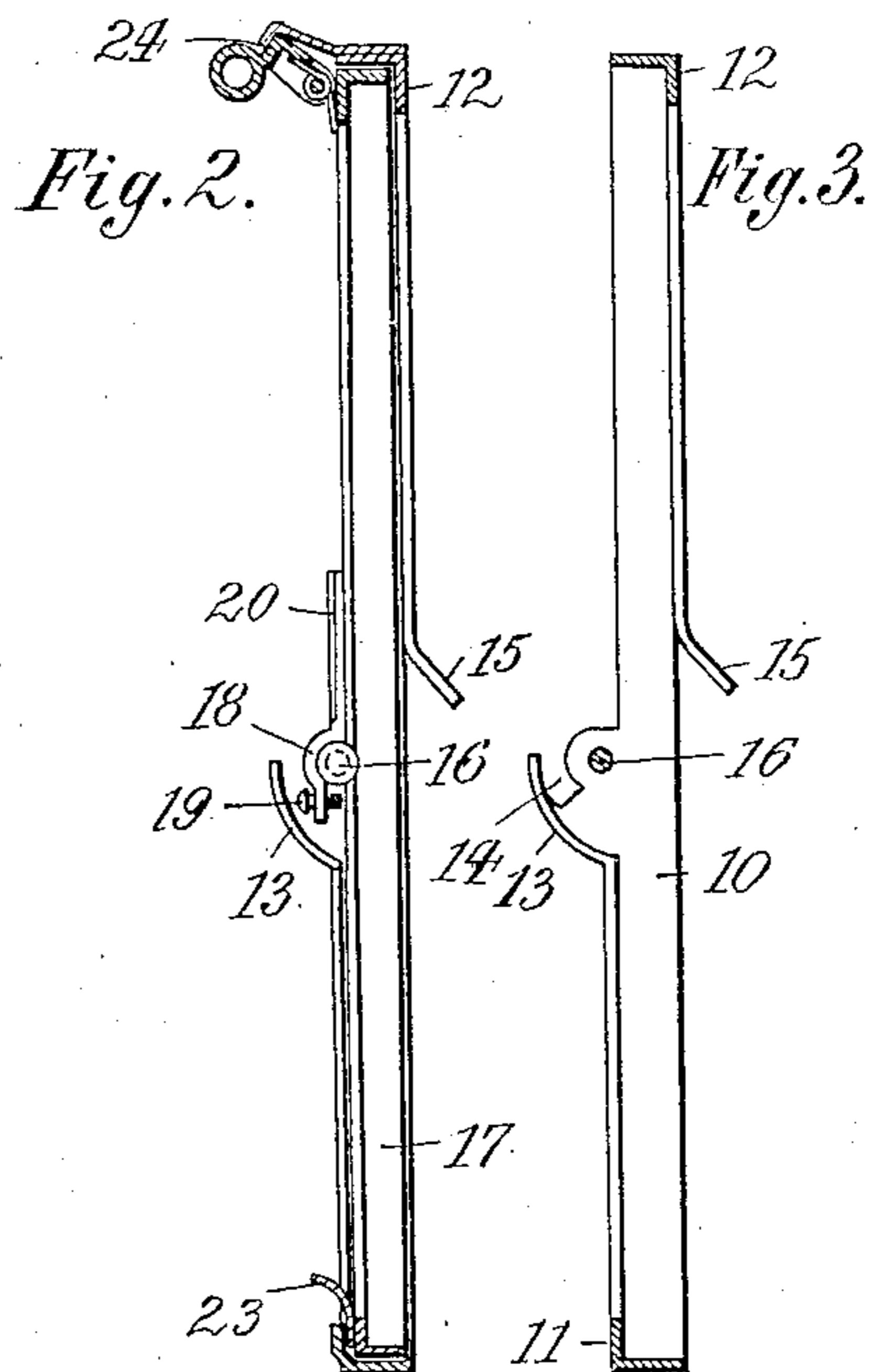
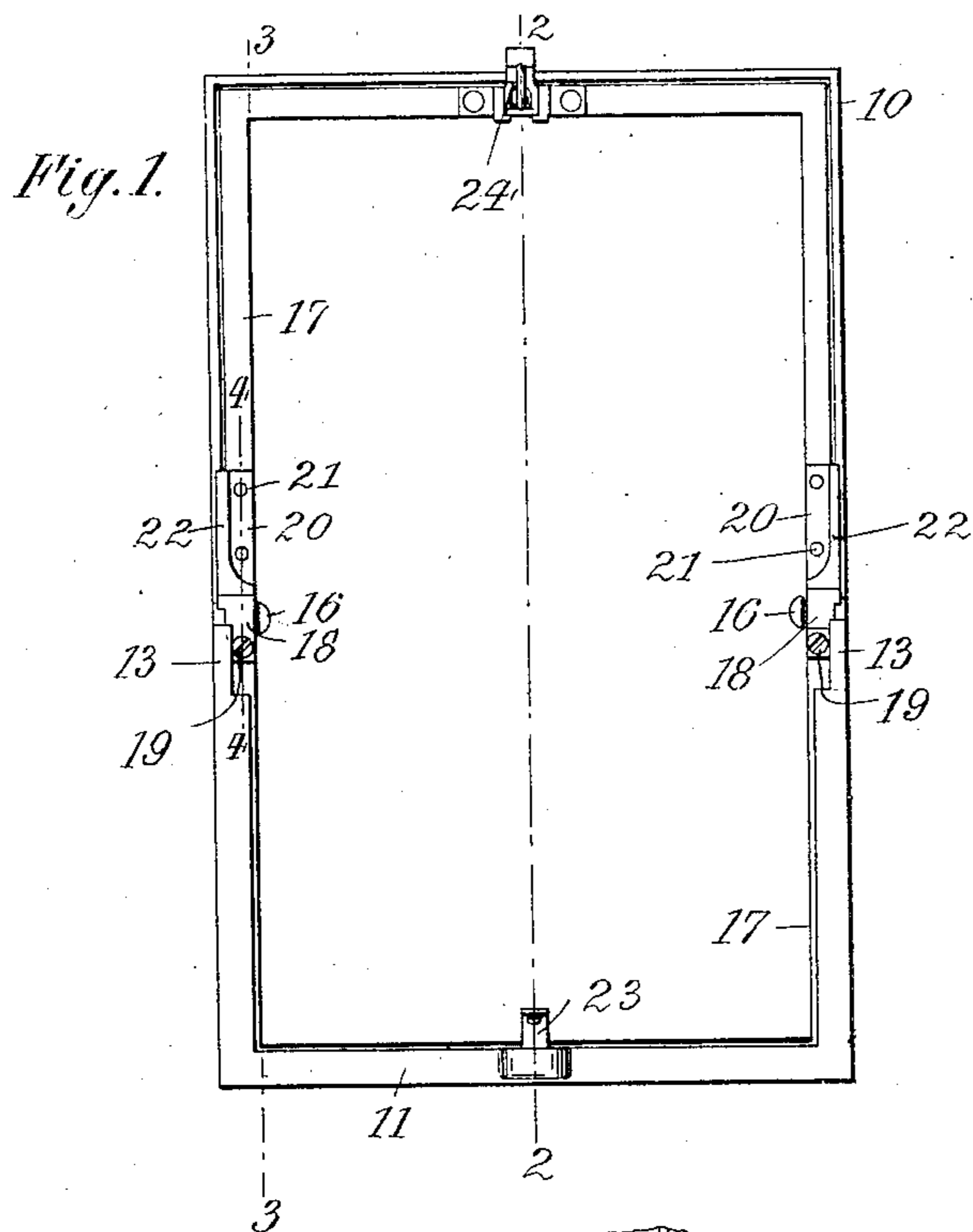


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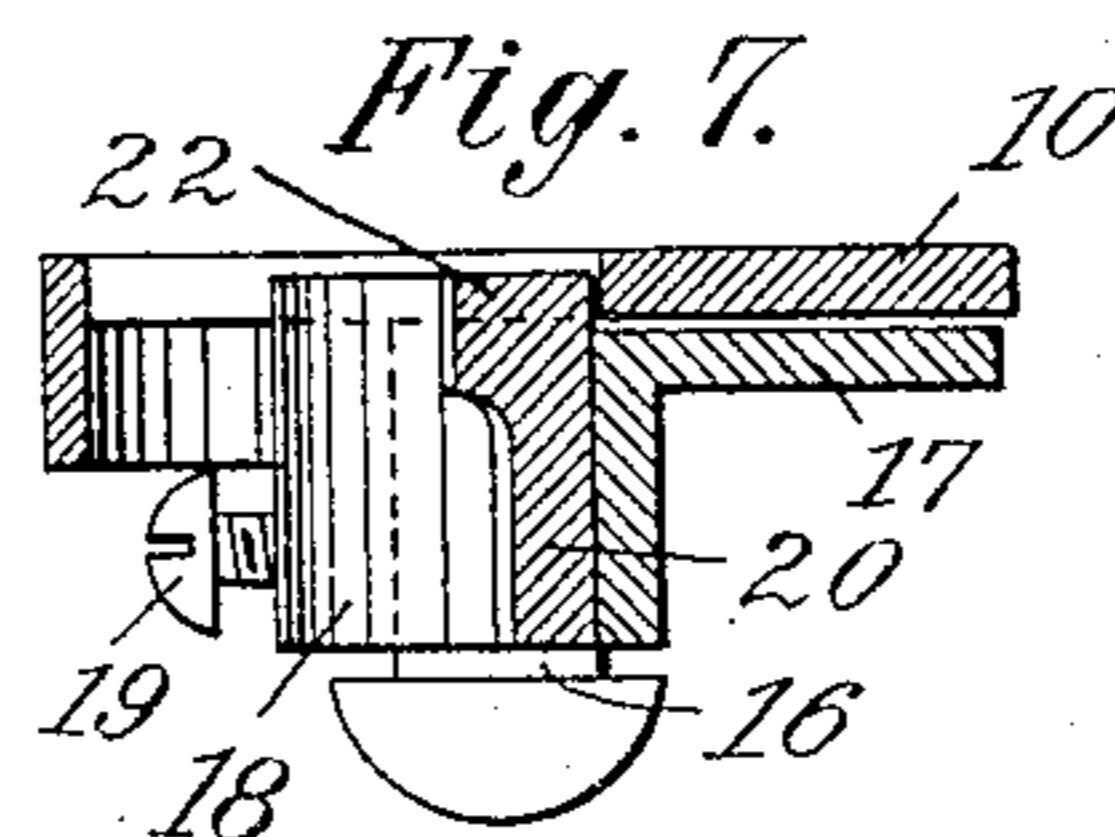
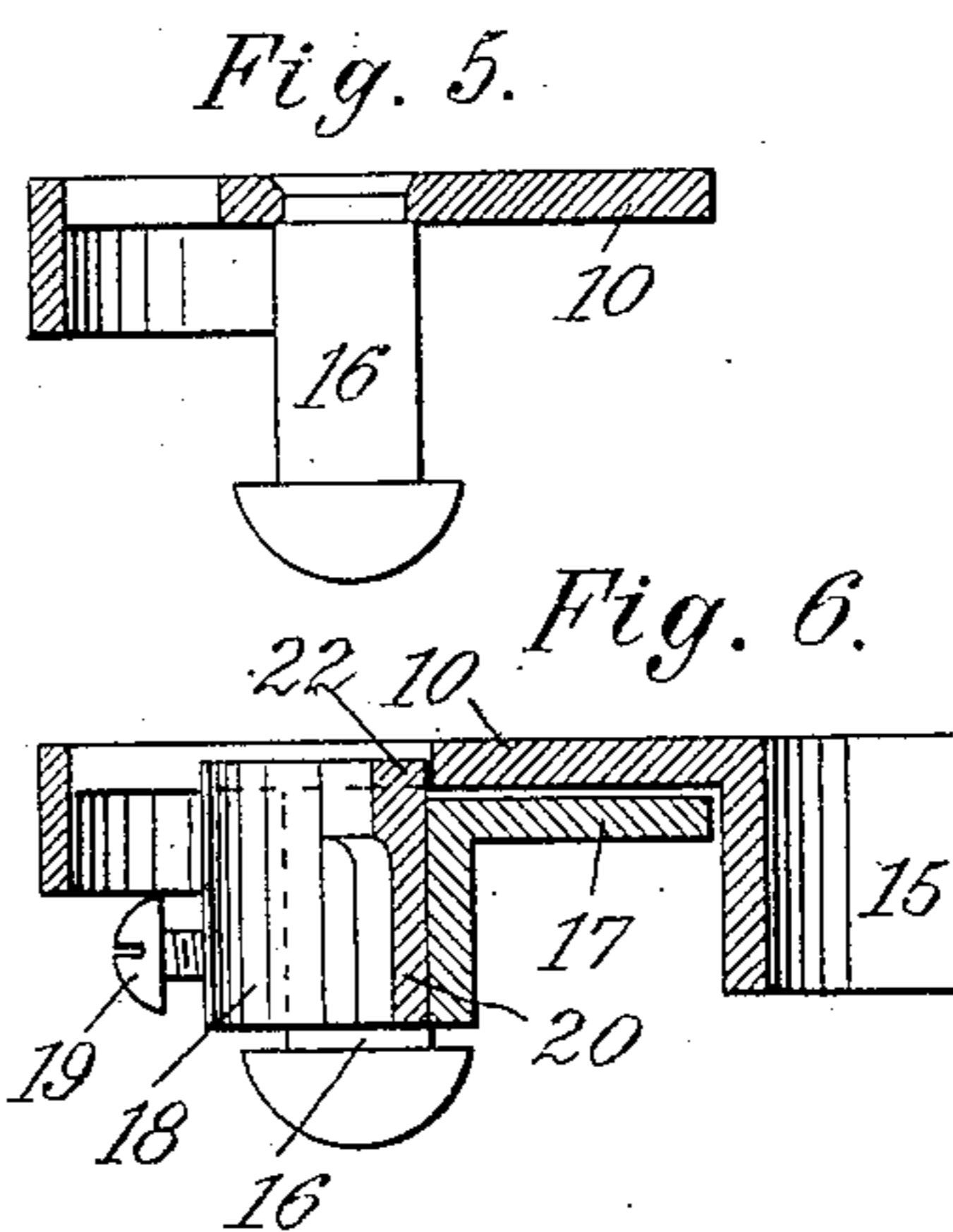
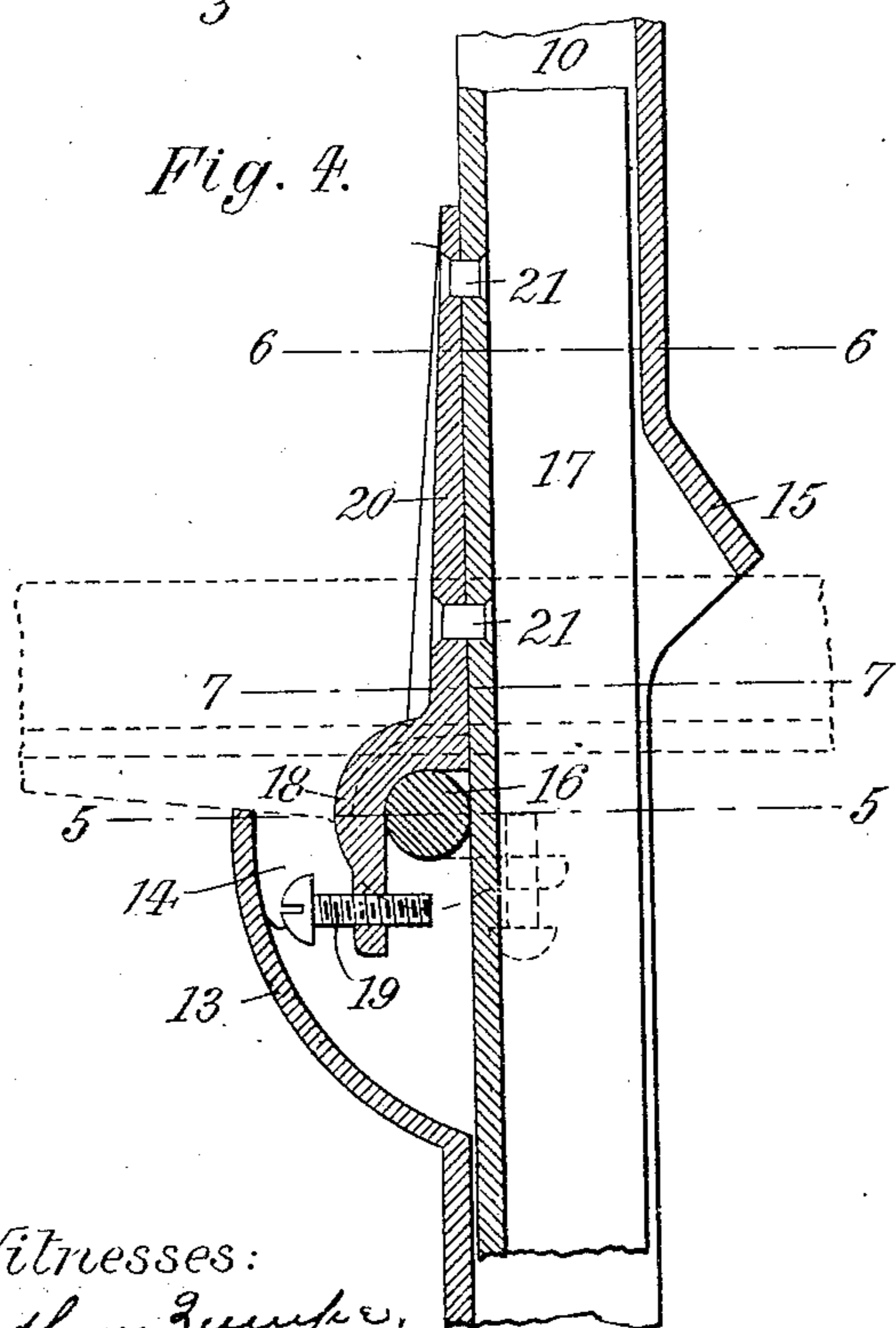
PATENTED FEB. 26, 1907.

A. TORNIER.  
WINDOW.

APPLICATION FILED MAR. 8, 1906.



*Fig. 3.*



Witnesses:  
Arthur Zumpfer.  
William Schulz.

Inventor.  
Alphons Tornier  
by Frank Priesen Atty.

# UNITED STATES PATENT OFFICE.

ALPHONS TORNIER, OF NEW YORK, N. Y.

## WINDOW.

No. 845,382.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed March 8, 1906. Serial No. 304,906.

*To all whom it may concern:*

Be it known that I, ALPHONS TORNIER, a citizen of Germany, residing at New York city, Manhattan, county and State of New York, have invented new and useful Improvements in Windows, of which the following is a specification.

This invention relates to a window more particularly designed for churches and similar edifices and which is so constructed that it may be readily removed from its frame for the purpose of repair.

In the accompanying drawings, Figure 1 is a front view of my improved window; Fig. 2, a longitudinal section on line 2 2, Fig. 1; Fig. 3, a similar section on line 3 3, Fig. 1, with the sash removed; Fig. 4, a section, on an enlarged scale on line 4 4, Fig. 1; Fig. 5, a cross-section on line 5 5, Fig. 4, with the sash removed; Fig. 6, a cross-section on line 6 6, Fig. 4; and Fig. 7, a cross-section on line 7 7, Fig. 4.

The frame 10 of the window is provided along its lower section with a front flange 11 and along its upper section with a rear flange 12. The front flange 11 terminates at each of its upper ends in a forwardly and upwardly extending curved guard 13, having a notch 14. The rear flange 12 is deflected rearwardly at each of its lower ends to constitute a pair of stops or abutments 15. Intermediate the flanges 11 12 there extends inwardly from frame 10 a pair of pivots 16, on which is free to swing the sash-frame 17. This frame is provided with a pair of downwardly-extending hooks 18, that enter the notches 14 and removably engage the pivots 16. Set-screws 19, passing through the hooks 18, are adapted to be projected beneath pivots 16, Fig. 4, so as to lock frame 17 to frame 10. The hooks 18 are formed on the lower ends of plates 20, secured to frame 17, as at 21, and provided with laterally-extending flanges 22, that project over frame 10. The object of the plates 20, in conjunction with guards 13, is to prevent the light from penetrating between frames 10 17 along the central flangeless section of frame 10.

When the window is to be opened, the sash, which should be slightly overbalanced, is swung on pivots 16 until frame 17 strikes against stops 15. When the sash is to be removed, screws 19 are slackened, so that the hooks 18 can be disengaged from pivots 16 and the sash can be lifted entirely out of the frame. The sash is manipulated by a suitable handle 23 and may be locked to the frame by a catch 24.

It will be seen that with the construction described the guards 13, as well as the trunnions 16, are carried by the window-frame, while the hooks 18 are carried by the sash-frame. Thus when in hanging the sash the hooks 18 are projected over trunnions 16 they will at the same time pass behind guards 13, so as to be overlapped thereby. Consequently the hooks cooperating with the guards will exclude the weather between trunnions 16 and flanges 11, while the weather is excluded between trunnions 16 and flanges 12 by the plates 20, made integral with hooks 18.

What I claim is—

1. A window-frame having lower flanges, a pair of guards extending upwardly therefrom, and a pair of trunnions, combined with a sash-frame having a pair of hooks adapted to engage the trunnions and to be projected behind the guards, substantially as specified.

2. A window-frame having lower flanges, upper flanges, a pair of guards extending upwardly from the lower flanges, and a pair of trunnions, combined with a sash-frame having a pair of plates, and hooks integral with said plates and adapted to engage the trunnions, whereby the plates are interposed between the trunnions and the upper flanges, while the guards and hooks are interposed between the trunnions and the lower flanges, substantially as specified.

Signed by me at New York, Manhattan, New York, this 7th day of March, 1906.

ALPHONS TORNIER.

Witnesses:

FRANK V. BRIESEN,  
WILLIAM SCHULZ.