Nov. 25, 1930. A. HOFFMAN 1,782,896

WINDOW FASTENER

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Fig. 1.

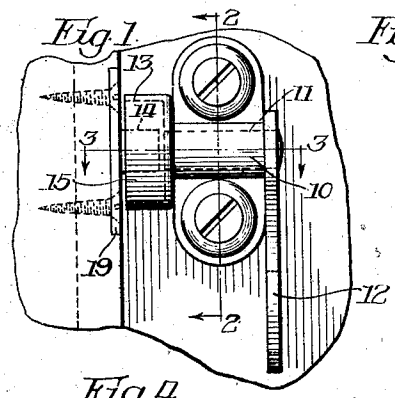


Fig. 2.

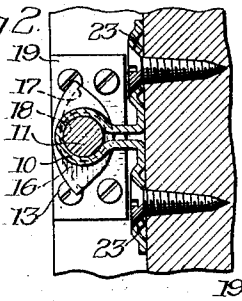


Fig. 3.

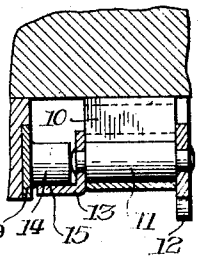


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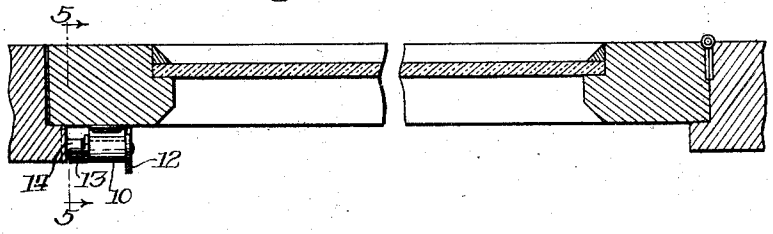


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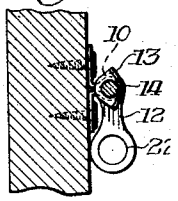


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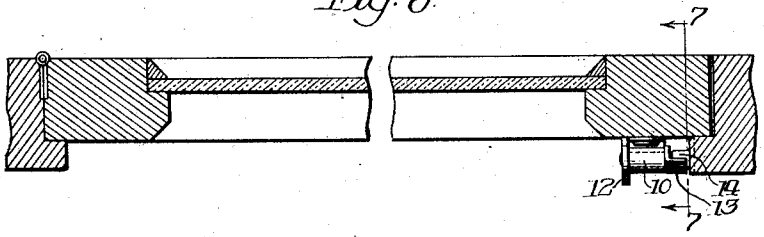


Fig. 7.

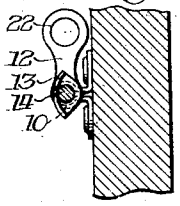


Fig. 8.

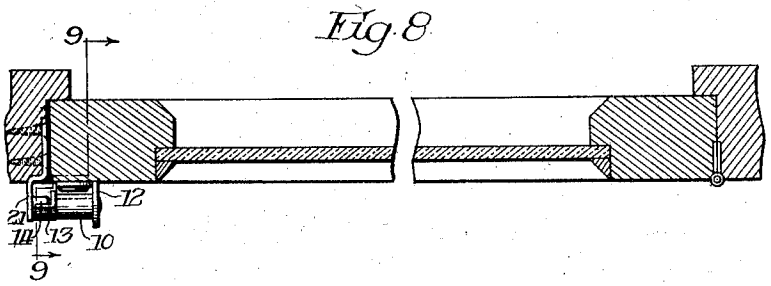


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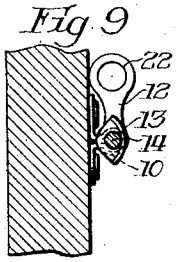


Fig. 10.

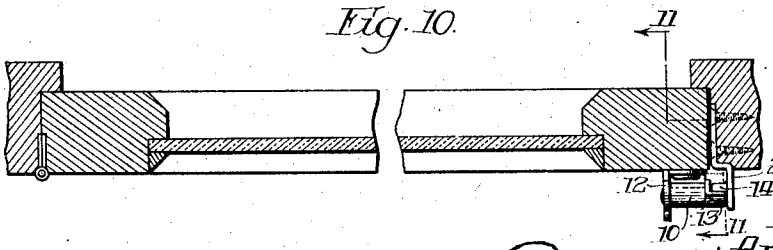
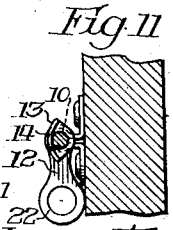


Fig. 11.



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Fig. 12.

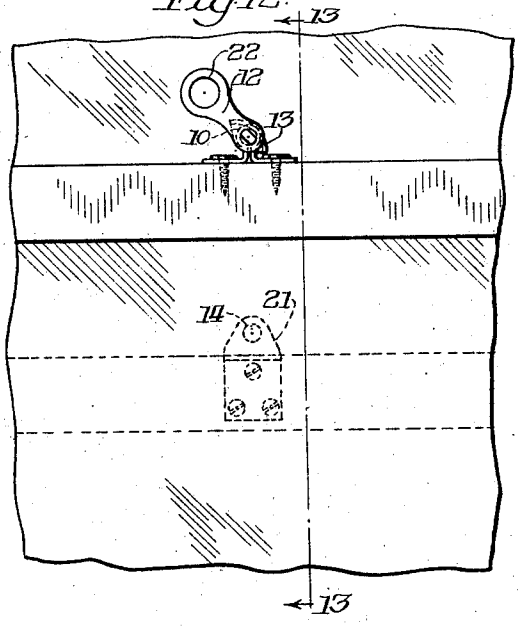


Fig. 13.

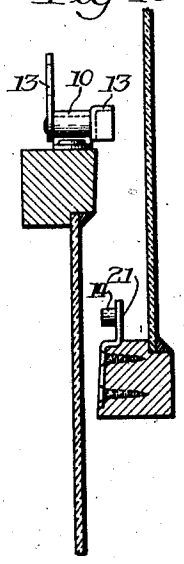


Fig. 14.

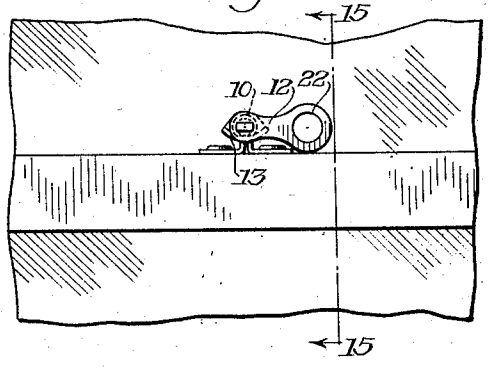


Fig. 15.

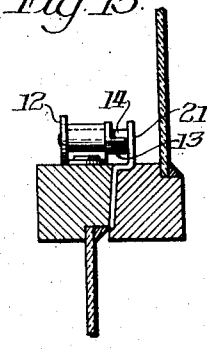


Fig. 16.

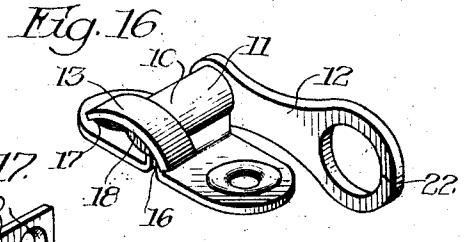


Fig. 17.

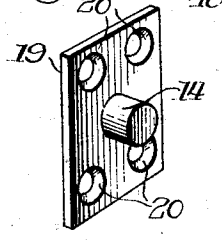
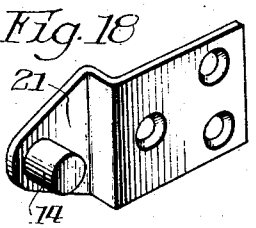


Fig. 18



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Patented Nov. 25, 1930

1,782,896

UNITED STATES PATENT OFFICE

ANDREW HOFFMAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO ANDREW HOFFMAN MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS

WINDOW FASTENER

Application filed July 15, 1927. Serial No. 205,922.

The purpose of this invention is to provide an improved window fastener which is simple in construction, pleasing in appearance, inexpensive to manufacture, efficient in operation, and of universal application.

A fastener embodying the invention may be used on all kinds of casement windows, whether in-swinging, out-swinging, right-swinging, or left-swinging, and may also be used on double-hung windows, doors, trap doors, and the like.

Other objects and advantages of the invention will be apparent upon a full understanding of the construction, arrangement and operation of the fastener.

One form of the invention is presented herein for the purpose of exemplification, but it will of coure be appreciated that the invention is susceptible of embodiment in other slightly modified forms coming equally within the scope of the claims.

In the drawings:

Fig. 1 is a front view of a fastener embodying the invention;

Fig. 2 is a vertical section, taken on the line 2—2 of Fig. 1;

Fig. 3 is a horizontal section, taken on the line 3—3 of Fig. 1;

Fig. 4 is a horizontal section through an out-and-right swinging casement window to which the fastener is applied

Fig. 5 is a vertical section, taken on the line 5—5 of Fig. 4;

Fig. 6 is a horizontal section through an out-and-left swinging casement window to which the same fastener is applied;

Fig. 7 is a vertical section taken on the line 7—7 of Fig. 6;

Fig. 8 is a horizontal section through an in-and-right swinging casement window to which the same fastener is applied;

Fig. 9 is a vertical section taken on the line 9—9 of Fig. 8;

Fig. 10 is a horizontal section through an in-and-left swinging casement window to which the same fastener is applied;

Fig. 11 is a vertical section, taken on the line 11—11 of Fig. 10;

Fig. 12 is a fragmentary front view of a partly open double-hung window to which the same fastener is applied;

Fig. 13 is a vertical section, taken on the line 13—13 of Fig. 12;

Fig. 14 is a similar view showing the window closed;

Fig. 15 is a vertical section taken on the line 15—15 of Fig. 14;

Fig. 16 is a perspective view of the fastener;

Fig. 17 is a perspective view of one form of strike used with the fastener; and

Fig. 18 is a perspective view of another form of strike used with the fastener.

The fastener illustrated in the drawings consists of a bracket 10, a stem 11 rotatably mounted in the bracket, a handle 12 secured to one end of the stem, and a head 13 secured to the other end of the stem.

The fastener is adapted to cooperate with a strike 14, and, when the fastener and the strike are applied to two relatively movable members, as for instance the stile of a casement window and the jamb of the surrounding window frame, they are so arranged that the axis of the strike occupies a position in the plane of movement of the axis of the stem.

The head 13 is provided with a flange 15 which projects from one side of the head in parallel relation to the axis of the stem. The flange 15 is curved on a radius passing through the axis of the stem about a center on the opposite side of such axis, whereby to afford two inclined strike-engaging surfaces 16 and 17, one of which will cam the fastener and the strike toward each other when the head is turned in one direction, and the other of which will perform the same function when the head is turned in the other direction.

When the head is turned far enough to cam the strike into engagement with the surface 18 of the flange, which surface is midway between the surfaces 16 and 17 and is nearest the axis of the stem, a stable association between the strike and the head will result, since any forces tending to separate the strike and the head will have the effect of rendering more secure the locked association therebetween. Before the strike can be released from

engagement with the surface 18 of the flange of the head, the head must be turned positively by the handle.

The strike 14 consists of a round stud which projects from a plate 19, the plate being attached to the jamb or other member by screws which pass through apertures 20 in the plate. Instead of projecting directly from the plate, as shown in Fig. 17, the stud may project from a rearwardly and laterally offset portion 21 of the plate, as shown in Fig. 18, whereby to hold the stud in a position behind the plane of the plate, which modification in the form of the strike permits the same fastener to be used with an in-swinging as well as with an out-swinging window.

The handle 12, which turns the head of the fastener, is shaped like a ring at its free end, in order to present a conveniently shaped finger-engaging portion 22, which portion may be engaged easily by a curtain pole when the fastener is used in a location where it is difficult to reach.

The bracket 10 is of extremely simple construction, being a single strip which is bent intermediate its ends to form a stem-journalling loop in offset relation to such ends. The bracket is attached to the stile or other member by screws which pass through apertures 23 in the ends of the strip.

In Figs. 4, 6, 8 and 10 the same fastener is shown as applied respectively to an out-and-right swinging, an out-and-left swinging, and in-and-right swinging and an in-and-left swinging casement window, and in Fig. 12 the same fastener is shown as applied to a double-hung window. In Fig. 4, the handle swings downwardly in latching the fastener, in Fig. 6 it swings upwardly, in Fig. 8 it swings upwardly, in Fig. 10 it swings downwardly, and in Fig. 12 it swings downwardly.

I claim:

1. In a latch, a strike which is adapted to be mounted on one of two relatively movable members, a bracket which is adapted to be mounted on the other of said members, a stem rotatably mounted in the bracket, a head secured to the stem for coaction with the strike, and a handle for turning the head, said head having a flange which is generally parallel to the axis of the stem and is curved on a radius passing through such axis about a center on the opposite side of the same.

2. In a latch, a strike which is adapted to be mounted on one of two relatively movable members, a bracket which is adapted to be mounted on the other of said members, a stem rotatably mounted in the bracket, a head secured to one end of the stem for coaction with the strike, and a handle secured to the other end of the stem for turning the same, said head having a flange which is generally parallel to the axis of the stem and is curved on a radius passing through such axis about a center on the opposite side of the same.

3. In a latch, a strike which is adapted to be mounted on one of two relatively movable members, a bracket which is adapted to be mounted on the other of said members, a stem rotatably mounted in the bracket in axial alignment with the strike, a head secured to one end of the stem for coaction with the strike, and a handle secured to the other end of the stem for turning the same, said head having a flange which is shaped to provide two strike-camming surfaces, one of which will cam the strike and head toward each other when the handle is turned in one direction, and the other of which will cam the strike and head toward each other when the handle is turned in the other direction.

4. In a latch, a pivoted head, and a strike for coaction therewith, said strike consisting of a plate having a flat attaching portion and another portion in rearwardly offset parallel relation to the attaching portion, and a stud projecting from the offset portion toward the plane of the attaching portion.

5. In a latch, a strike which is adapted to be mounted on one of two relatively movable members, a bracket which is adapted to be mounted on the other of said members, a stem rotatably mounted in the bracket, a head secured to the stem for coaction with the strike, and a handle for turning the head, said head having a strike-engaging portion which is curved on a radius passing through the axis of the stem about a center on the opposite side of such axis.

6. In a latch, a strike which is adapted to be mounted on one of two relatively movable members, a bracket which is adapted to be mounted on the other of said members, a stem rotatably mounted in the bracket in axial alignment with the strike, a head secured to one end of the stem for coaction with the strike, and a handle for turning the head, said head having a strike-engaging portion which is shaped to provide two oppositely-extending and symmetrically-arranged cam surfaces, one of which will cam the strike and head toward each other when the handle is turned in one direction, and the other of which will cam the strike and head toward each other when the handle is turned in the other direction.

7. In a latch, a pivoted head, and a strike for coaction therewith, said strike consisting of a plate having a flat attaching portion and another portion in rearwardly offset relation to the attaching portion, and a stud projecting from the offset portion toward the plane of the attaching portion and terminating adjacent the plane of the attaching portion.

8. In a latch, a strike which is adapted to be mounted on one of two relatively movable members, a bracket which is adapted to be

mounted on the other of said members, a stem rotatably mounted in the bracket, a head secured to the stem for coaction with the strike, and a handle for turning the head, said head having a curved strike-engaging portion which is offset from the axis of the stem and is tangential with but of less curvature than an arc about such axis at that point.

In testimony whereof I have hereunto subscribed my name.

ANDREW HOFFMAN.