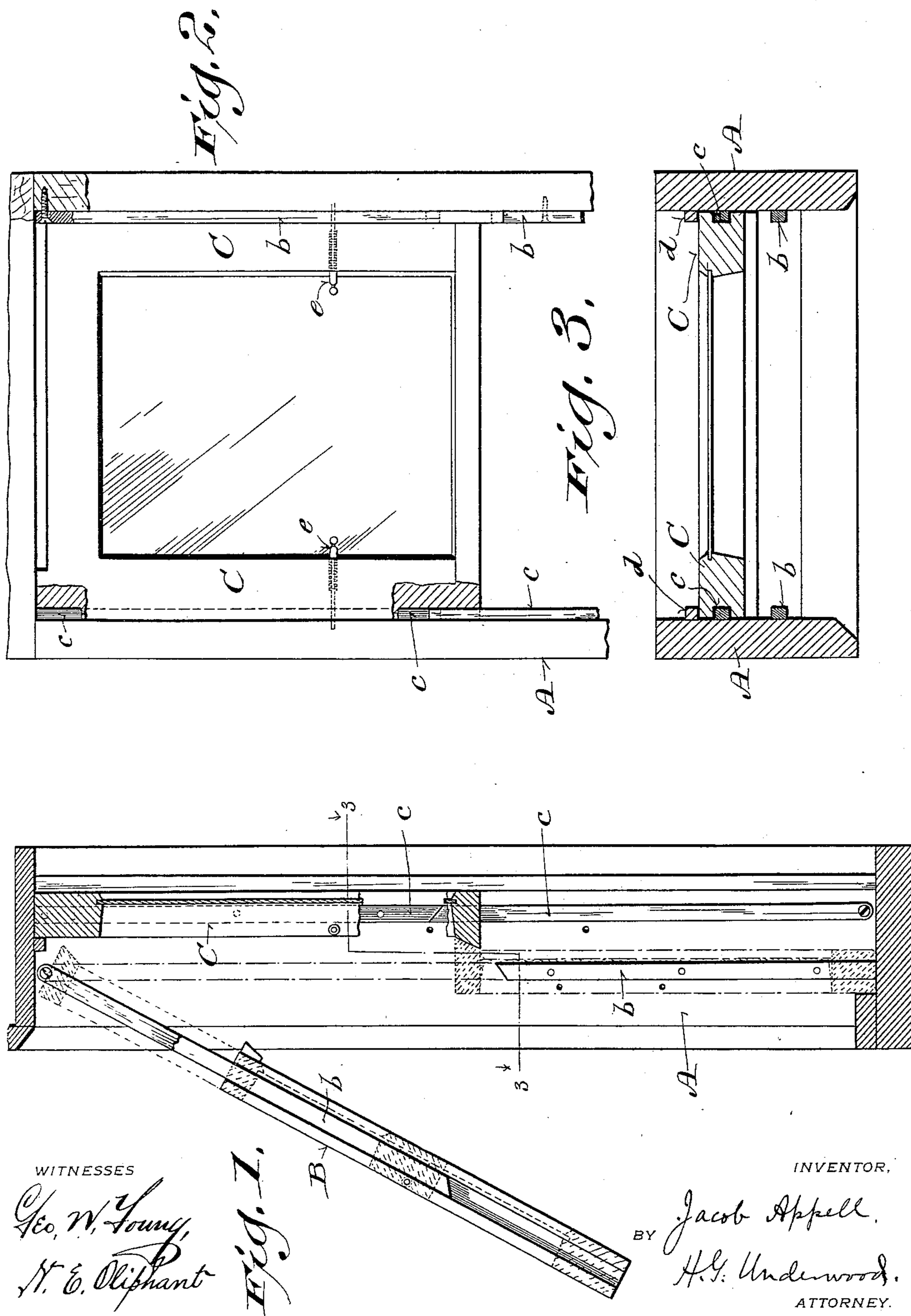


(No Model.)

J. APPELL.  
WINDOW.

No. 602,712.

Patented Apr. 19, 1898.





# UNITED STATES PATENT OFFICE.

JACOB APPELL, OF MILWAUKEE, WISCONSIN, ASSIGNOR, BY DIRECT  
AND MESNE ASSIGNMENTS, OF ONE-HALF TO MICHAEL LEHNERER,  
OF WAUKESHA, WISCONSIN.

## WINDOW.

SPECIFICATION forming part of Letters Patent No. 602,712, dated April 19, 1898.

Application filed November 29, 1895. Serial No. 570,442. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB APPELL, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Windows; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide for the ready removal of sash from window-frames; and it consists in certain peculiarities of construction and combination of parts hereinafter set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 represents a window-frame and sash embodying my improvements, the view being for the most part a longitudinal section on an irregular plane, with certain of the parts in elevation and broken away; Fig. 2, a front elevation with parts broken away, and Fig. 3 a horizontal section on line 3 3 of the first figure.

Referring by letter to the drawings, A represents the stiles of a window-frame provided with inwardly-projecting sectional guide-strips *b c* for engagement with longitudinal grooves in the outer longitudinal faces of sash-stiles B C, and the frame-stiles are also provided with vertical stops *d* outside the sash. With the exception of the sectional sash-guides and grooved stiles the frame and sash above specified are the same in the matter of construction as those of common use, spring-catches *e* being shown as a means for holding said sash in adjusted position.

Each of the guide-strips *b c* comprises two sections, one of which is permanently fastened to a stile of the window-frame, the other section being pivoted at one end to said stile. The meeting ends of the guide-strip sections are beveled to permit of the pivotal ones being readily swung away from the permanent ones when it is desirable to remove sash from the window-frame. The meeting ends of the sections pertaining to each pair of guides are at such elevation as to require the bringing of each sash a greater distance than full length out of normal position before the movable sections of said guides can be swung on their piv-

ots, and hence under ordinary circumstances each guide is practically rigid throughout to insure easy working of said sash and its retention against displacement.

As a matter of detail it will be observed that the guides *b* have their movable sections pivoted to the upper ends of the frame-stiles, and the guides *c* have their movable sections pivoted to the lower ends of said stiles.

In practice when it is desirable to remove the lower sash the latter is run up on its guides *b* to clear the stationary sections of the same, after which it is swung out with the pivotal sections of said guides and drawn therefrom, as will be best understood by reference to Fig. 1. To remove the upper sash, it is run down on its guides to clear the permanent sections of the same and then swung out with the pivotal sections of the latter guides to be drawn therefrom, this operation taking place subsequent to the removal of the aforesaid lower sash.

It will be noticed that each inwardly-projecting guide-strip normally extends from the top of the window-frame to the bottom of the same, and consequently operates as a weather-stop the entire length of the sash when the latter is in closed position, this being a matter of considerable importance in the practical application of my invention.

While the construction and arrangement of parts above specified does not increase the cost of production in the matter of window-frames and sash, it facilitates removal of the latter at any time such an operation may be desirable and prevents marring of the wood-work in said frame and sash.

It is to be understood that while spring-catches for holding the sash in adjusted position have been shown it is possible to employ weighted cords run on pulleys for the same purpose, as is common in the art to which the invention relates.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A window-frame having its stiles provided with outside stops *d*, sash-guides in the form of strips each comprising two sections of unequal length, the short section being rigid

and the long section pivoted to the upper end  
of a frame-stile, and other sash-guides in the  
form of strips each comprising two sections  
of unequal length, the short section being  
5 rigid and the long section pivoted to the lower  
end of a frame-stile; the meeting ends of all  
said strip-sections being at such elevation as  
to require bringing of sash a greater distance  
than full length out of normal position before  
10 either pair of the movable sections can be  
swung on their pivots, it also requiring that

run-up lower sash be swung out before run-  
down upper sash can be swung out for re-  
moval.

In testimony that I claim the foregoing I 15  
have hereunto set my hand, at Milwaukee, in  
the county of Milwaukee and State of Wis-  
consin, in the presence of two witnesses.

JACOB APPELL.

Witnesses:

N. E. OLIPHANT,

B. C. ROLOFF.