

May 19, 1925.

R. MURRAY

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CATCH HINGE FOR WINDOWS AND THE LIKE

Filed Oct. 22, 1923

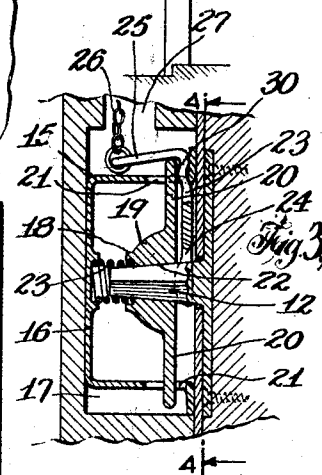
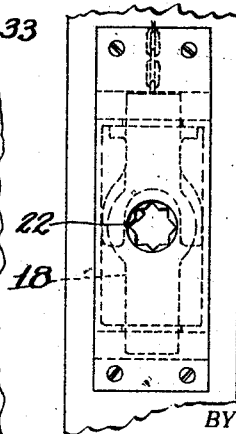
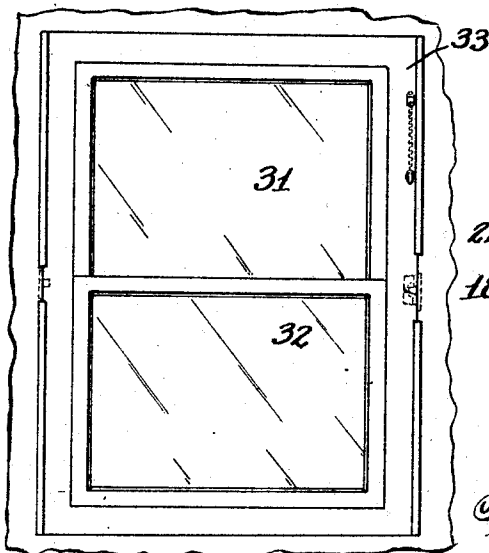
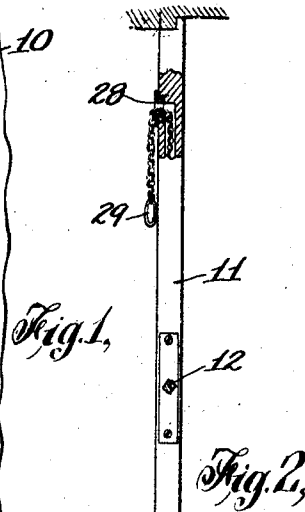
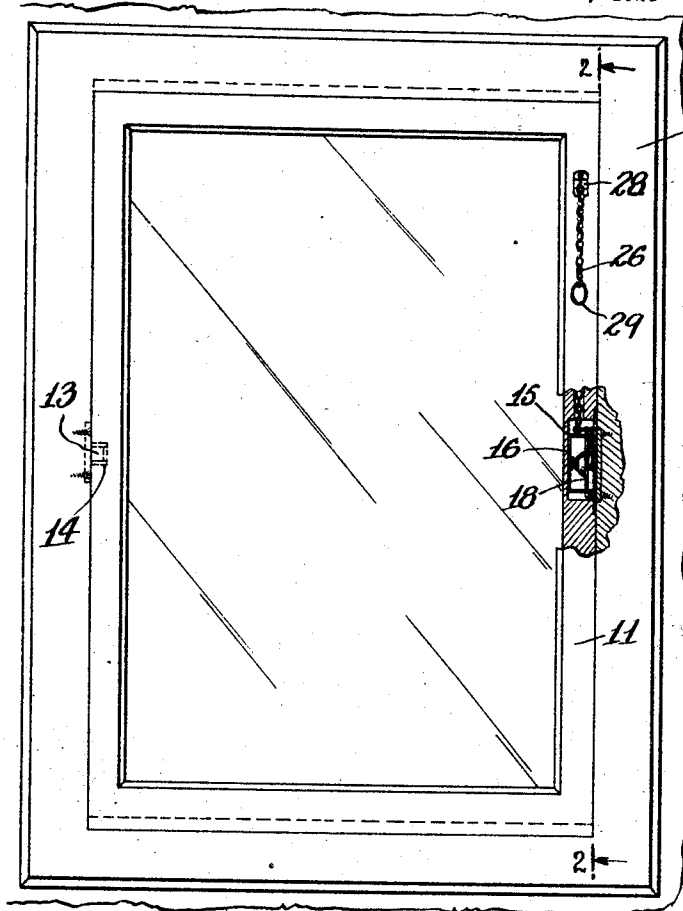


Fig. 4, INVENTOR
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UNITED STATES PATENT OFFICE.

RICHARD MURRAY, OF NEW YORK, N. Y.

CATCH HINGE FOR WINDOWS AND THE LIKE.

Application filed October 22, 1923. Serial No. 669,925.

To all whom it may concern:

Be it known that I, RICHARD MURRAY, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Catch Hinges for Windows and the like, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to pivot windows and the like and particularly to an improved catch hinge for devices of this class, mounted in such manner as to pivot the windows in a horizontal plane to permit of their swinging in a vertical plane; and the object of the invention is to provide a catch hinge construction of the class specified which will operate to automatically lock the window in different positions of adjustment and for locking the same in a closed position; a further object being to provide a catch hinge of the class specified which is adapted to be countersunk and concealed in the sash frame of a window with means protruding through said sash for actuating the lock element of the hinge; and with these and other objects in view, the invention consists in a device of the class and for the purpose specified, which is simple in construction, efficient in use and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Fig. 1 is an inside view of a window construction showing my improvement mounted in connection therewith, and parts of the construction being broken away and in section.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a view similar to Fig. 1 but showing only a detail of the construction and on an enlarged scale, and showing other parts in section.

Fig. 4 is a section on the line 4—4 of Fig. 3; and,

Fig. 5 is a view similar to Fig. 1 but showing a modification.

In Fig. 1 of the drawing I have shown at 10 a window frame in which is mounted

a window sash 11 of the usual construction and secured to the side rails of the frame 10 substantially centrally thereof and preferably at a point above the center of the sash 11, are plates having pivot pins 12 and 13. In the construction shown, the pivot pin 12 is tapered and angular in form, preferably square, in cross section as clearly shown in Figs. 2 and 3 of the drawing.

The pivot pin 13 operates in a socket 14 at one side of the sash 11 to provide for the pivotal or rotary action of the sash on the pin 13 while the pivot pin 12 extends into a lock device constituting part of the catch hinge construction countersunk and imbedded in the opposite rail of the sash 11.

The lock device 15 comprises a box-shaped casing 16 which sets in and is retained within a recess portion 17 in the sash and movably mounted in the casing 16 is a lock element 18 comprising a central cylindrical portion 19 substantially semispherical in form in cross section and laterally directed arms 20 which extend through apertures 21 in the top and bottom walls of the casing 16 as clearly shown in Fig. 3 of the drawing. The lock element 18 or the central portion 19 thereof is provided with an aperture 22 which is octagon in form as shown in Fig. 4 of the drawing and is adapted to operate in connection with the tapered angular pin 12, said pin passing through said aperture. A spring 23 is employed between the casing 16 and lock element 18 to normally hold said element in engagement with the pin 12 as shown in Fig. 3 of the drawing.

A lever 23 is mounted in connection with the top portion of the casing 16 and the lower end 24 thereof is forked to span the pin 12 and is adapted to operate in connection with the lock element 18 to disengage the same from the pin 12 as hereinafter described. The lever 23 has an angular extension 25 with which a cord, chain or the like 26 is connected, and this cord or chain extends upwardly through an aperture 27 formed in the sash 11 or one of the rails thereof and passes outwardly through the rail of the sash adjacent to the upper end thereof as shown at 28. The free end of the cord or chain is provided with a finger piece 29 by means of which the lever 23 may be operated.

The operation of my improved lock device for locking the pivot sash 11 in different positions of adjustment is as follows. When

the sash 11 is in a closed position, it is locked in this position by the engagement of the lock element 18 with the pin 12, and when it is desired to open the window or to move the sash into an open position the ring 29 is grasped by one hand and pulled downwardly, which operation releases the angular end 25 of the lever 23, said lever swinging on a fulcrum 30, and the forked end 24 of the lever moves inwardly to disengage the lock element 18 from the pin 12, to release and permit of its movement on the pivots, and when the sash has been moved into the desired position, the pull on the cord or chain 26 is released and the spring 23 returns the lock element 18 into operative position, it being understood that the lock element will find its nearest seat on the tapered pin 12, depending solely on the form of the aperture 22, which in the construction shown is octagon in form, but any number of positions, within certain limits, may be provided.

The construction shown in Fig. 5 of the drawing is the same as that shown in Figs. 1 to 4 inclusive with the exception that slidable window sashes 31 and 32 are mounted in a swinging window sash 33. In other words, the sash 33 is the equivalent of the sash 11 and the separate window sashes 31 and 32 are mounted therein in the usual manner or as such sashes are commonly mounted in a window frame. It will be understood that various changes in and modifications of the construction herein shown and described may be made within the scope of the appended claims without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A catch hinge of the class described comprising a casing; a suitably supported lock element movably mounted therein, said element being provided with an aperture, a tapered pin adapted to be passed through said aperture and to be locked in engagement with the casing, through said lock element.

2. A catch hinge of the class described comprising a casing; a suitably supported lock element movably mounted therein, said element being provided with an aperture, a tapered pin adapted to be passed through said aperture, and to be locked in engagement with the casing through said lock element, and means in said casing for normally holding said element in engagement with said tapered pin.

3. A catch hinge of the class described comprising a casing; a suitably supported lock element movably mounted therein, said element being provided with an aperture, a tapered pin adapted to be passed through said aperture and to be locked in engagement with the casing through said lock element, means in said casing for normally holding said element in engagement with said tapered pin, and manually controlled means for moving said lock element into an inoperative position to permit the movement of said casing relatively to said pin.

4. A catch hinge for pivot windows of the class described comprising a casing adapted to be mounted in a window sash, pivot pins mounted in the window frame and upon which said sash is movably mounted, one of said pivot pins being angular in form and extending into said casing, and a lock element movable in said casing provided with an angular aperture through which said pin passes and tensional means within the casing and cooperating with said element for locking the same in engagement with said pin.

5. A catch hinge for pivot windows of the class described comprising a casing adapted to be mounted in a window sash, pivot pins mounted in the window frame and upon which said sash is movably mounted, one of said pivot pins being angular in form and extending into said casing, a lock element movable in said casing provided with an angular aperture through which said pin passes, tensional means within the casing and cooperating with said element for locking the same in engagement with said pin, and manually operated means for moving said element into an inoperative position.

6. A catch hinge for pivot windows of the class described comprising a casing adapted to be mounted in a window sash, pivot pins mounted in the window frame and upon which said sash is movably mounted, one of said pivot pins being angular in form and extending into said casing, a lock element movable in said casing provided with an angular aperture through which said pin passes, tensional means within the casing and cooperating with said element for locking the same in engagement with said pin, manually operated means for moving said element into an inoperative position; and said pin being tapered.

In testimony that I claim the foregoing as my invention I have signed my name this 18th day of Oct. 1923.

RICHARD MURRAY.