This invention has to do with casement window fasteners of the type disclosed in an application filed by Andrew Hoffman on July 15, 1927 under Serial No. 205,929.

The object of the invention is to provide an improved casement window fastener of the type referred to which will function not only to force the window closed but to pry the same open after it has been closed.

A preferred embodiment of the invention is disclosed herein for the purpose of exemplification, but it will of course be understood that the invention is susceptible of embodiment in other structurally modified forms coming equally within the scope of the appended claims.

In the accompanying drawings:

Fig. 1 is a horizontal section through an out-swinging casement window to which the fastener is applied;

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. 2;

Fig. 4 is a horizontal section through an in-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 perspective view of the fastener;

Fig. 7 is a perspective view of one form of strike for cooperation with the fastener; and

Fig. 8 is a perspective view of another form of strike for cooperation with the fastener.

The fastener is characterized by a bracket 10 which is adapted to be attached by screws 11 to a casement window or other closure, a stem 12 journalled in the bracket, a handle 13 secured to the stem at one side of the bracket, a head 14 secured to the stem at the other side of the bracket, and a strike 15 which cooperates with the head and is adapted to be attached by screws 16 to the frame surrounding the window.

The fastener is shown in Figs. 1, 2 and 3 in association with an out-swinging casement window 17, and the construction and operation of the fastener in such association will first be described. The head 14 is provided with two inclined strike-engaging surfaces 18 and 19 which are designed to cooperate respectively with two diametrically opposite surfaces 20 and 21 on the strike 15.

After the window 17 has been moved into an approximately closed position by means of the handle 13, the handle is swung downwardly, as shown in Figs. 1, 2 and 3, causing the surface 18 on the head to cam against the surface 20 on the strike and draw the window into a tightly closed position against an abutment 22 on the jamb of the same, in which position the surface 20 on the strike will rest against a surface 23 on the head between the inclined surfaces 18 and 19.

It frequently happens that a casement window will stick in its closed position, due to warping, moisture, soft paint or other cause, and can only be opened with a great deal of effort. The feature of this invention is to provide a fastener which will not only draw a window into a tightly closed position in the manner above described but will effectively pry the window open again in case the same should tend to stick.

When it is desired to open the window, the handle 13 is swung 90° from the locking position shown in Figs. 1, 2 and 3, whereby to cause the inclined strike-engaging surface 19 on the head to cam against the surface 21 on the strike. Such caming action forces the window away from the abutment 22 on the jamb, as shown in dotted lines in Fig. 3, by reason of the fact that the strike is elongated in the direction of movement of the window and the surface 21 on the strike is located a greater distance from the pivotal axis of the head than is the surface 21 on the strike.

From the foregoing explanation, it will be appreciated that the fastener of the invention is so constructed as to embody means for conveniently opening a tightly closed window with the expenditure of very little effort, one of the inclined surfaces on the head of the fastener serving to draw the window closed and the other serving to force it open. These two surfaces also render the fastener of universal application in that it may be applied to either an in-swinging or an out-swinging casement window, as well as to other kinds of windows.
When the fastener is applied to an in-swinging casement window, as shown in Figs. 4 and 5, the functions of the inclined surfaces 18 and 19 on the head are reversed, the surface 19 serving to draw the window closed and the surface 18 serving to pry it open. When the fastener is used in connection with an in-swinging window, the strike, instead of projecting from a flat attaching plate as shown in Fig. 7, projects from a laterally offset ear 24 on the attaching plate and terminates flush with the attaching surface of such plate, whereby to clear the edge of the window.

The handle 13, it will be noted, is flanged continuously about the edge of the free end of the same, whereby to produce a laterally opening socket into which a hook on the end of a pole may be easily inserted when the fastener is used on a window or other closure which is conveniently accessible. The flanging also presents a wide gripping surface on the handle.

I claim:

1. A casement window fastener, comprising a strike which is elongated in the direction of movement of the window and is adapted to be mounted on the frame surrounding the window, and a head which is adapted to be pivotally mounted on the window with its axis nearer one end of the strike than the other when the window is closed, said head having an axially offset cam portion which will cooperate with one end of the strike to draw the window closed and assume a dead-center position with respect to the strike and having another axially offset cam portion which will cooperate with the other end of the strike to pry the window open.

2. In a casement window fastener, a pivoted handle consisting of an elongated plate the edge of the free end of which is flanged continuously to provide a laterally opening socket for engagement with an operating hook.

3. A fastener, comprising a head which is adapted to be mounted on one member, and a strike which is adapted to be mounted on another relatively movable member, said head having a double strike-engaging portion which will operate to draw the members together and assume a dead-center position with respect to the strike when the head is turned into one position and will operate to force the members apart when the head is turned approximately 180° into another position.

4. In a casement window fastener, in combination, a strike, a pivotally mounted member cooperating with the strike to draw the window closed and assume a dead-center position with respect to the strike when turned in one direction and cooperating with the strike to force the window open when turned approximately 180° in the other direction.

5. A casement window fastener, comprising a strike which is elongated in the direction of movement of the window and is adapted to be mounted on the frame surrounding the window, and a head which is adapted to be pivotally mounted on the window with its axis nearer one end of the strike than the other when the window is closed, said head having an axially offset double cam portion which is considerably greater in length than the thickness of the strike in the direction in which elongated, which double cam portion will cooperate with one end of the strike to draw the window closed, and assume a dead-center position with respect to the strike and will cooperate with the other end of the strike to pry the window open.

6. A window fastener, comprising a stud which is adapted to be attached to the frame surrounding the window, and a curved stud-engaging blade which is adapted to be pivotally mounted on the window to force the window closed when turned in one direction and to pry the window open when reversed in position, said blade being considerably greater in length than the stud is in thickness and being arranged with the pivotal axis thereof between the middle of the blade and the center of curvature of said blade, with the middle of the blade spaced from the pivot axis a distance less than one-half the thickness of the stud.

In testimony whereof I have hereunto subscribed my name.

ALFRED J. JOHNSON.