

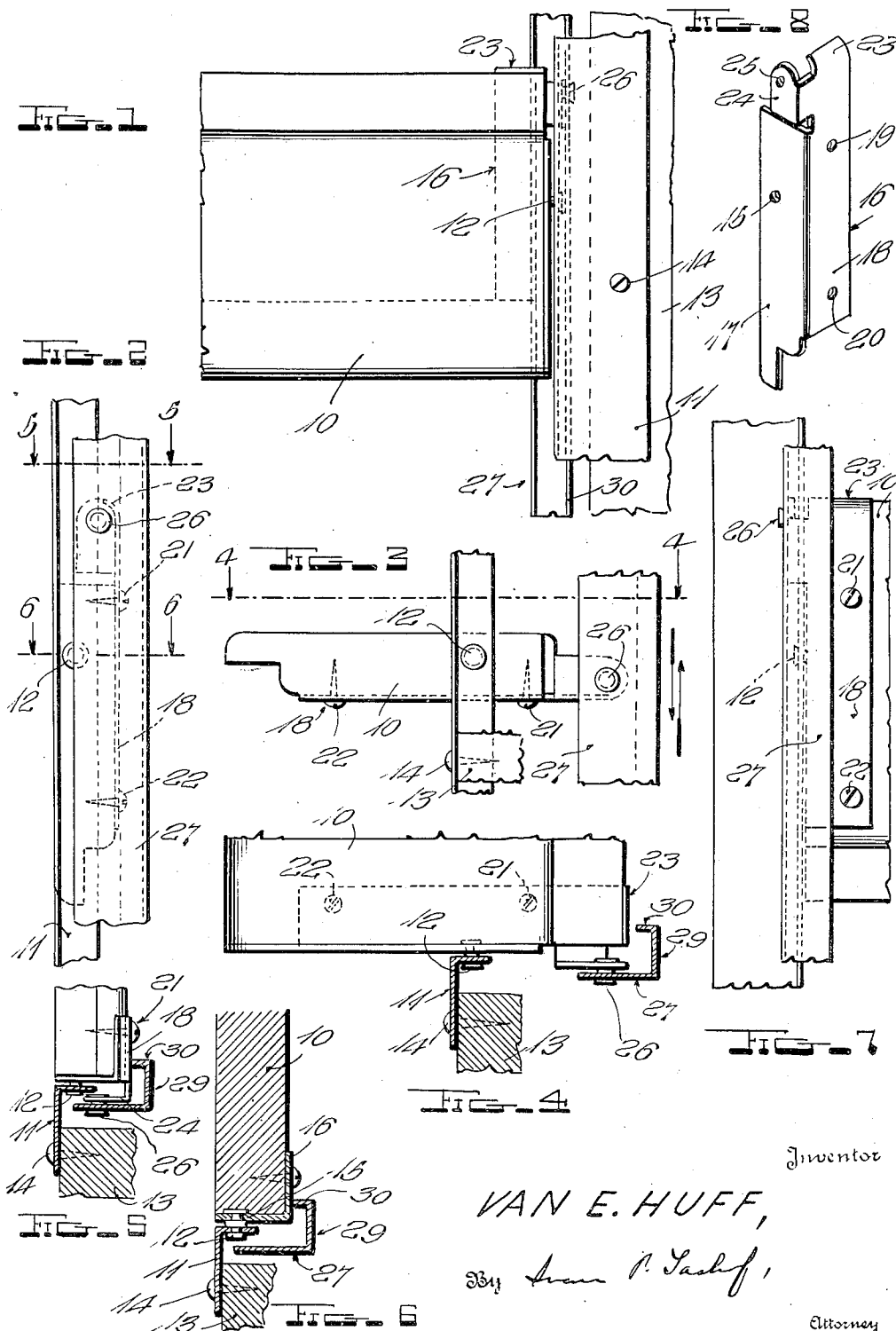
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LOUVRE CONSTRUCTION AND PIVOT CLIP THEREFOR

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LOUVER CONSTRUCTION AND PIVOT
CLIP THEREFOR

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4 Claims. (Cl. 20—62)

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The present invention relates to a louver construction. More particularly, the present invention relates to a louver construction wherein a traveling member or traveler bar partially connected to slats overlaps a stationary member adapted to partially support the slats, and to a pivot clip especially adapted to be attached to the louver slats and provided with pivot-receiving members.

The present invention is more particularly concerned with the type of louver construction which is adapted to be mounted in the window opening of tropical homes and other structures and to take the place of or supplement the usual glazed sash. However, the present invention is also generally suitable for a louver adapted to be received in other types of openings and used for other purposes. One of the problems involved in louver constructions of this character is the provision of an adequate hanger member or pivot clip which can be attached to the slat and will serve as the connecting portion between the slat and a fixed member which is attached to the window frame so that the slat can be pivotally moved relative thereto.

Where a suitable operator is provided for moving a plurality of slats it is desirable that a part of this operator or a traveler bar should overlap the stationary bar or member which carries the slats for pivotal movement. Such a louver operator member and louver is disclosed in detail in U. S. Patent No. 2,257,056 and U. S. Patent No. 2,324,454. A pivot clip which is suitable for mounting slats on the fixed member and also for receiving a pivot carried by the traveler bar is further disclosed in U. S. Patent No. 2,375,176. However, in the pivot clip shown in detail in the aforementioned U. S. Patent No. 2,375,176, the movable pivot is offset substantially from the fixed pivot as it was thought that this was necessary in order to permit the overlapping of the traveler bar and the fixed bar which retain the pivots. Although this construction in general has been quite satisfactory it has not been possible, utilizing this construction to open the slats to their fullest extent. There are occasions when the slats should be open to at least the horizontal position and preferably beyond the horizontal position, and in the type of construction shown in the last mentioned U. S. patent the slats were only capable of relatively limited opening to approximately the horizontal.

It is one of the objects of the present invention, therefore, to provide a novel pivot clip and louver slat operating mechanism which will enable the slats to be opened to a greater extent than formerly, while still permitting the overlapping of the traveler bar and a fixed bar upon which the slats are mounted for pivotal movement.

A second object of the present invention is to provide a slat operating mechanism for a lou-

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vre or the like having a bearing or opening to receive a fixed pivot and a second opening which is in general longitudinal alignment relative to the slat and with the first pivot receiving bar, but is positioned in a different lateral plane.

A third object of the present invention is to provide a novel clip for louver slats or the like which is capable of easy manufacture from a single piece of metal and which when fastened to the slat will provide both a bearing for the fixed pivot and a second bearing for a laterally spaced movable pivot.

A fourth object of the present invention is to provide a pivot clip for louver slats which may be assembled with the rest of the operating mechanism and will lend itself to easy insertion of a wooden slat or the like, after the operating mechanism has been assembled.

A fifth object of the present invention is to provide a pivot clip having a general L-shape and adapted to be positioned about the end of a louver slat and provided with a second integral L-shaped portion, wherein the base of the L is in a different lateral plane than the base of the L-shaped pivot clip as a whole.

Other objects and advantages of the present invention will become apparent from the subsequent description and figures of the drawing wherein:

Figure 1 is a front view of a slat and traveler bar assembly incorporating the new pivot clip;

Figure 2 is an end elevation of the slat and louver assembly of Figure 1;

Figure 3 is a view similar to Figure 2, but with the slat shown in open position;

Figure 4 is a section taken approximately on the line 4—4 of Figure 3;

Figure 5 is a section similar to Figure 4 but taken on the line 5—5 of Figure 2;

Figure 6 is a section taken on the line 6—6 of Figure 2;

Figure 7 is a view similar to Figure 1, but taken from the rear of the louver construction;

Figure 8 is a perspective view of the pivot clip itself.

Referring to the figures of the drawing and particularly Figure 1 thereof, a slat which may be considered representative of a plurality of vertically aligned slats is indicated at 10. The slat 10 is mounted on an elongated L-shaped member 11 by means of a pivot 12. The member 11 is fastened to a suitable louver frame 13 as for example by a screw 14. The pivot 12 may be a rivet or a machine screw or any other suitable member which is capable of supporting one end of the slat and permitting its pivotal movement relative to the member 11. The rivet or screw or other suitable pivot 12 is received within an opening 15 in the pivot clip which is best shown in Figure 8 and indicated in general at 16. As may be noted from the drawing the pivot clip

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body is in general L-shape in cross section, being provided with two legs or portions 17 and 18.

The portion 17 is adapted to be positioned against the end of the slat and the portion 18 against the face of the slat. Two openings 19 and 20 are provided for screws 21 and 22, respectively, which serve to fasten the slat to the pivot clip. The portion 18 of the pivot clip extends upwardly and terminates in a generally rounded portion 23 which extends over the upper edge of the slat when assembled.

Extending laterally from the upper end of the portion 18 is a portion 24 provided with an opening 25 for receiving a traveling pivot of the louvre operating mechanism. It will be noted from Figure 8 and other figures of the drawing that the portion 24 with the upper end of the portion 18 constitutes a second L-shape member having a base, i. e., the portion 24, in a different lateral plane from the portion 17.

The traveling pivot which may be a rivet or other suitable screw, pin, or the like and indicated at 26, is received in the opening 25 and extends through a traveler bar 27. As shown in Figures 4 to 6 particularly, the traveler bar is of general L-shape in cross section and the portion 27 which receives the pivot, is adapted to overlap a portion of the fixed pivot supporting member 11 which also is of a general L-shape. This is best shown in Figures 5 and 6. The second leg of the L-shape traveler bar 27 is indicated at 28 and as shown in Figures 5 and 6 is provided with a forwardly bent portion 30 which is adapted to bear against the face of the slats when the slats are closed in order to maintain the same in a firmly fixed closed position.

By referring to Figure 3 it will be noted that by thus providing a pivot clip receiving portion for a removable pivot 26 which is offset in a different lateral plane than the fixed pivot-receiving portion 15, it is possible to substantially align the pivots as shown in Figure 3 or at least position the pivots within the width of the slat and at the same time permit overlapping of the traveler bar portion 28 and a portion of the slat support 11.

As pointed out in the patents previously referred to, the overlapping of the traveler bar and the fixed bar constitutes what amounts to a weather stripping arrangement. The traveler bar may be moved by any suitable mechanism such as a link connected to a rack and gear disclosed in the aforementioned prior patents or a simple manual operator. Movement of the traveler bar 27 in the directions of the arrows indicated in Figure 3 will open and close the slat 10. Obviously if the pivot 26 were offset downwardly any substantial amount as compared to the arrangement shown in Figure 3; for the same movement of the traveler bar 27 the slat 10 would be moved a lesser distance. Since the two pivots are positioned relatively close together as compared to the remainder of the slat this difference is multiplied and a very substantial amount of slat opening is achieved in accordance with the present invention which permits positioning of the movable pivot within the area defined by the end of the slat. Obviously the pivot may be positioned in absolute alignment with the axis of the slats when the slats are closed; however, in this event there will be a tendency for the closed slats to be locked in dead center position, and it will be difficult to open the same.

I claim:

1. In a device of the kind described, the com-

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bination with a louver of an end clip comprising an L-shaped body portion, one arm of which is adapted to lie flat against the slat and the other arm of which is adapted to lie against the end of the slat, said first mentioned arm having an upwardly extending L-shaped extension provided with a laterally extending portion off-set with respect to the arm which lies against the end of the slat and in a different plane from said arm, said last mentioned body arm and the off-set portion respectively having pivot openings therein for the reception of pivots for the slat and for an operating bar, and a fixed member to which the slat is pivoted.

2. In a device of the kind described, the combination with a louver of an end clip comprising an L-shaped body portion, one arm of which is adapted to lie flat against the slat and the other arm of which is adapted to lie against the end of the slat, said first mentioned arm having an upwardly-extending L-shaped extension provided with a laterally extending portion off-set with respect to the arm which lies against the end of the slat and in a different plane from said arm, said last mentioned body arm and the off-set portion having pivot openings therein for the reception of a pivot for the slat and a pivot for an operating bar, said upward extension having an in-curved terminal portion lapping the upper edge of the slat to which the clip is affixed.

3. In combination, a louvre construction including a stationary member extending from a louver frame and having a general L-shape, a slat, a pivot clip comprising an L-shaped portion, one arm of which is in engagement with the outer face of the slat and the other arm which engages the end of the slat, said first mentioned arm having an upper L-shaped extension provided with a laterally extending portion off-set with respect to the arm which lies against the end of the slat and in a different plane from said arm, said last-mentioned body arm and the off-set portion respectively having pivot openings therein for the reception of a pivot for the slat and a pivot for an operating bar, a traveler bar of general L-shape in cross section for moving said slat and provided with a flange overlapping a portion of the stationary member, said traveler bar being provided with a second flange parallel to the first flange and closing against the body portion of the clip upon the closing of the louver, the overlapping portion of the traveler bar and the off-set portion of the clip being pivotally connected.

4. A pivot clip for a louvre construction having an L-shaped member provided with a portion having means to fasten said clip to a louvre slat and a pivot receiving portion, and a second integral L-shaped member having a portion spaced outwardly from said pivot receiving portion and including a pivot receiving portion aligned with said first pivot receiving portion within the width of the louvre slat and in a different transverse plane therefrom.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
708,618	Briggs	Sept. 9, 1902
2,375,176	Huff	May 1, 1945
2,457,871	Cooper	Jan. 4, 1949