March 11, 1924. 1,486,614

H. H. SULLWOLD

WINDOW FASTENER

Filed Nov. 26, 1921

Fig. 1

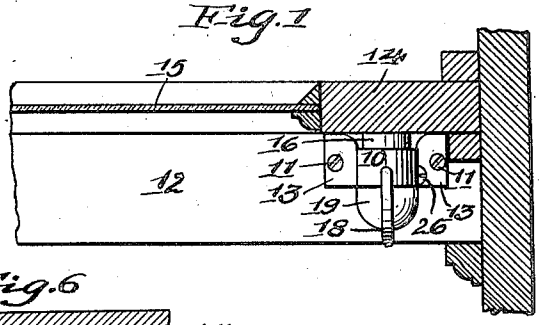


Fig. 6

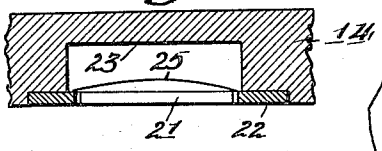


Fig. 2

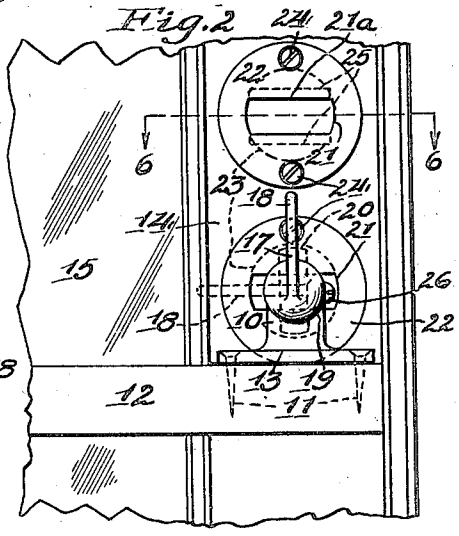


Fig. 3

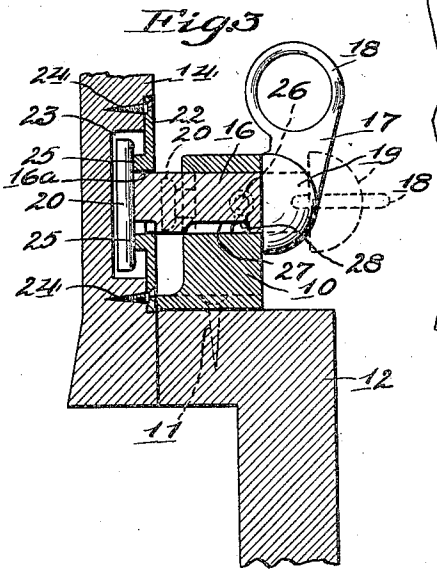


Fig. 4

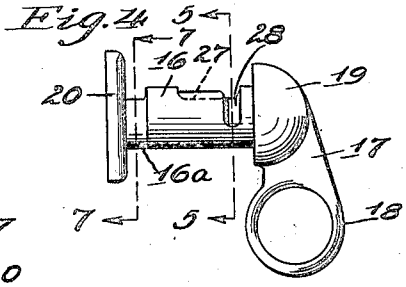


Fig. 5

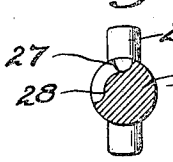
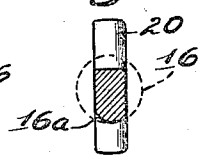


Fig. 7



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UNITED STATES PATENT OFFICE.

HAROLD H. SULLWOLD, OF ST. PAUL, MINNESOTA.

WINDOW FASTENER.

Application filed November 26, 1921. Serial No. 517,884.

To all whom it may concern:

Be it known that I, HAROLD H. SULLWOLD, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented new and useful Improvements in Window Fasteners, of which the following is a specification.

It is my object to provide a novel, simple and efficient fastener for windows.

More particularly it is my object to provide a device of this kind which is adapted to engage a vertical member of the upper sash frame so that the fastener may be used on windows with glass flush or nearly flush with the inner surface of the sash frame, as in double glazed windows.

Another object of my invention is to provide a novel and secure window fastener which is adapted to lock the sashes in partially open position.

My invention also includes various novel features of design which will appear and be more fully pointed out in the following specification and claims.

In the accompanying drawings, which illustrate the best form of my device at present known to me, Fig. 1 is a plan view of my improved fastener mounted on the upper edge of the lower sash of a window, fragmentary portions of the window frame, guide strips and upper sash being shown in horizontal section; Fig. 2 is an elevation of my fastener together with adjacent portions of a window; Fig. 3 is a central vertical section of my device and fragmentary portions of the sashes; Fig. 4 is a detail plan view of the locking bolt, cross bar and handle detached from the support; Fig. 5 is a section taken on the line 5—5 of Fig. 4; Fig. 6 is a section taken on the line 6—6 of Fig. 2 and Fig. 7 is a section of the bolt eccentric taken on the line 7—7 of Fig. 4.

Referring to the accompanying drawings, my fastener is mounted in a supporting bearing 10 secured by screws 11 to the upper surfaces of the lower sash 12, said screws being counter-sunk in a flange 13, formed on said bearing. The bearing 10 is offset a short distance from the inner surface of a vertical member 14 of the upper sash 15. A bolt 16 is slidable and revoluble in the bearing 10 and provided with a handle 17 on its inner end. This handle 17 is formed with a ring 18 and a hemispherical knob 19 rigidly joined to said bolt. An eccentric surface 16^a on the outer end of the bolt 16 is adapted to bear against an abutment plate as hereinafter described. Fast on the end of the bolt 16 opposite the handle 17, is a cross bar 20 which is adapted to enter a slot 21 in the abutment plate or strike 22.

The abutment plate 22 is counter-sunk in the vertical member 14 of the upper sash and is arranged concentrically with a circular recess 23 in said member. Counter-sunk screws 24 fasten the plate 22 to the upper sash and two cam surfaces 25, formed on said plate along the longitudinal edges of said slot, are provided to engage the cross bar 20 as hereinafter described. A stop screw 26 is threaded in the bearing 10 and projects into connecting grooves 27 and 28 cut in the bolt 16.

Operation.

In the operation the stop screw 26, which projects into the grooves 27 and 28, limits longitudinal and turning movement of the bolt 16 in the bearing 10. Thus, said bolt may be moved longitudinally in said bearing from one extremity to the other of the groove 27 and when said bolt has been moved toward the upper sash the screw 26, will stop longitudinal movement and the handle 17 may be turned until the screw, which during this turning movement is in the groove 28, comes in contact with the end of said groove. When the window is unlocked the bolt 15 is withdrawn and the handle 17 is placed in horizontal position as indicated in dotted lines in Figs. 2 and 3. To lock the sashes the bolt 16 is moved longitudinally in the bearing 10 with the handle 17 in horizontal position and the cross bar 20 is simultaneously inserted in the slot 21 of the abutment plate 22. The handle 17 is now turned to vertical position. During this turning movement the eccentric surface 16^a bears against a surface 21^a of the slot 21, and the cross bar 20, which has suitably rounded corners, bears on the cams 25. As will be readily understood, the sashes are moved longitudinally in opposite directions (i. e. toward closed position) by the action of the eccentric surface 16^a and said sashes are pulled horizontally toward each other by the action of the bar 20 on the cam surfaces 25. Thus, in addition to locking the window my improved fastener tends to close the sashes tightly and to firmly press the adjacent edges of said sashes into contact. To unlock the window the handle 17 is

first turned to horizontal position and then withdrawn, thus freeing the bolt 16 from the abutment plate.

When my fastener is used to lock the sashes in partially open position a plurality of the abutment plates 20 are mounted on the member 14 of the upper sash as indicated in Fig. 2. Thus, to lock the sashes in partially open position the sashes are moved so that the bolt 16 and cross bar 20 register with the slot 21 of the upper abutment plate 22 when the bolt is inserted and turned as described above.

I have illustrated a single fastener mounted on one side of a window but it may be considered desirable to use a pair of fasteners one opposite each vertical member 14 of the upper sash of the window together with the desired number of pairs of abutment plates 22.

Having described my invention what I claim as new and desire to protect by Letters Patent is:

1. In a window fastener a support adapted to be secured to one sash of a window adjacent to a vertical member of the other sash, said member having a plurality of recesses therein, a bolt slidable and revoluble in said support and having groves therein, a handle mounted on one end of said bolt, a cross bar arranged on the other end of said bolt to be selectively inserted into said recesses, a plurality of abutment plates mounted over said recesses, each of said plates being formed with a horizontal slot, cam surfaces formed on the longitudinal edges of said slots to be engaged by said cross bar, and a stop extending into the grooves in said bolt whereby turning and sliding movement of said bolt is limited.

2. In a window fastener, a support adapted to be secured to one sash of a window, a bolt slidable and revoluble in said support, means for limiting sliding and turning movement of said bolt in said support, an abutment plate having a slot therein arranged to be mounted over a recess in the other sash of the window, a handle mounted on one end of said bolt, the other end of said bolt being formed to be inserted into said recess through said slot and an eccentric surface formed on the last mentioned end of said bolt to engage said abutment plate when said bolt is turned and thereby move said sashes toward closed position.

In testimony whereof, I have hereunto signed my name to this specification.

HAROLD H. SULLWOLD.