

J. ALSFASSER.

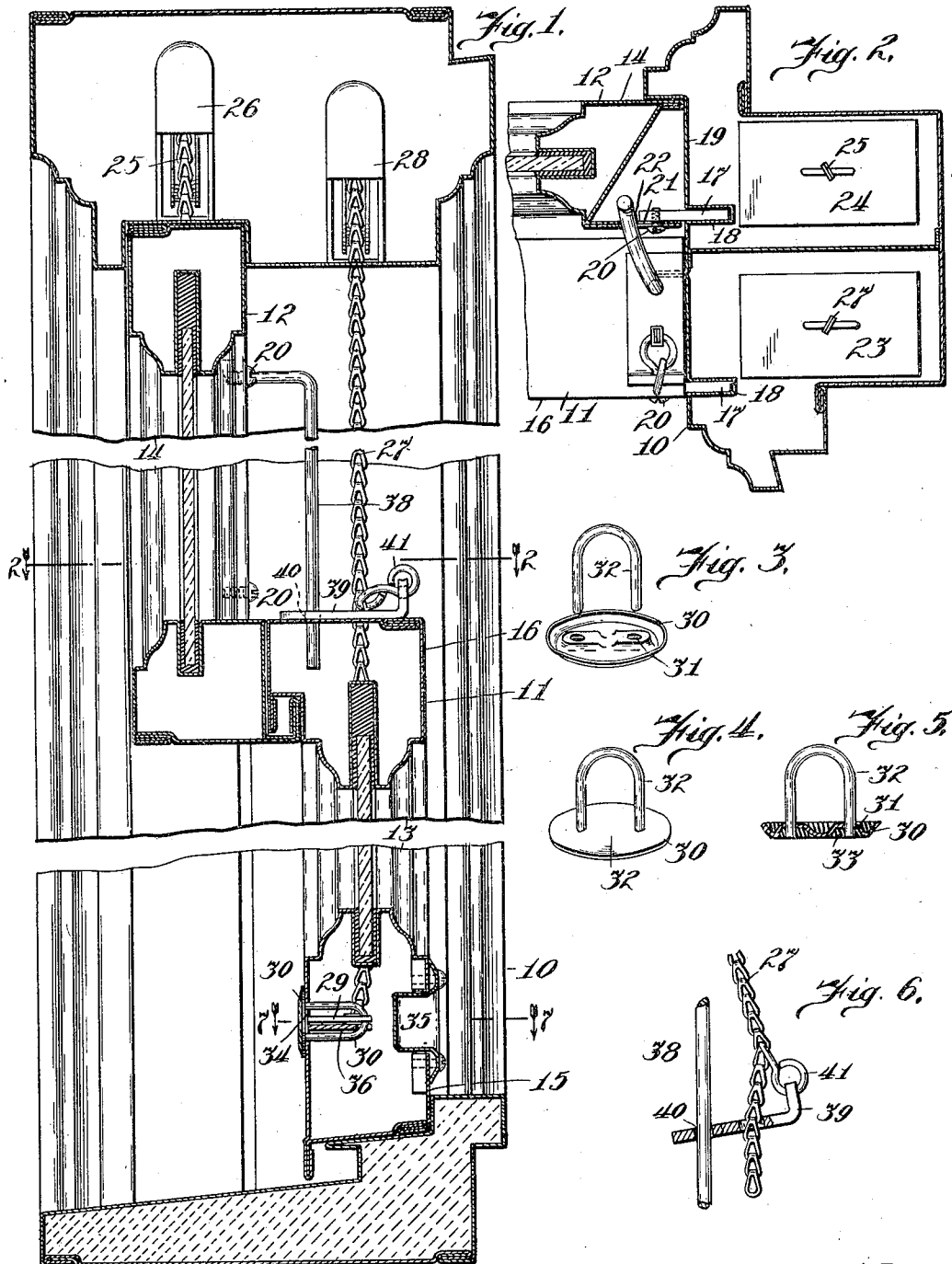
WINDOW.

APPLICATION FILED APR. 8, 1910.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.

999,357.



Witnesses

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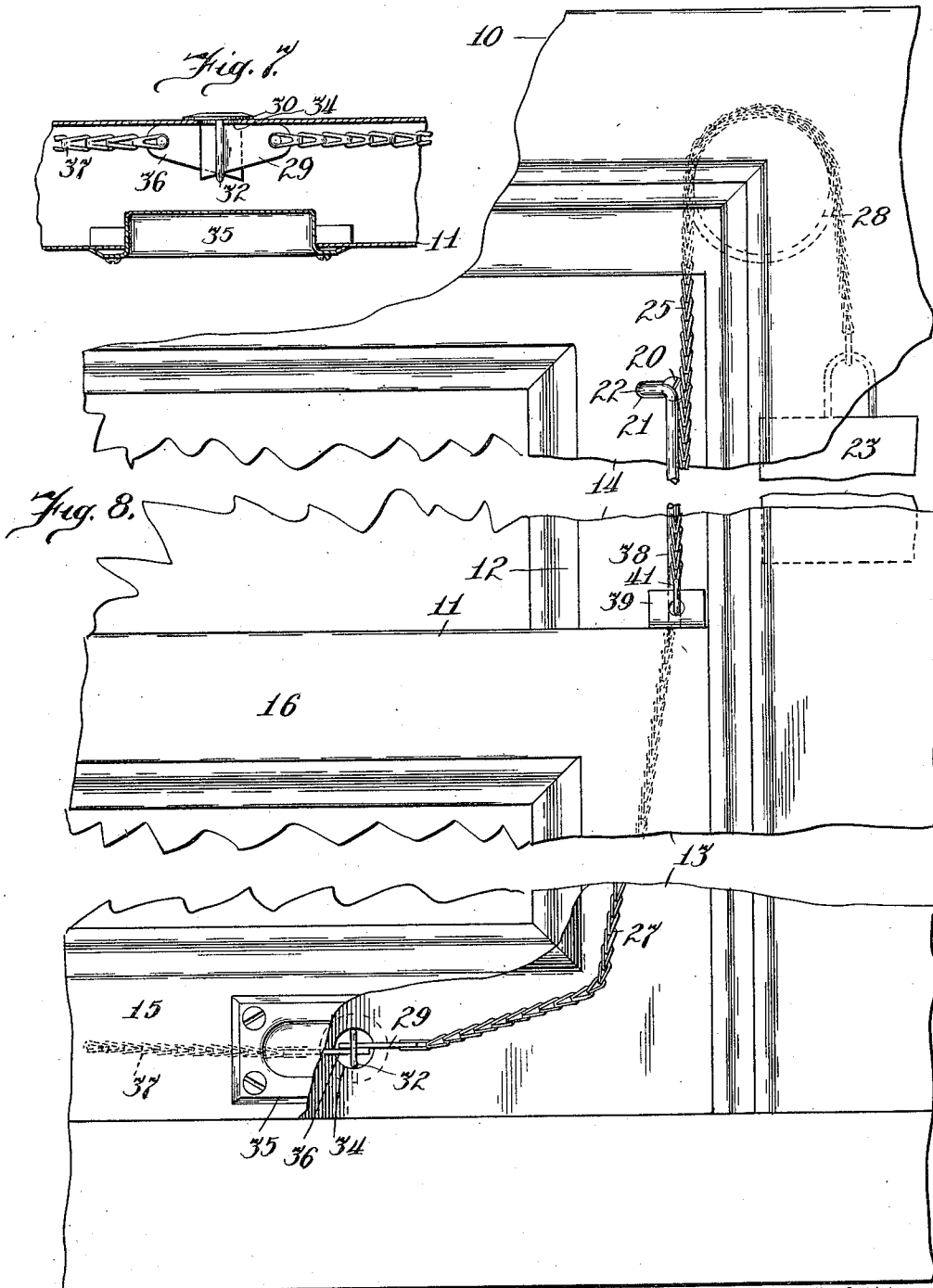
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UNITED STATES PATENT OFFICE.

JOSEPH ALSFASSER, OF CHICAGO, ILLINOIS.

WINDOW.

999,357.

Specification of Letters Patent.

Patented Aug. 1, 1911.

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To all whom it may concern:

Be it known that I, JOSEPH ALSFASSER, a citizen of the United States, and resident of Chicago, county of Cook, and State of Illinois, have invented certain Improvements in Windows, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to windows, and more particularly to those adapted to be automatically closed when exposed to heat, as that of an adjacent fire.

The invention contemplates a movable window sash normally balanced by counterweights, and releasable connection between the counterweights and the sash whereby the counterweights become disconnected from the sash and permit it to close by gravity when the sash is exposed to heat.

A detail of the invention contemplates a window having two movable sashes, one of which moves downwardly to close and the other upwardly to close, and improved means for transferring the counterweights from the downwardly-movable sash to the upwardly-movable sash.

The object of the invention is to provide an automatically-closing window of simple and improved construction.

In the accompanying drawings, Figure 1 is a central vertical sectional view of a window embodying the features of improvement provided by the invention; Fig. 2 is a plan sectional view taken on the line 2—2 of Fig. 1; Figs. 3 and 4 are detail perspective views illustrating a form of fusible staple member employed in the window illustrated in Figs. 1 and 2; Fig. 5 is a central sectional view of the fusible staple member illustrated in Fig. 4; Fig. 6 is a detail sectional view illustrating a clutch member employed in the device; Fig. 7 is a detail sectional view taken on the line 7—7 of Fig. 1; and Fig. 8 is a front elevation of the window illustrated in Figs. 1 and 2, some of the parts being broken away to show the internal construction.

The invention is illustrated as being applied to a window generally designated 10, having a pair of vertically-movable sliding sash members 11 and 12. As is usual in windows of this form, one of the sash members, as 11, moves downwardly to close and the other sash member, as 12, moves upwardly

to close. The sash member 11 is therefore hereinafter referred to as the lower sash member and the sash member 12 as the upper sash member.

Preferably the sash 11 and 12 have tubular frames of sheet metal comprising stile members 13, 14, and upper and lower cross-members 15, 16. As shown, the stile members 13 each carry an adjustable guide-plate 17, adapted to slidingly enter a vertical channel 18 formed in the stile face 19 of the window frame. The guide-plates 17 are secured to the stile members 13 by set-screws, as 20, which pass through slotted openings 21 in the front face of the sash frames, which slotted openings are partially uncovered by the guide-plates 17 when the latter are adjusted to enter the channels 18, thereby leaving an aperture 22 providing a convenient entrance to the chamber of the tubular sash frame for parts to be hereinafter described.

The sash 11, 12, are equipped with the usual sash weights 23, 24. These counterweights will preferably be employed at each side of the window, but as both sides may be constructed in the same manner the equipment at one side only is shown and described. The counterweight 24 is preferably permanently connected to the upper sash member 12 by the usual sash cord or chain 25, passing over a stile pulley 26. A sash cord 27 is permanently connected to the counterweight 23, and passes over a stile pulley 28.

In carrying out the invention, the sash cord 27 is releasably connected to the window sash 11, and provision may also be made for connecting this sash cord to the upper sash 12 upon its release from the lower sash 11, whereby both counterweights 23, 24, then pull upon the upper sash to close it. As shown, the sash cord 27 extends downwardly through the tubular stile member 13 of the lower sash 11 and has attached to its end a flaring or wedge-shaped plate 29, the sash cord being connected to the wedge at its narrower end. For releasably connecting the sash cord 27 to the window sash 11, a staple member of the form illustrated in Figs. 3, 4 and 5 of the drawings, may be employed. This staple member comprises a head 30, which may be conveniently made of sheet metal stamped to the form having channels 31, illustrated in Fig. 3, and a U-shaped body 32. The body and head of the staple member are releasably connected by a fusible

solder which, as shown at 33, fills the channels 31 of the sheet metal head 30. In using the staple member the body 32 enters the chamber of the tubular frame of the window sash 11 through a slotted opening 34 in its wall, whereby the head 30 and fusible solder 33 are exposed upon the outside face of the sash.

The sash 11 will be conveniently equipped with suitable lifting handle, as 35, set into the inside face of the lower cross member 15 of the frame of the sash. When the sash is so equipped the slotted opening 34, provided for the entrance of the body 32 of the staple member, will preferably be located in the outside wall of the cross member 15 of the frame of the sash in line with the lifting handle 35, thus providing convenient access to the chamber of the tubular sash frame at the point where the staple member is located, by simply removing the handle 35.

The wedge-plate 29 is wider at its outer end than the length of the body 32 of the staple member, and in applying the equipment described will be set into the body of the staple prior to the connection of its narrower end with the end of the sash cord 27. If then the sash becomes exposed to the heat of an adjacent fire, and the fusible solder 33 softened, the pull of the sash cord 27 upon the wedge-plate 29 will insure the separation of the body 32 of the staple from its head by reason of the wedging or cam action of the side of the wedge-plate upon the end of the body of the staple. In Figs. 1 and 8 of the drawings, a second wedge plate 36, having its wider portion extended in the opposite direction from that of the wedge plate 29, is also set through the body 32 of the staple member. This second wedgeplate serves as a connection for the end of a cord 37 extending to a counterweight (not shown), located at the opposite side of the window from the counterweight 23, whereby, when the head 30 and body portion 32 of the staple member, become separated in the manner just described the counterweights for the lower sash 11 at both sides of the window will be released at the same time and the sash permitted to close by gravity.

If desired, provision may be made for causing the counterweight 23 to supplement the action of the counterweight 24 and close the upper sash 12 when it becomes released from the lower sash 11. As shown, a vertical rod 38 is connected with the frame of the upper sash 12, as by having its end inserted in the aperture 22, and has telescopic sliding relation with the stile member 13 of the lower sash. A clutch plate 39, having an aperture 40 for slidably receiving the rod 38, rides upon the lower sash 11, as by merely resting upon the top of its frames. This clutch plate 39 is connected with the

sash cord 27 as by means of a link 41, which engages the clutch plate at a point remote from the aperture 40. The link 41 is so applied to the sash cord 27 as to hang slack when the end of the cord is connected to the lower sash. When, however, the sash cord 27 becomes released from the lower sash 11, it raises the outer end of the clutch plate 30 through its connection therewith, by the link 41, and causes the walls of the aperture 40 to bind upon the rod 38, whereby the effort of the counterweight 33 is exerted upon the upper sash. As shown, the rod 38 is located immediately in rear of the sash cord 27, as viewed from the face of the window, and the clutch plate 39 is apertured intermediate its ends to permit the sash cord 27 to pass through it.

I claim as my invention—

1. In a window, in combination, upper and lower vertically movable sash members, a counterweight for each of the said sash members, the two counterweights being movable in parallel paths, each of said counterweights being normally independent of the other sash and normally adapted to pass the other counterweight during the movement of the sash, releasable connection between the lower sash and its counterweight, and means for connecting the last-named counterweight with the upper sash upon its release from the lower sash.

2. In a window, in combination, upper and lower vertically movable sliding sash members, a counterweight and sash cord for each of the said sash members, a vertical rod connected to the upper sash member, releasable connection between the lower sash member and its sash cord, and a clutch carried by the said last-mentioned sash cord, the said clutch being normally in sliding engagement with the said rod and being adapted to grip the said rod upon the release of the connection between the lower sash member and its sash cord.

3. In a window, in combination, upper and lower vertically movable sliding sash members, a counterweight and sash cord for each of the sash members, the sash cord of the lower sash member having releasable connection with such member, a vertical rod connected to the upper sash member, a clutch plate normally riding on the lower sash member and sliding on the said rod, and normally slack connection between the sash cord of the lower sash member and the clutch plate.

4. In a window in combination, upper and lower vertically movable sliding sash members, a counter weight and sash cord for each of the sash members, the sash cord of the lower sash member having releasable connection with such member, a clutch member engageable with the upper sash member normally supported in inoperative position by

the lower sash member and normally slack connection between the sash cord of the lower sash member and the clutch member.

5 In a window in combination, upper and lower vertically movable sliding sash members, a counter weight and sash cord for each of the sash members, the sash cord of the lower sash member having a releasable con-

nection with such member, and means for connecting the sash cord of the lower sash member with the upper sash member upon its release from the lower sash member. 10

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
