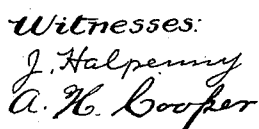


A. MASSALSKI.
WINDOW.

Patented Oct. 30, 1894.

FIG. 2.



6 *Amundus Massalski*
By his attorneys
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UNITED STATES PATENT OFFICE.

AMANDUS MASSALSKI, OF CHICAGO, ILLINOIS.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 528,333, dated October 30, 1894.

Application filed June 8, 1894. Serial No. 513,886. (No model.)

To all whom it may concern:

Be it known that I, AMANDUS MASSALSKI, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Windows, of which the following is a specification, reference being had to the accompanying drawings, which are made a part hereof, and in which—

Figure 1 is a front elevation of a window embodying the invention, portions of the sash and frame being broken away in order to show internal parts. Fig. 2 is a vertical section thereof on the line 2—2, Fig. 1, with the lower sash removed. Fig. 3 is a side elevation of one of the sashes. Fig. 4 is a horizontal section on the line 4—4, Fig. 1. Figs. 5, 6 and 7 show a block, to which is attached the extremity of the sash hanger, and which in turn is attached to one of the guides hereinafter described, Figs. 5 and 6 showing the block of the construction that is used where the hanger consists of a rope, cord or cable, and Fig. 7 showing the block of the construction that is used where the hanger consists of a metallic tape.

As ordinarily constructed, window frames are provided with vertical grooves, formed by strips of beading nailed or screwed to the jam of the frame, by which the sash is guided in its vertical movement. With such a construction, in order to remove the sash it is necessary to first remove the beading, and this is not only difficult, but is attended with more or less injury to the woodwork, the beading being frequently broken.

The object of the present invention is to provide a window of such construction that when it becomes desirable to do so the sash may be readily removed without injury to any of the parts. It is my aim in accomplishing this object to avoid, as much as possible, departing from customary constructions, to the end that the invention may be applied to windows that have already been constructed without any radical alterations.

The invention does not contemplate any alteration in the window frame, and it is not in any way limited to the construction of the counterbalancing devices.

It consists in the features of novelty that

are particularly pointed out in the claims hereinafter.

In the drawings, A represents the window frame, having vertical grooves *a* resulting from strips of beading *a'* nailed or otherwise secured to the jamb of the frame in the customary manner.

B are the sashes, a description of one of which will be sufficient for the purposes of this specification, since both are similar in construction and have similar accessories, similar parts in both being indicated by similar letters of reference.

C are the counterbalancing weights. D are the hangers by which said weights are suspended. E are the pulleys over which said hangers pass, and F are slides to which said hangers are attached in any suitable manner, depending very largely upon the character of the hanger. I prefer to attach the hangers to the slides through the medium of blocks, the construction of which varies according to the character of the hanger.

In Figs. 5 and 6 is shown a block, lettered G, of the construction that is preferably used where the hanger consists of a rope, cord or cable, said block being provided with three transverse openings *g*, *g'*, *g''*, and a longitudinal opening *g'''* which communicates with the opening *g*, the arrangement being such that the hanger may be rove through the several openings in such manner as to produce between it and the block sufficient friction to prevent its withdrawal. The block is provided with tapped holes for the reception of a pair of screws H by which it is attached to the slide F.

In Fig. 7 is shown a block, lettered I of the construction that is preferably used where the hanger consists of a metallic tape. Here the block is formed in two longitudinal sections *i*, *i'*, the former of which has at top a loop or eye *i''* for receiving the upper end of the section *i'*, said sections having in their meeting faces oppositely located depressions *i'''* and being provided near their lower ends with a clamping screw *i''''* by which they are secured together. In order to secure the tape to this block, it is first bent over the upper end of the section *i'*, then carried along the inner face of said section until the depres-

sion i^3 is reached, at which point it is doubled upon itself and passed through the eye i^2 , after which the upper end of the section i' , with the tape bent over it, is inserted in said eye and the lower ends of the two sections brought together and secured with the screws i^4 , a pin I' being inserted in the lower portion of the loop of the tape so as to fill the depressions i^3 . The block thus constructed is secured to the slide F by means of the screws H , as already described with relation to the block G . These are two devices for attaching the hangers to the slides, and while I shall make claim in this application to the particular construction of one of them, still, I desire to have it understood that in its broadest aspect the present invention is not limited to any particular means for accomplishing this result. It comprehends broadly any means for either directly or indirectly attaching the hangers to the slides, the essential feature of the invention being the construction of the slides and not the devices for attaching them to the hangers.

The slides are equal in length to the height of the sash, and in horizontal cross-section are of such size and shape that they fill the grooves a and project a short distance therefrom. Preferably, each of them is constructed of a piece of sheet-metal bent to form three sides of a rectangle, and has one of its flanges doubled upon itself and continued backward far enough to form a projecting flange f .

J are hooks carried by the slides and adapted to enter bayonet grooves L in the edges of the sashes, K are screws carried by the sash and adapted to enter tapped openings k in the slides, and M are bayonet grooves in the edges of the sashes adapted to receive the heads of the screws H by which the slides are attached to the hangers. These devices, H , J , K , L , and M constitute a convenient and simple means whereby the sash may be attached to the slides, but I desire to have it understood that in its broadest aspect my invention is not limited to any particular means for accomplishing this result. My aim is simply to provide a readily detachable sash, and this may be accomplished by any means other than those shown that will suggest themselves to those skilled in the art.

In order to remove the sash it is first placed

in such position that openings n in the sides of the slides F register with openings N formed through the beads a' , after which keys O are passed through said openings, as shown more plainly in Fig. 2. The object of this is to anchor the slides so as to prevent them from being pulled up by the weights when the weight of the sash is taken from them. The keys being inserted, the screws K are turned back until they disengage the slides, after which the sash may be moved upward, relatively to the slides, so as to bring the hook J and the heads of the screws H opposite the lateral portions of the slots L and M , respectively, whereupon the sash may be removed from between the slides. The openings N are preferably provided with metallic bushings N' . When not in use the keys O may be hung upon hooks o , as shown in Fig. 1.

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

1. The combination with a sash and a frame having guides, of slides fitting said guides, means detachably securing the sash to the slides, and counterbalancing devices connected to the slides, said slides being made of sheet metal bent to form three sides of a rectangle and having one of its flanges doubled upon itself and continued backward far enough to form a flange for engaging the sash, substantially as set forth.

2. The combination with the tape doubled upon itself, of a clamping block formed in two longitudinal sections i, i' having in their meeting faces oppositely located depressions i^3 , a pin I' placed in the loop of the tape and filling the depressions i^3 , and means for securing the two sections of the block together, substantially as set forth.

3. The combination with a tape, of a clamping block consisting of the two longitudinal sections i, i' having in their meeting faces oppositely located depressions i^3 , the former of said sections having at one end a loop i^2 adapted to receive the corresponding end of the other section, and means for securing the two sections together, substantially as set forth.

AMANDUS MASSALSKI.

Witnesses:

L. M. HOPKINS,
J. HALPENNY.