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PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements in Adjustable Louvres

We, METAL INDUSTRIES LIMITED of 6 F Asia Insurance Building, Finlayson Green, Singapore, a Company organised under the laws of the State of Singapore, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to louvre ventilators and windows and particularly to louvres for use with metal window frames and has for an object to provide an improved construction of adjustable louvre.

The invention consists in a louvre for metal window frames comprising a series of glass or other blades movable in unison, wherein blade holders of the said blades are secured to pivot blocks mounted for rotation in the jambs of the window frame and, in one or each of the jambs, the pivot blocks are connected by links pivoted to an operating bar housed within the jamb, one of the links being extended so as to protrude beyond the jamb whereby to serve as an operating handle.

It will be appreciated that on raising the operating handle, the operating bar is moved both laterally and vertically causing the louvre frames or clips to be turned on their pivots in the jambs to bring the louvre sections into abutting or into overlapping relation.

Advantageously, in order to lock the louvres in open or in closed position, locking means are provided which comprise a protruding rivet or the like on the operating bar and a plate pivoted on the respective jamb, the plate having an operating arm protruding beyond the jamb, the arrangement being such that an abutment carried by the operating arm can be positioned in the path of movement of the said rivet or the like, or released from such a position, by manual pulling or pushing on the operating arm.

To ensure that the window will be weathertight when closed the side frames of the louvre sections are provided with a medial rib each side of the pivot holes by which the frames are attached to the operating arms and a continuous bead on the jamb with a greater protrusion where the sections meet when in closed position.

The invention is illustrated diagrammatically in the accompanying drawings in which Figs. 1 and 2 are elevations of the louvre operating mechanism seen from the inside of one of the jambs of a metal window frame for the louvres, Fig. 1 showing two louvre sections in the open position and Fig. 2 showing them in the closed position. Fig. 3 is a section on the line 3x—3x of Fig. 1 taken in the direction of the arrow. Figs. 4 and 5 are similar views of Figs. 1 and 2 but illustrating a locking device in inoperative position in Fig. 4 and in operative position in Fig. 5. Fig. 6 is a perspective view showing the locking device more clearly. Fig. 7 is a perspective view similar to Fig. 6 but indicating on one of the jambs the beading provided on the jambs which in conjunction with beading on the glass-holding clips ensures weather proofness of the louvre when closed. Fig. 8 is a section through a jamb and a glass holding clip showing the beading on both in contact while Fig. 9 is a perspective view of one of the clips showing the beading on the spine.

Referring to Figs. 1 to 3, 10 indicates one of the two U section jambs or lateral sections of a metal window frame and 11 two louvre sections of the window mounted to pivot between the jambs, 12 the operating handle for adjusting the opening of the louvres and 13 the operating bar connecting the louvre sections for operation in unison. It will be appreciated from Fig. 3 that the blades or glass of the louvre are held between side frames or clips 14 and that these clips are secured to pivot blocks 15 mounted for rotation in bushes 16 formed in the jambs 10. These pivot blocks

[*Price 4s. 6d.*]

are secured to the spines of the clips 14 by means of screws 17 which also serve to secure thereto links 18 connected to pivots 19 on the operating bar 13 which is disposed within the jamb 10. One of the links 18 is extended to form the operating handle 12, which is movable between the position shown in Fig. 1 to that shown in Fig. 2 in order to regulate the opening between the blades.

In order to lock the blades in position there may be provided, as shown in Figs. 4, 5 and 6, in conjunction with a protruding stud 20 on the bar 13 a pivoted plate 21 with an arm 22 extending through a slot in the flange of the jamb and shaped to form a handle 23 while another portion 24 is bent on itself to form a clip to engage the operating bar 13 when the handle 23 is pulled inwards, thus ensuring in conjunction with the stud 20 that the operating bar 13 and thus the blades will be prevented from moving.

In order to ensure that the window will be as weatherproof as possible when the louvre sections are in closed position the blade-holding clips 14 along the spine 14*a* are provided with protruding beadings 25 while the faces of the jambs are provided with beadings 26 extending lengthwise of the jambs as indicated in Figs. 7 and 8 in a position corresponding to the closed position of the louvre sections. In the mid position of beading 26 between successive pivot blocks 15 *i.e.* where adjacent clips abut when the louvre is closed and where a kink as at 27 is shown in the beading 26, the beading is slightly more protruded.

WHAT WE CLAIM IS:—

1. A louvre for metal window frames comprising a series of glass or other blades movable in unison wherein blade holders of the said blades are secured to pivot blocks mounted for rotation in the jambs of the window frame and in one or each of the jambs, the pivot blocks are connected by links pivoted to an operating bar housed within the jamb, one of the links being extended so as to protrude beyond the jamb whereby to serve as an operating handle.

2. A louvre as claimed in claim 1, wherein the louvre blades are held in side frames or clips to which the pivot blocks and links are secured by screws.

3. A louvre as claimed in claim 1, in which means for locking the louvres in position are provided, the locking means comprising a protruding rivet or the like on the operating bar and a plate pivoted on the respective jamb, the plate having an operating arm protruding beyond the jamb, the arrangement being such that an abutment carried by the operating arm can be positioned in the path of movement of the said rivet or the like, or released from such a position, by manual pulling or pushing on the operating arm.

4. A louvre as claimed in claim 1, 2 or 3, wherein each jamb along the line occupied by the blades when the louvre is closed is formed with a continuous protruding beading, spine portions of the blade holders being formed with co-operating beading interrupted where the pivot blocks are secured to the blade holders.

5. A louvre as claimed in claim 4, wherein more greatly protruding beading is provided on the jambs at the location where adjacent louvres meet when closed.

6. A louvre for metal window frames constructed and arranged substantially as described with reference to Figs. 1 to 3 or Figs. 4 to 6 or Figs. 7 to 9 of the annexed drawings.

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