# PATENT SPECIFICATION

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COMPLETE SPECIFICATION

## Improvements in and relating to Casement Windows

I, JOHN BELL, British Subject, formerly of Hale Road, Forrestfield, in the State of Western Australia, Commonwealth of Australia, but now of 20, Alexander Road, Dalkeith, in the State of Western Australia, Commonwealth of Australia, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in casement windows.

One of the main disadvantages associated with casement windows is the lack of any simple arrangement for screening the openings with fly wire. There have of course been several arrangements proposed for the purpose referred to, but these have been far from satisfactory. One of the best known consists in mounting the wire on the frame which is hinged so that the screen can be turned clear of the opening to allow the casement stay to be operated.

A further disadvantage associated with casement windows concerns the casement stays that are used therewtih. These have lacked simplicity and moreover have nearly all had a considerable amount of back lash, so that in a breeze the open windows rattle.

The present invention relates to a form of casement stay whereby the unit can be opened or closed at will from the inside without disturbing the fly screen, and also in the means used for attaching the fly wire.

The casement stay can be used for opening casement windows even though they are not protected by a fly screen.

The invention comprises a window frame, a fly screen fixed to the outside thereof, an opening in the frame or screen, a hollow housing covering the opening at the inside, a pivot supported inside the housing, an operating lever mounted on said pivot inside the housing, an extension thereof through the housing for operating it from the inside of the window, a link member pivoted to the lever inside the housing, and a hinged casement to which the other end of the link is pivoted.

The invention will, however, more readily he understood by reference to the accompanying drawings showing a suitable form thereof. In these drawings:—

Figure 1 is an elevation of the window and the appurtenant parts as seen from the inside;

Fig. 2 is a plan in section through the window frame and associated parts;

Fig. 3 is an elevation, partly sectional, through the housing and its associated operating member; and

Fig. 4 is a side sectional elevation through the frame to show the means used for attaching and tensioning the fly screen.

As shown in these drawings, there is an upper metal bracket 10 and a lower metal bracket 11, each having a length equal to the opening of the window. The upper bracket 10 will consist of sheet metal bent at right angles with one leg having an upturned edge which will be adapted to crimp the wire subsequently referred to. The part 12 of the bracket which does not carry the loop will be bent at right angles in the opposite direction to give a bearing edge resting against the head of the window frame.

The lower bracket 11 will be a simple angle bracket and it will be screwed into position to the sill or frame. This bracket also has a bent over leg for crimping to the fly wire.

The wire or screen 13 will be cut for the full width of the opening, that is, the full width of the brackets at the top and at the bottom, and will extend also an additional width on each side of say half an inch. The top and bottom edges of the wire are bent over and held between a bent metal strip 14 at the top and another similar metal strip 15 at the bottom. At the top the bent metal strip 14 with the wire between it is slipped into position in the loop of the bracket 10. At the bottom the bent metal strip 15 is slipped into the loop of the bracket 11. The top bracket 10 is then screwed up, which causes it to turn up about the edge of the bent part 12 and this is continued until the wire is taut. The wire can then be tacked up around each side where it extends say half an inch beyond the full size of the opening.

The lower bracket 11 will have a cut-away


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part and with this registers the open face of a housing member 16. This housing member 16 has laterally extending lugs 17 and 18, by means of which it can be screwed to the frame or to the bracket 11, as may be desired. Inside this housing near one end there is supported a pivoting member 19, the lower end of which is threaded and the upper end of which extends through the housing to a milled nut 20 for tightening purposes. On the pivot 19 is adapted to turn an operating member such as an offset lever 21. This lever is offset so that one part of it can extend through the housing and be operated from the inside of the window. The other part of the offset lever extends inside the housing for some distance and is pivoted to a link 22 which in turn is pivoted to a movable casement window 23. The lever can be locked on the pivot by means of an appropriate washer and the milled nut 20, as may be desired.

Any form of latch operated from the inside window when in the closed position.

As described, the arrangement is a complete unit. There is a permanent fly screen 13 protecting the interior of the house. All that projects inside is the housing member 16 and the offset portion of the lever 21, together with the milled head 20 of the pivot 19.

When it is desired to open the window, the locking latch used is released, the lever 21 turned, and this opens out with the link 22 functioning as an extension to open the window 23 to any desired extent, when it can be locked by the milled nut 20. When the window is to be closed, the reverse action takes place. The lever retracts and together with the link folds into the housing member 16, thereby allowing the window to become flush against the frame or appropriate moulding.

It will be understood that the precise mechanism operated from the inside and through the housing to open the casement window 23 is capable of variation without departing from the scope of the invention.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A fly or insect protected casement window which comprises a window frame, a fly screen fixed to the outside thereof, an opening in the frame or screen, a hollow housing covering the opening at the inside, a pivot supported inside the housing, an operating lever mounted on said pivot inside the housing, an extension thereof through the housing for operating it from the inside of the window, a link member pivoted to the lever inside the housing, and a hinged casement to which the other end of the link is pivoted.

2. A fly or insect protected casement window as claimed in Claim 1, together with the use of a bracket at the top of the window frame to which the fly wire is crimped, another bracket member attached to the bottom of the window frame to which the wire is crimped at the bottom, and means for exerting a tightening action on the wire by movement of one of the brackets.

3. A fly or insect protected casement window as claimed in Claim 2, together with an opening in the lower bracket, such opening being covered by the housing.

4. A fly or insect protected casement window as set out in Claim 2 or 3, characterised in that the screen extends the full width of the brackets and an additional width to enable it to be attached to the stop moulding of the window frame.

5. Improvements in and relating to casement windows substantially as illustrated in the accompanying drawings.

Dated this 8th day of November, 1949.

JOHN BELL.

Per Boult, Wade & Tennant,
111/112, Hatton Garden, London, E.C.1,
Chartered Patent Agents,

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may be used (none shown) for locking the

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