Dec. 7, 1926. 1,609,935

W. H. FLEWELL

COMBINED LATCH AND STAY

Filed May 6, 1926

Fig. 1

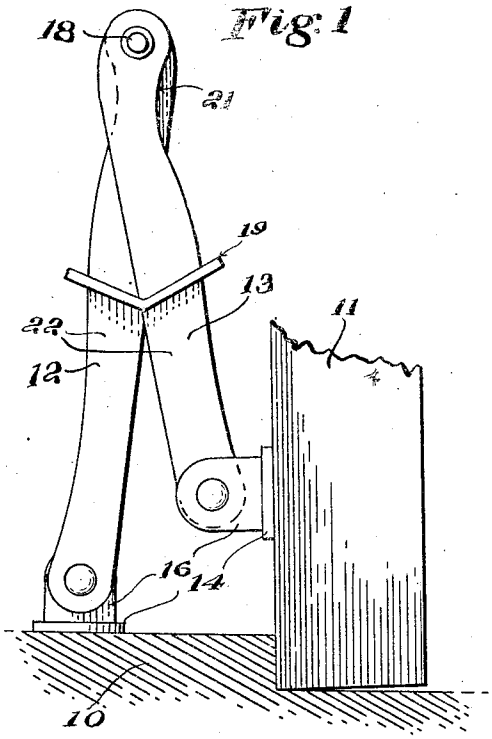


Fig. 2.

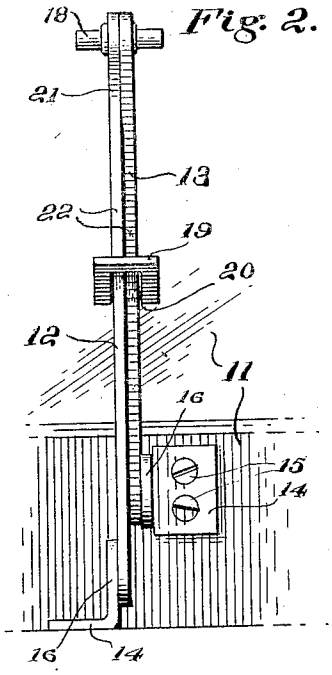


Fig. 3.

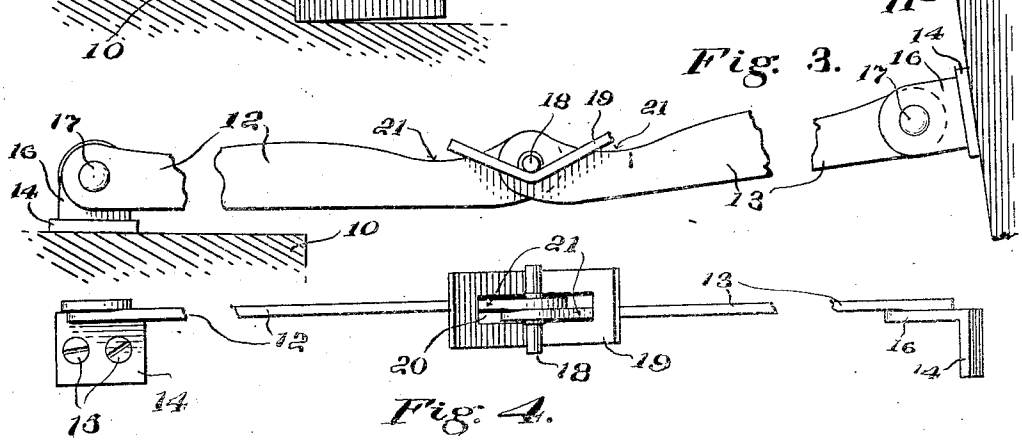


Fig. 4.

Inventor:

W. H. Flewell,

By N. L. Woodward

Attorney

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WALTER H. FLEWELL, OF SIOUX CITY, IOWA.

COMBINED LATCH AND STAY.

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The invention relates to devices especially adapted to securing storm shutters and storm sash in open and closed positions, although it is equally applicable to other closures. It is a particular object to provide an extremely simple device of this nature to hold hinged sash alternately at the opposite limits of its movement in a most positive manner without liability of becoming casually loosened in the respective positions, and having the further advantage of serving as a lock of a safe character, by which a sash or the like may be held securely in closed position, so that it cannot be opened by manipulation of the fastener from without. It is an especial aim to present an article of this character which may be produced entirely from sheet metal stampings with the exception of the pintles.

Additional objects, advantages and features of invention reside in the construction, arrangement and combination of parts, as may be more readily understood from the following description, and acompanying drawings, wherein,

Figure 1 is an elevational view of my invention applied to a storm sash, the sash being represented in elevation and a window sill in cross section.

Figure 2 is an elevational view from the left of Figure 1.

Figure 3 is a view similar to Figure 1 showing the parts in open position.

Figure 4 is a top view of the parts in Figure 3.

There is illustrated a window sill 10, comprising a part of a frame on which there is hung a storm sash 11 or the like, ordinarily hinged at the upper edge so as to swing outward at the bottom. Connected respectively to the sill and sash are long and short links 12 and 13 of my combined latch and prop, which are pivotally connected together at their ends opposite those attached to the sash and sill as indicated. The mounting for the device on the sash and sill comprises in each instance metal plates 14, apertured to receive fastening screws 15, and having at one edge an outstanding ear 16 at right angles to the body of the plate. By rivets 17 the links are pivoted upon the ears 16. The mutual connection between the links comprises an elongated pintle 18, which projects at each end beyond the links, which are arranged in close parallel relation. Before engagement of the pintle 18 in the links, a locking yoke 19 in the form of a rectangular frame stamped integrally from sheet metal is slipped over the links while held in close parallel relation, after which the pintle 18 is put in place.

The opening 20 through the yoke 19 has a minimum dimension equal to the aggregate thicknesses of the two links, so that they may slide therethrough readily. One edge of each link may be rectilinear or otherwise formed, as economy or ornamentation may dictate, the links being so connected that these edges will be presented at the same side of the device when extended. The opposite edges are shaped each with a recess 21 closely adjacent the pivotal connection between the links, and the yoke 19 is bent so that its opposite end portions will extend at an angle to each other. Thereby, when the device is extended as shown in Figure 3, the ends of the yoke may rest in the recesses 21 and the pintle 18 rests within the vertex of the angle formed by the bending of the yoke. The depths of the recesses 21 and the bending of the yoke 19 are such as to permit the links to swing slightly beyond dead center in open position, so that with the recessed edges aranged at the upper side, the weight of the sash bearing inwardly on the device will tend to hold it locked by the yoke 19 against further movement beyond dead center, and the force of the sash so applied that casual closing of the device thereby is obviated. The edge portions of the links extending from the recesses 21 may be shaped as desired, so that when the link 12 is mounted upon the sill a short distance inwardly of the sash when closed, the edges 22 will be divergent downwardly. The length of the opening in the yoke 19 is slightly less than the aggregate width of the two links intermediately of the length of the link 13 when the parts are in the position shown in Figure 1, so that by forcing the yoke 19 downwardly upon the links while they are in such position, it will wedge upon their intermediate parts, tending to draw the link 13 inwardly and locking the sash 11 securely against opening movement. Release of the sash for opening from this position may be attained by simply lifting the yoke 19 and pressing outwardly on the sash at the same time, so that the links may fall into the position shown in Figure 3.

It will be noted that by making one link longer than the other it is possible for the links to fold upwardly into nearly or quite vertical position of desired, closely within the sash or shutter when closed, so that there will be no interference with the regular sash, and the closed appliance may be accommodated within a very narrow space between the inner and outer sash or between the sash and shutter. The difference in length also enables attachment of the device to the sash or shutter safely above the sill, and placement of the mounting on the sill a sufficient distance inwardly from the sash or shutter, enabling rapid fitting of the device in a window and also minimizing liability of splitting the sill or sash by the fastening being too close to the edge of the material therein.

Various modifications and adaptations of the device will be obvious from the disclosure, and it will be seen that when the appliance is mounted so that the links fold upwardly in the position shown in Figure 1, gravity will hold the yoke 19 in locked position thereon, and will also serve to hold the parts in extended position against casual closing of the sash. Simple blanks of sheet metal comprise all of the essential parts of the device, and they are adapted to be produced economically, in accordance with ordinary shop practices.

I claim:

1. A device of the character described, comprising pivotally connected links, means for mounting the outer ends of the links upon respective relatively movable members, pivotal connection between the links comprising a pin extended at its ends beyond the links, and a yoke apertured to receive the links snugly slidable therein, the yoke being adapted to wedge upon the parts to hold them in closed position, and the yoke and links being so constructed and arranged that the links may swing beyond dead center in opening movement and said pin will engage against the yoke to stop said movement further.

2. The structure of claim 1 in which said links have recessed edges at one side and said yoke is bent so that its ends extend in an angular relation to each other, whereby its ends may rest in the recesses and the pin may bear upon the concave side of the yoke.

3. The structure of claim 1 in which one link is longer than the other, whereby the outer end of the short link may be mounted upon a sash or the like above a window sill, and the long link being mounted upon a window sill and the parts in closed position may extend upwardly in close relation to a sash or the like.

In testimony whereof I affix my signature.

WALTER H. FLEWELL.