April 3, 1928. 1,664,820

C. L. HUGHES

WINDOW FASTENER

Filed Aug. 11, 1925

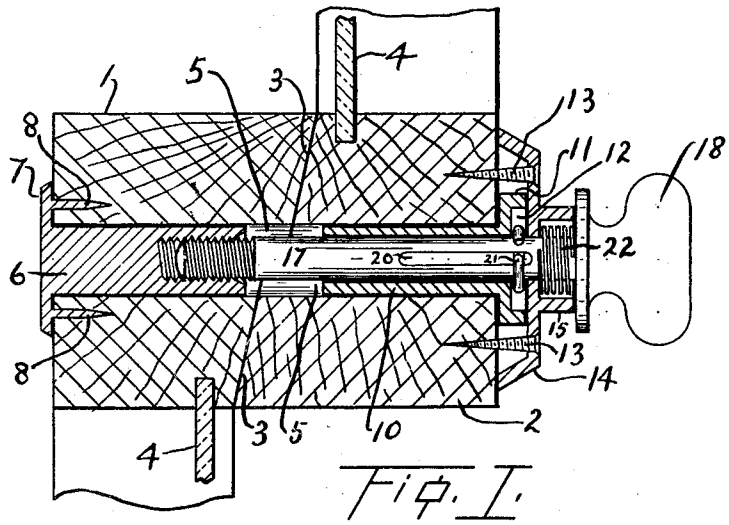

Fig. 1.

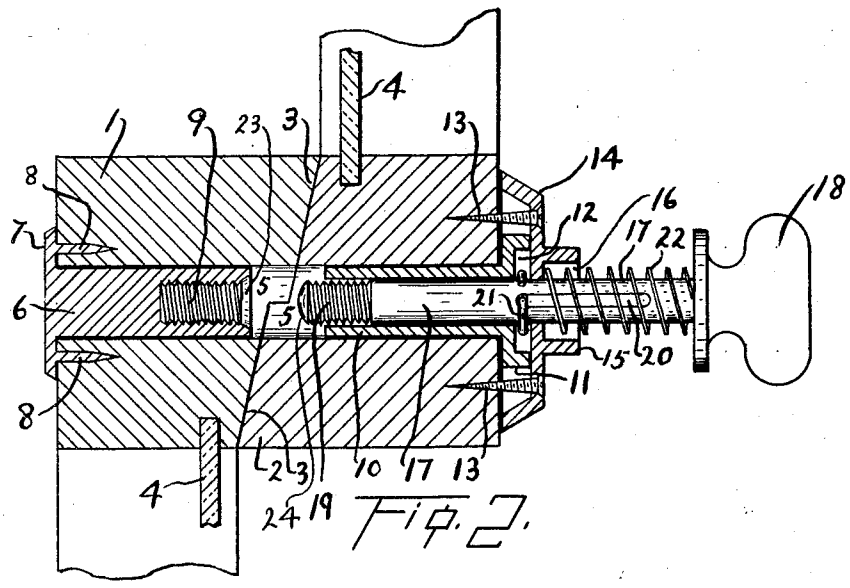

Fig. 2.

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WINDOW FASTENER.

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My invention relates to improvements in window fasteners and the object of the invention is to provide a window fastener of extremely simple and inexpensive construction which will be very efficient and positive in operation and which may be mounted upon a window with the minimum trouble and expense.

Other objects will appear in the course of the following specification.

My invention consists in the construction and arrangement of parts, all as hereinafter more particularly described and illustrated in the accompanying drawings in which:—

Fig. 1 is a sectional view of the meeting rails of the inner and outer sashes of a window, showing my fastener mounted therein, the sashes being in their closed positions, and the fastener in the locked position.

Fig. 2 is a similar view showing the fastener in the unlocked position.

In the drawings, like characters of reference indicate corresponding parts in the two views.

In the form of my invention illustrated, 1 indicates the top rail of the outer sash and 2 the bottom rail of the inner sash which rails may be bevelled at 3 along their abutting edges as is common practice.

The glass of the sashes is indicated by the numeral 4.

The inner and outer sashes 1 and 2 are each provided with an orifice 5 which orifices are in alignment when the sashes are in their closed positions and would be located centrally of the width of the sashes.

Projecting inwardly into the orifice 5 in the outer sash from the outer face thereof, is a cylindrical socket element 6. The outer end of this socket element 6 carries a flange 7 which flange carries inwardly directed spicular projections 8.

The inner end of the socket element 6 is internally threaded at 9 to receive the threaded end of a locking bolt as will hereinafter appear.

When the socket element is mounted in position, it lies within the orifice 5 of the outer sash, the flange 7 abutting the outer face of the outer sash and the spicular projections 8 penetrating into the outer sash for retaining the socket element in position and preventing turning thereof.

Mounted within the orifice 5 of the inner sash 2 and projecting inwardly from the inner face of the sash is a sleeve 10, which sleeve is formed with an enlarged head 11 which head abuts the inner face of the sash.

The head 11 is formed with a recess 12, the purpose of which will presently appear.

Secured to the inner face of the inner sash by screws 13 is a face plate 14 which also abuts the end of the sleeve 10.

Projecting from the surface of the face plate 14 is a cylindrical flange 15 which forms a recess 16.

A locking bolt 17 is slidably and rotatably mounted within the sleeve 10 and extends through an orifice in the face plate 14 which orifice is in axial alignment with the sleeve 10.

One end of this locking bolt 17 carries a finger grip 18 and the other end is externally threaded at 19.

The bolt 17 is formed with a longitudinal slot 20 and slidably encircling the bolt and having one end projecting into this slot is a ring member 21 which member is accommodated within the recess 12 in the head 11 of the sleeve 10.

Mounted upon the bolt 17 is a compression coil spring 22 one end of which abuts the face plate 14 and the other end abuts the finger grip 18.

The internally threaded portion 9 of the socket element 6 is formed with a cup-shaped mouth 23 and the bolt 17 is formed with a bullet-shaped end 24,

By this means the bolt will centre itself with respect to the portion 9 as it is pushed towards the socket element so that it will enter readily into the socket element and will thus insure perfect operation of the device regardless of whether the bolt and socket element are in exact alignment. This will allow for any shrinkage or distortion of the sashes due to warping.

The construction and operation of my improved window lock is as follows:—

In mounting the device, the only work to be done upon the sashes is the drilling of the orifices 5, which orifices are positioned to be in alignment when the sashes are closed.

The socket element 6 is simply driven into the orifice 5 in the outer sash, the spicular projections 8 penetrating into the sash and the flange 7 abutting the outer face thereof. The projections 8 prevent turning of the socket element within the sash. This positively retains the socket element in position and if desired screws may be used in addition

to the projections 8 to further secure the socket element upon the sash.

The sleeve 10 is then inserted into the orifice 5 in the inner sash.

The face plate assembly, comprising the face plate 14, with the bolt 17, the ring 21 and the coil spring 22 is then secured upon the inner face of the inner sash by means of the screws 13 and when assembled, the bolt projects through the sleeve 10.

The operation of locking the window is as follows:—

When the sashes are closed, the parts are as indicated and it will be noted that the compression coil spring 22 will normally maintain the locking bolt 17 withdrawn as illustrated in Fig. 2.

To fasten the sashes the bolt 17 is pushed towards socket element 6 and the threaded end 19 is engaged within the internally threaded portion 9 of the socket element, which positively locks the sashes not only against being opened in the ordinary way but serves to draw the meeting rails of the sashes very tightly together thus preventing all rattling.

The construction of the socket element 6 having the flange 7 engaging the outer face of the outer sash is such that the strain due to locking has no tendency to loosen this socket element in the sash.

In the above mentioned movement of the locking bolt the ring 21 slides within the slot 20 and permits both rotation and turning of the bolt.

The fastened position is illustrated in Fig. 1 and it will be noted that the coil spring 21 is compressed within the recess 16.

When it is desired to unfasten the window the bolt is simply turned by means of the finger grip 18 so as to unthread it from engagement within the socket element 6.

As soon as it is unthreaded, the spring 22 will withdraw it into the position shown in Fig. 2 so that the sashes may be opened.

The ring 22 sliding within the slot 20 forms a stop element which limits the withdrawal of the locking bolt.

From the foregoing it will appear that I have devised an improved window fastener whereby the objects of my invention have been attained.

Various modifications may be made in my invention without departing from the spirit thereof or the scope of the claim and therefore the exact forms shown are to be taken as illustrative only and not in a limiting sense and I desire that only such limitations shall be placed thereon as are imposed by the prior art or are specifically set forth in the appended claim.

What I claim as my invention is:

A sash fastener for windows comprising a cylindrical element formed with a flanged head at one end and with an internally threaded axial recess at the other end, spicular projections carried by the flanged head and directed towards the end having the axial recess therein, a sleeve having an enlarged head at one end, said sleeve positioned in spaced relation from and in axial alignment with the cylindrical element with the enlarged head remote from said cylindrical element, said enlarged head formed with a recess in the end thereof, a face plate superimposed over the enlarged head and provided with an orifice in alignment with the bore of the sleeve, a spindle slidably mounted within the sleeve and projecting outwardly through the orifice in the face plate, a finger grip at the outer end of said spindle, a compression coil spring upon the spindle and operative between the face plate and finger grip, the spindle formed with a slot therein, a ring surrounding the spindle and having one end thereof bent within the slot and slidable therealong, said ring located within the recess in the enlarged head of the sleeve, the spindle positioned in axial alignment with the cylindrical element and formed at the end thereof adjacent to said element with an externally threaded portion adapted to have threaded engagement within the internally threaded recess in the element.

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