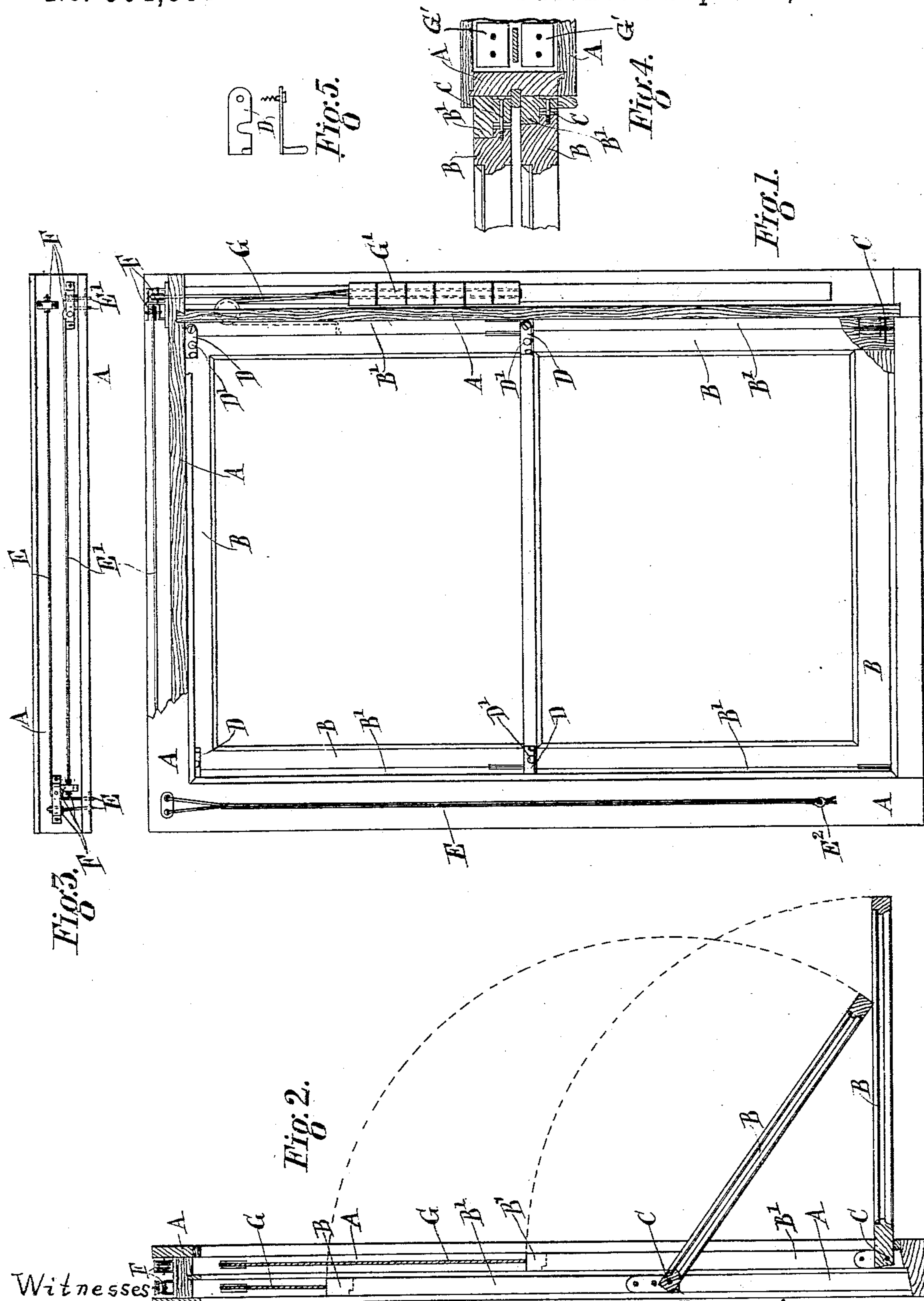


(No Model.)

C. HIBBERD.
WINDOW.

No. 504,806.

Patented Sept. 12, 1893.



Witnesses

William K. Palmer,

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UNITED STATES PATENT OFFICE.

CHARLES HIBBERD, OF MELBOURNE, ASSIGNOR TO THOMAS WRIGHT
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WINDOW.

SPECIFICATION forming part of Letters Patent No. 504,806, dated September 12, 1893.

Application filed June 22, 1892. Serial No. 437,667. (No model.) Patented in Victoria February 14, 1891, No. 8,507.

To all whom it may concern:

Be it known that I, CHARLES HIBBERD, contractor, a subject of Her Majesty the Queen of the United Kingdom of Great Britain and Ireland, and a resident of Bromby Street, South Yarra, Melbourne, in the Colony of Victoria, have invented a new and useful Improvement in Windows, (for which I have obtained a patent of the Colony of Victoria, No. 8,507, dated February 14, 1891,) of which the following is a specification.

This invention relates to improvements in windows of the type that have two sashes hung by weighted cords in a casement or sash frame and capable of being raised or lowered as required.

My first improvement consists in so constructing each sash that the portion or frame carrying the glass or window is centered or hinged to side stiles that traverse in the casement grooves and are supported therein by the ordinary weight cords, while fastenings are provided at top of each side stile to secure them to their window frames. The purpose of so hanging or hinging the main portion of each sash is to allow them to be lowered inward upon their hinge pin, to enable windows at great heights and in awkward positions to be cleaned and repaired without danger.

My second improvement consists in attaching to casements and sashes, either of the ordinary or of the inwardly lowering form above referred to, two pull cords one arranged to hang over each inside facing of casement, such cords being so fitted up and arranged that by releasing the cord at one side from its hold-fast pin the lower sash will be raised while by pulling upon the cord at other side the upper sash is lowered and one or both of them may be left at any desired position without having to handle the sashes at all.

The attached drawings fully illustrate my improvements.

Figure 1 shows an inside view of a window with its facing at top and on one side removed to exhibit the pull cords. Fig. 2 is a side sectional view showing the top and bottom sash dropped or lowered inward. Fig. 3 is a plan on top of casement showing the arrangement of pull cords. Fig. 4 is an enlarged horizon-

tal section through casement and sash bars to exhibit the sliding check stiles. Fig. 5 shows enlarged details of the catch for securing upper part of sashes and sliding check stiles together.

A is the casement, B the sashes, B' the check stiles, C the hinge pins, D fastenings for securing sashes and check stiles firmly together, E the pull cords for operating the upper sash and E' the pull cords for operating the lower sash, E'' holdfast pins, F sheaves for pull cords, G the ordinary sash cords and G' their weights. The cords G are secured to the check stiles B'.

In the first improvement the outer checked stiles B' are the only additional woodwork required and these are made no thicker than is necessary to allow the sashes when folding down or falling inward to pass freely the fixed woodwork or bead rods of the casement, while at the lower part of the outer checked stiles B' on both its sides small brass or other metal plates are secured let in flush into the woodwork, a strong screw countersunk flush on outer side passing loosely through the plates in check stile and taking the screw thread in the plate upon the stile and in the stile bar so as to form hinge pins C for supporting the sashes while lowering them inward. On the inner face of the upper portion of the outer checked stiles the small brass, or other metal, catches or fastenings D are centered upon screws. The catches have a slot or gap in them to neatly fit over pins D' secured into and projecting from the top rail of sash so as to securely fix both parts together and allow the sashes to be moved upward or downward as if as ordinarily in one solid frame.

In the second improvement the innermost ends of each double pull cord or wire are secured to the sash weights G', pull cord E being secured to the weights of the upper sash and pull cord E' to those of the lower sash. Such pull cords pass over sheaves F as shown and thence out through perforated plates in top facing of casement and from which plates they are suspended. The usual axle rollers and sash lines are not interfered with. The sash weights of the upper sash are of about the same weight as the sash, as is the usual

custom, so that they balance one another. On the other hand, the weights of the lower sash are heavier than the sash so that they over-balance it. It will be understood that
 5 by pulling cord E its sash weights are lifted and consequently the upper sash will fall or be opened, while, again by releasing cord E' from its pin E'' its sash weights will be freed and they being heavier than the lower sash
 10 it will be lifted or opened upward. Obviously by fastening each cord on its button or pin, the sashes may be held at any desired position within the casement.

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

1. In a window, the combination with the lower sash; of weights and cords therefor, said weights being heavier than the sash; of
 20 pull cords attached to the weights and passing over sheaves in the facing of the casement; and of means, such as holdfast pins, for fastening the cords.

2. In a window the combination with the

sashes; of sash weights and cords therefor, 25 the weights for the lower sash being heavier than the sash and those for the upper sash being about the same weight as the sash; of pull cords attached to the weights and passing over sheaves in the top facing of the case- 30 ment; and of means, such as holdfast pins, for fastening the pull cords.

3. In a window, the combination with the sashes; of sash weights and cords therefor, the weights for the lower sash being heavier 35 than the sash and those for the upper sash being about the same weight as the sash; and of means connected with the sash weights for lowering and raising them independently of the sash cords. 40

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 4th day of May, 1892.

CHARLES HIBBERD.

Witnesses:

ROBERT BODYCOMB, Jr.,
 BEDLINGTON BODYCOMB.