desired height it may be locked in such position by again forcing the side movable section c^3 outwardly against the side a of the window-frame.

It is evident that changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set forth; but

What I claim is—

1. In combination, a sash having one of its stiles or rails provided with a recess along one of its edges, a movable section located within the said recess, a protecting-strip carried by the stile or rail and overlapping the movable section and means for adjusting the movable section outwardly and inwardly, substantially as set forth.

2. In combination, a sash having one of its stiles or rails provided with a recess along one of its edges, a movable section located within the said recess, a protecting-strip carried by the stile or rail and overlapping the movable section, and means for adjusting the movable section outwardly and inwardly comprising an adjusting-screw attached to the movable section and a stationary nut embedded in a cross-socket in the said stile or rail, through which the adjusting-screw passes, substantially as set forth.

3. The combination with the lower sash of a window having its top rail provided with a recess along one of its edges, of a movable section located within the said recess, a protecting-strip carried by the rail and overlapping the said movable section and means for adjusting the movable section bodily toward and away from the top rail at right angles to the plane of the sash, substantially as set forth.

4. The combination with one stile of a sash and a movable section located along the same, of a nut embedded in the stile, the said nut being tapped out of center and an adjusting-screw passing through the said nut and engaged with the movable section for moving it inwardly and outwardly as the screw is turned, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of witnesses, this 30th day of December, 1899.

CHARLES C. WHEELER.

Witnesses:
GERRIT J. DIEKEMA,
LENA DE BREE,
MARY E. DIEKEMA.