No. 652,553. Patented June 26, 1900.

W. D. WATSON.

WINDOW.

(Application filed Feb. 3, 1900.)

(No Model.)

Fig. 1.

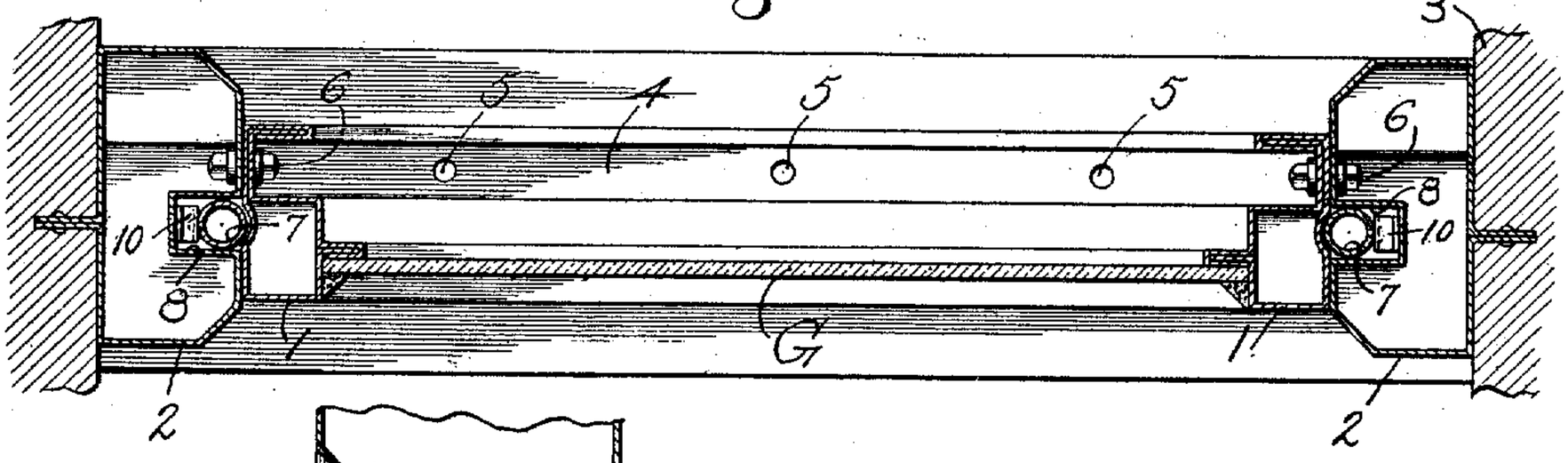


Fig. 2.

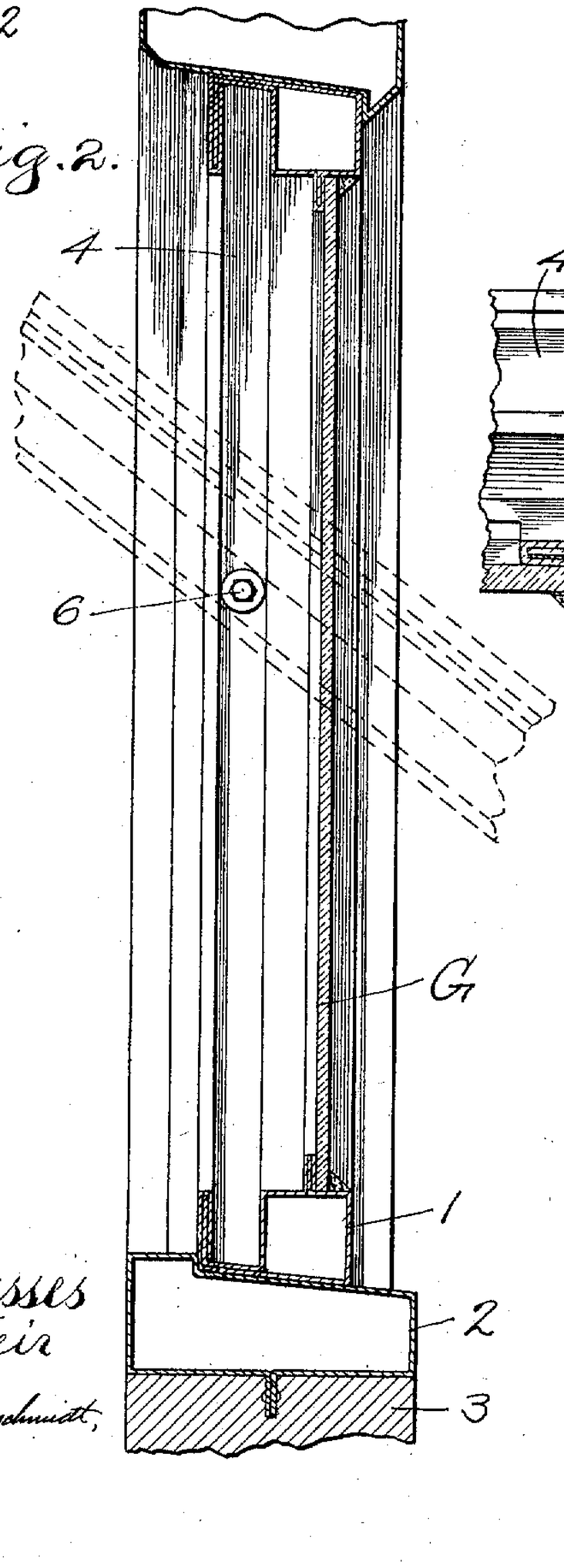


Fig. 3.

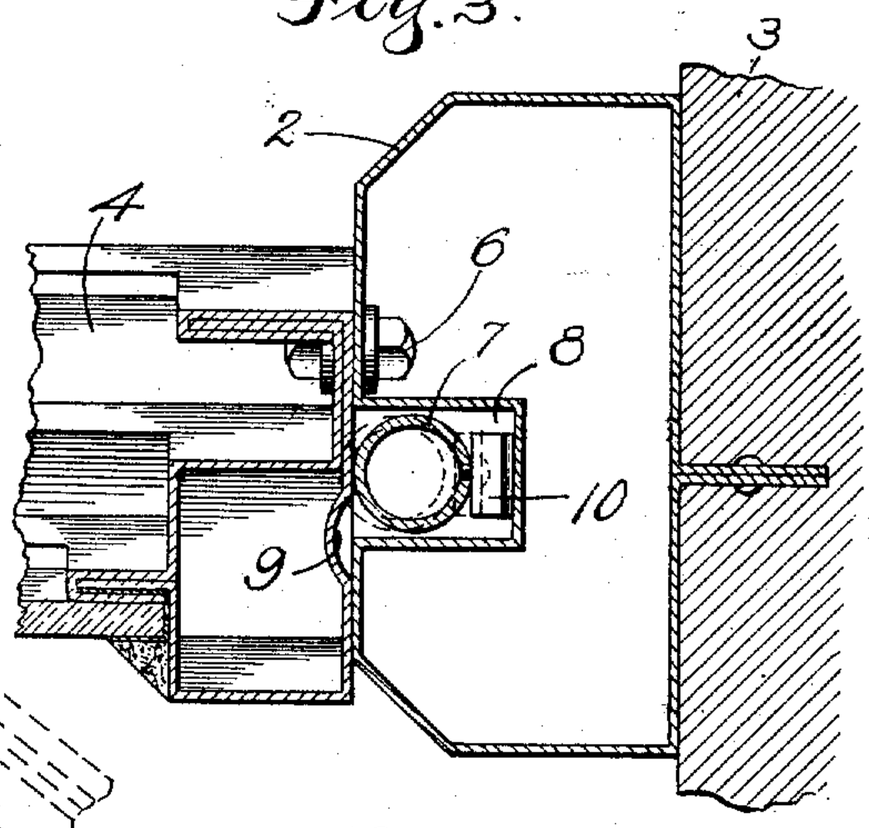
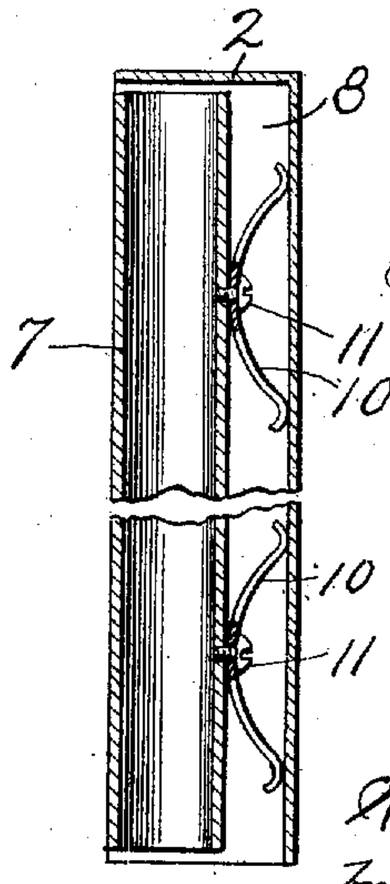


Fig. 4.



Witnesses
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G. Paulenschmidt,

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Wm. D. Watson
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Attys.

UNITED STATES PATENT OFFICE.

WILLIAM D. WATSON, OF CHICAGO, ILLINOIS.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 652,553, dated June 26, 1900.

Application filed February 3, 1900. Serial No. 3,792. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. WATSON, a citizen of the United States, residing at Chicago, in the county of Cook, in the State of Illinois, (whose post-office address is No. 229 Walnut street, Chicago, Illinois,) have invented certain new and useful Improvements in Windows, of which the following is a specification.

My invention relates more particularly to swinging windows and to windows of sheet-metal construction made in accordance with municipal fire-protection regulations; but in some of its features the invention is applicable as well to sliding windows or to windows made of wood instead of metal.

A principal object of the invention is to provide improved weather-excluding devices to be applied between the sides of the window frame and sash, as well as to provide a generally-improved construction in structures of this character; and the invention consists in the matters hereinafter set forth, and particularly pointed out in the appended claims, when considered in connection with the accompanying drawings, which illustrate a window-frame and swinging sash constructed of metal and embodying my improvements in one form.

In said drawings, Figure 1 is a horizontal section taken through the window sash and casing. Fig. 2 is a transverse vertical section thereof. Fig. 3 is an enlarged horizontal sectional detail showing the sash as swung slightly out of its closed position and showing the weather-tubes forced back accordingly, and Fig. 4 is a vertical sectional detail taken on a plane through the weather-tubes and side of the window-casing.

In said drawings, 1 designates the window-sash, within which the glass G is secured in any suitable manner, and 2 is the window-casing, which is built into the aperture in the wall of the building to receive the sash. The sash-frame is herein shown as of tubular construction, with an inwardly-projecting channel 4 extending entirely around the frame and forming a condensation-gutter, at the bottom of which one or more apertures 5 are desirably provided to permit the escape of any moisture collecting therein. Pivot-bolts 6 to pivotally support the sash are shown as passing through this channel portion 4 of the sash and through the adjacent sides of the window-casing at points which are considerably out of the plane of the center of gravity of the sash when closed, and the weight of the sash consequently always tends to swing it closed, this self-closing tendency being increased by locating the pivots 6 somewhat above the middle of the sash. Suitable chains or other contrivances will then be provided for holding the sash open when desired, but are not herein illustrated, as they have no particular bearing on the case in hand.

To exclude the weather at the joints between the sides of the swinging sash and the casing, spring-pressed weather-tubes 7 are provided in vertical grooves or recesses 8 in the sides of said casing. These tubes project, when the sash is closed, into vertical grooves 9, formed in the adjacent side surfaces of the sash, and fit therein so closely as to effectually exclude the weather. When the sash is swung on its pivots 6, the weather-tubes are forced back into the recesses 8, as shown in Fig. 3, by the wedging action of the sash on the curved surfaces of the tubes as the sash swings out of line therewith, and the fact that the pivots 6 are considerably to one side of the tubes 7 renders such wedging action on the latter more effective and gradual. When the sash is once more returned to its closed position, the tubes instantly spring forward again into the grooves and seal the openings between the sides of the sash and the casing. As herein shown, the tubes 7 are not fastened within their recesses 8, but are simply loosely placed therein before the sash is mounted within the casing, and the tube-springs 10 are herein shown as made in the form of bow-shaped plate-springs that are removably secured to the tubes by screws 11. This renders it a very simple matter to remove the tubes and replace the springs in case any failure should occur in the latter. It will, however, be understood that said springs may be otherwise formed or provided, if desired. It will also be understood that while the hollow construction of the weather-tubes is preferred on account of their greater lightness and economy solid or other than tubular bars may be employed to the same end, and various other changes may be made in the details of the construction described

without involving any material departure from the broad invention claimed.

I claim as my invention—

1. The combination, with a window-casing and inclosed sash, of pivots extending between the sides of the casing and sash to pivotally support the latter, and interposed spring-pressed bars seated in grooves extending along said pivotally-connected sides above and below the pivots thereof, substantially as described.

2. The combination, with a window-casing, of a sash mounted therein upon horizontal pivots extending between the sides of the sash and casing, said pivotally-connected sides being provided with vertical grooves extending above and below the pivots thereof, and interposed spring-pressed bars removably seated in the grooves in the casing and yieldingly engaging the grooves in the sash when the latter is closed but adapted to be forced back and extend angularly across the sash when the latter is open, substantially as described.

3. The combination, with a window-casing and a sash pivotally mounted therein, of interposed spring-pressed bars seated in grooves in the one and fitting into coacting grooves in the other when the sash is closed, the sash-pivots being offset from the plane of said bars, substantially as described.

4. The combination, with the window-casing 2, provided with the recesses 8, of the tubular sash 1, provided with the surrounding channel 4, pivot 6 extending through said channel into the casing, grooves 9 in the lateral faces of the tubular sash removed from the pivot 6, and the spring-pressed weather-tubes 7 seated within the recesses 8 and normally projecting into the grooves 9, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two subscribing witnesses, this 1st day of February, A. D. 1900.

WM. D. WATSON.

Witnesses:
HENRY W. CARTER,
N. R. BAILEY.