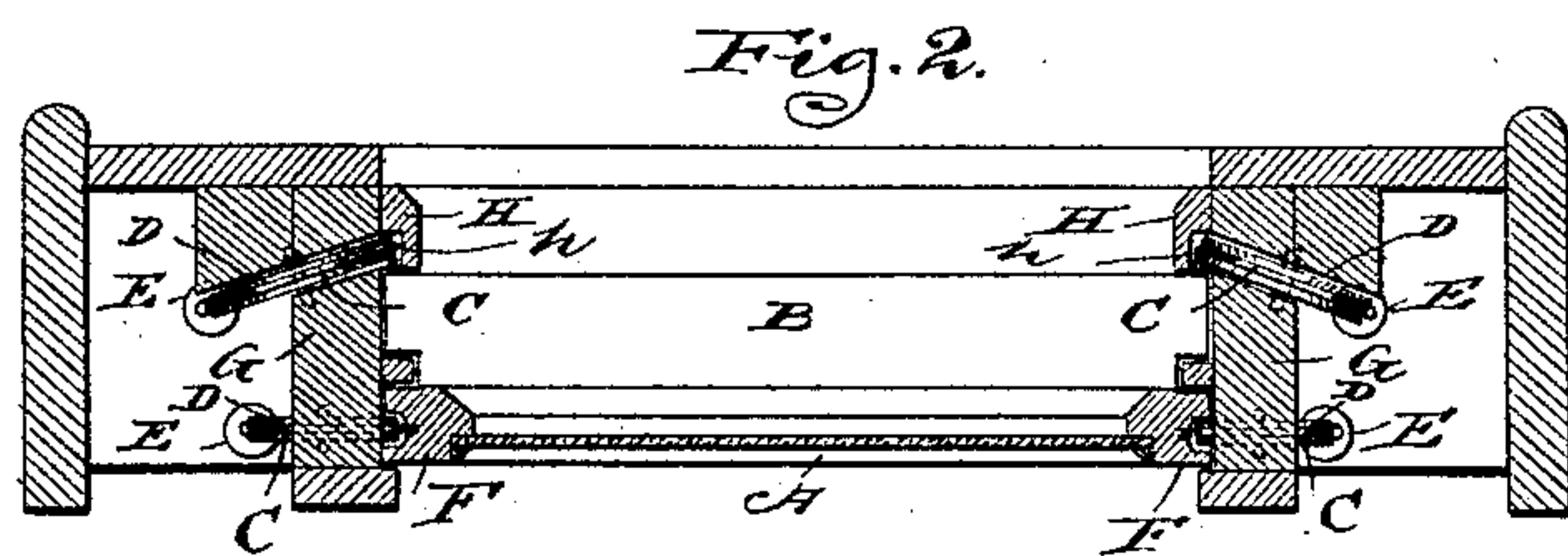
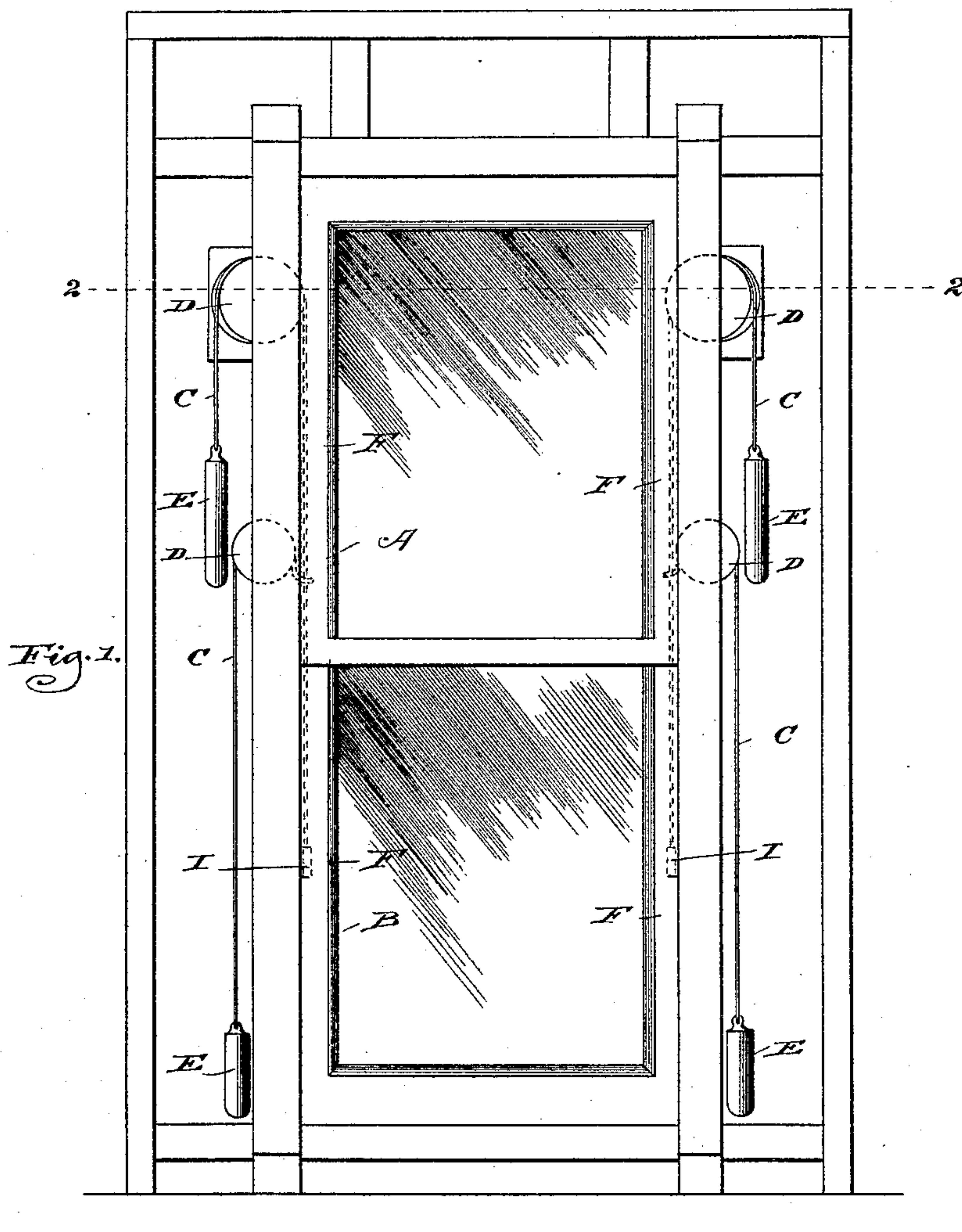


(No Model.)

A. O. WIKLUND.
WINDOW.

No. 452,557.

Patented May 19, 1891.



Witnesses,
J. J. Mann.
Frederick Goodwin

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UNITED STATES PATENT OFFICE.

ANDERS. O. WIKLUND, OF CHICAGO, ILLINOIS.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 452,557, dated May 19, 1891.

Application filed September 4, 1890. Serial No. 363,905. (No model.)

To all whom it may concern:

Be it known that I, ANDERS. O. WIKLUND, a subject of the King of Norway and Sweden, residing at Chicago, Cook county, Illinois, have
5 invented certain new and useful Improvements in Windows, of which the following is a specification.

My invention relates to certain improvements in the arrangement of the cords and
10 pulleys for sash-weights, and has for its object to conceal the cords and pulleys and afford means of easy access to the window-stile attachment of the sash-weight cord. The pulleys for the lower sash are set obliquely in
15 the jamb near the top, and the outside stops are grooved out on their inner sides to furnish a channel for the cords to travel in, and also to conceal the exposed edges of the pulleys. The cords are fastened to keepers at a
20 point outside the plane of the window-stiles at a point about midway of their height. Removal of the outside stops affords easy access to the keepers to which the cords are fastened and permits of renewing the cords or fasten-
25 ing them, if accidentally detached, without removing the sash.

In the accompanying drawings, Figure 1 is an exterior elevation of a window and frame. Fig. 2 is a sectional plan taken on line 2 2,
30 Fig. 1.

A represents the upper sash; B, the lower sash; C, the cords; D, the pulleys; E, the weights; F, the window-stiles; G, the jambs; H, the outside stops, and I the keepers. The
35 upper sash is constructed in the usual manner; but the pulleys are placed in the jamb at a point near the plane of the meeting-rails, so that the window can be lowered a distance substantially equal to its height without ex-

posing the cord or pulley to view. The lower
40 sash has no groove in its edge, such as is usually provided for the cords, and the latter are connected to keepers I at a point outside the plane of the sash-stile. The pulleys for
45 the cords of the lower sash are set obliquely in the jamb and their edges, which project in front of the jamb, are outside of the path of the sash. The stops H have the groove *h*
50 therein, which forms a way or channel for the cords, while said stops bear against the face of the stile and guide it, while the cords and pulleys are concealed from view. When the
stops are removed, access can be had to the ends of the cords.

I claim—

1. In a window, the combination, with the
55 lower sash, of counterbalancing-weights whose cords are secured with the stiles and lie outside the plane thereof, pulleys set to correspond with the arrangement of the cords, and
60 grooved stops for the lower sash, adapted to conceal the cords and pulleys.

2. In a window, the combination, with the
65 lower sash, whose cords are secured with its vertical stiles and lie outside the plane thereof, pulleys set to correspond with the arrangement of the cords, and grooved stops for the
lower sash, adapted to conceal the sash cords and pulleys, of an upper sash having coun-
70 terbalancing cords and weights therefor, and pulleys for the upper-sash cords located in the jambs near the plane of the meeting-rails, substantially as described.

ANDERS. O. WIKLUND.

Witnesses:

FREDERICK C. GOODWIN,
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