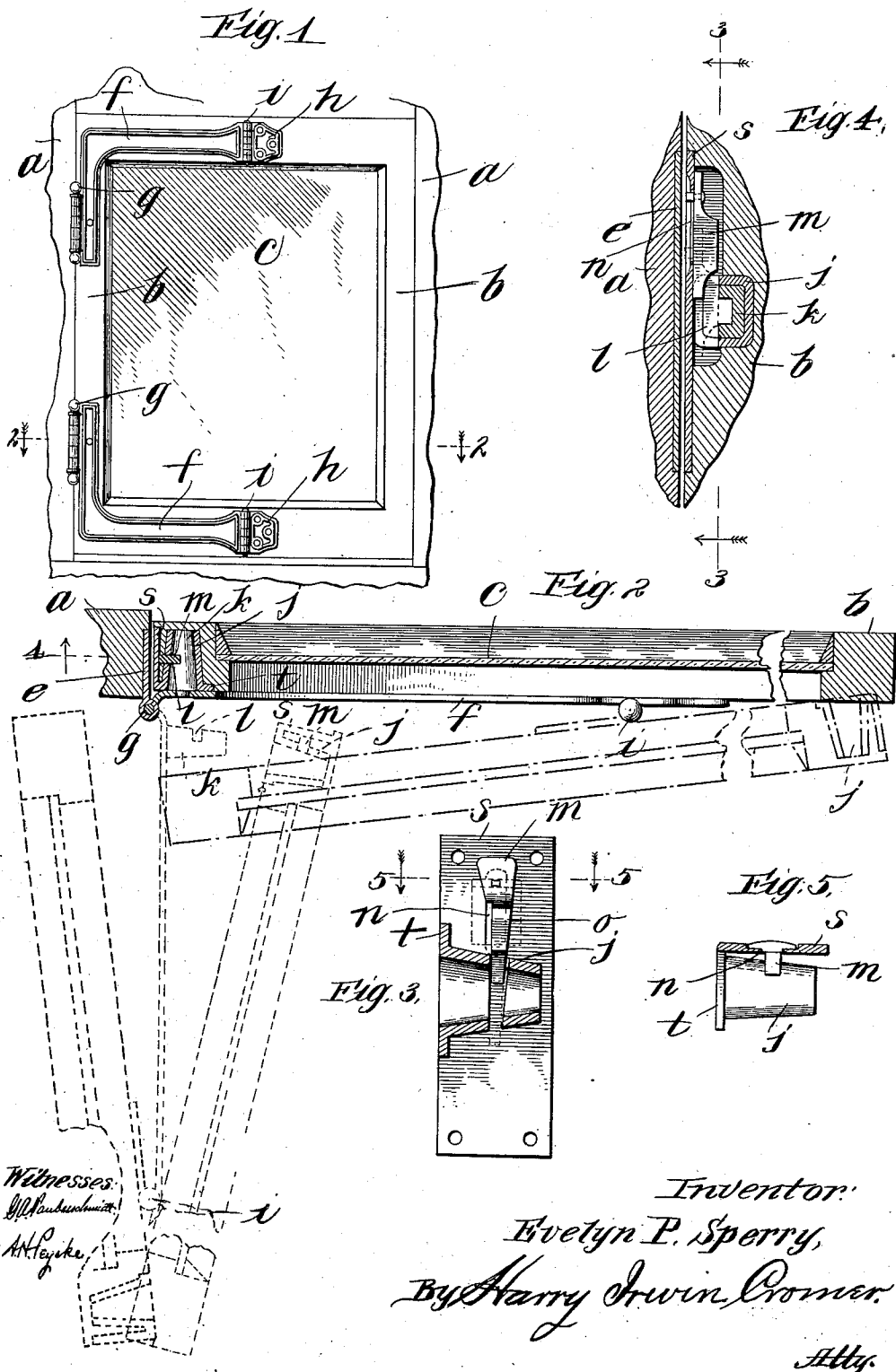


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PATENTED MAY 26, 1908.

E. P. SPERRY.
CASEMENT WINDOW.
APPLICATION FILED AUG. 25, 1906.



UNITED STATES PATENT OFFICE.

EVELYN P. SPERRY, OF OAK PARK, ILLINOIS.

CASEMENT-WINDOW.

No. 888,545.

Specification of Letters Patent.

Patented May 26, 1908.

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To all whom it may concern:

Be it known that I, EVELYN P. SPERRY, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Casement- Windows, of which the following is a specification.

This invention relates to that class of windows known as casement windows which are adapted to swing horizontally to open and closed positions.

The principal object of the invention is to provide a simple, economical and efficient casement window.

A further object is to provide a casement window adapted to swing to open and closed positions and to reversed or inverted position, so as to enable the side of the window which is normally the outer side, to be washed and cleaned from within.

A further object is to provide a casement window with hinge mechanism pivotally secured at different points to the casing and sash respectively, in such manner as to permit the sash to swing with the pivoted hinge members to open and closed positions, and also to swing with relation to the pivoted hinge members to reversed position, or inside out.

A further object is to provide suitable means, accessible from the inside only, for securing the sash in fixed relation to the swinging hinge portions, and for overcoming any tendency to sag,—such securing means being adapted to permit the sash to be readily released from such fixed engagement and to swing freely to and from reversed position when desired.

Other and further objects of the invention will appear from an examination of the drawings and the following description and claims.

The invention consists in the features, combinations and details of construction hereinafter described and claimed.

In the accompanying drawings Figure 1 is a view in elevation of a casement window constructed in accordance with my improvements showing the sash in closed position as seen from the outside; Fig. 2. A sectional plan view taken on line 2—2 of Fig. 1, showing the sash in full lines in closed position with its socket and the stud portion of the hinge secured together or in normal relation, the upper side of the sash being the inside and showing the sash in open and reversed

positions in broken lines; Fig. 3. An enlarged detail view in vertical section, of a socket member for connecting the sash in fixed relation to the corresponding pivoted hinge member as it would appear taken on line 3—3 of Fig. 4; Fig. 4. A detail view in section, taken on line 4 of Fig. 2, looking in the direction of the arrow and showing a socket member with its key for engaging the tapered stud shown in Fig. 2, and Fig. 5. A sectional plan view of the socket member taken on line 5 of Fig. 3 looking in the direction of the arrow.

In constructing a casement window in accordance with my improvements I provide a window frame or outer casing *a* which may be of any ordinary and well known form adapted to permit the casement or sash to swing to open and closed positions. A sash or casement *b* of suitable dimensions is then provided, having one or more panes of glass *c* mounted in and supported thereby. Hinges *d* are formed of metal and of such dimensions as to afford the required strength to support the sash in an efficient manner in all required positions. These hinges are each formed of a butt or fixed leaf *e* which is secured to the window-casing by means of screws, an elongated swinging arm or leaf *f*, a hinge member or leaf *h*, and a pintle *i*. Each hinge arm *f* is pivotally secured at one end to the butt or fixed hinge member *e* and thereby to the window-casing by means of a vertical pintle or pivot pin *g* such pivot pin being in line with the adjacent vertical edge of the sash, so as to permit the sash to swing thereon to any desired open or closed position.

The outer swinging ends of the horizontal hinge arms *f* above described are each pivotally secured—by means of pivot pins *i* and hinge members *h*—to the sash, midway between its opposite vertical edges, so as to permit the sash to swing with relation to the pivoted hinge members *f* to reversed position or inside out. The sash is adapted to be moved outward to open and inward from open to closed position upon the pivots *g* while in fixed relation to the horizontal swinging arm portions *f* and *h* of the hinges. When the sash is thus moved outward to open position it may be turned upon the pivots *i* to reversed position and then swung to as nearly closed position as the casing will permit. This enables the side which is normally the outer side to be cleaned while in such reversed position. The sash may then

be swung back to normal position or parallel with the swinging arm portions of the hinges and secured in fixed relation thereto.

It is very desirable that means be provided whereby the sash may be secured in fixed relation to the swinging portions of the hinges and locked in engagement therewith in such a manner that the securing means may be readily accessible from the inside but cannot be reached from the outside of the window. It is also desirable that such securing means be adapted to bring the sash up to normal position or plumb and prevent or correct any tendency to sag which may be due to the play of the parts at their respective points of connection. In order to accomplish this, metallic socket members *j* are provided—preferably one for each hinge—and mounted in the sash at points adjacent to such hinges respectively. This socket member has an angular face plate, one of the sides *s* of which is provided with the slot *n* through which the stem of the key *m* extends flush with the upright side edge of the sash which abuts against the window casing or frame and against the fixed hinge members. The other side of the face plate is flush with the outer face of the sash and abuts against the inner face of the adjacent pivoted hinge member to which the socket member is to be secured. A metallic stud *k* having a notch *l* in one side thereof is mounted upon the swinging arm portion *f* of each of the hinges in such position that the stud extends inward and into the socket member when the sash is in normal position with relation to the swinging hinge portions. The socket member is provided with a key *m* which is slidably mounted therein in a vertically elongated slot *n*. The inner edge *o* of this key is inclined downward and outward in the direction of the base of the stud or toward the hinge member on which the stud is mounted, so that as the

key is moved downward while in engagement with the notch or slot *l* in the stud *k* it will draw the stud inward into snug rigid engagement with the walls of the socket member. The recess or socket portion proper of the socket member is tapered preferably on all sides, the open end of such recess being of greater area than the inner end portion thereof. The stud *k* is similarly tapered on both sides and top and bottom so as to fit snugly in the recess or socket member when the parts are in engagement. By this means any sagging of the sash which may take place is overcome when the stud and socket members are in engaging position, and the desired rigidity of connection is afforded between the swinging arm portions of the hinges and the window sash. The window may thus be swung to any desired open position or to closed position, and the sash is held rigidly by the stud and socket members in any desired normal open or closed position, the mechanism for rigidly securing the sash to the swinging hinge arms being inaccessible from without and easily accessible from within.

I claim:

In a window, the combination of a sash, a hinge member pivotally mounted adjacent to the edge of the sash and pivotally connected with the sash, a metallic socket member mounted upon the sash having a recess on the side toward the adjacent pivoted hinge member, a stud upon the pivoted hinge member movable into and out of engagement with the socket, and a key mounted in the socket member movable into and out of securing engagement with the stud.

EVELYN P. SPERRY.

Witnesses:

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HARRY M. RENSON.