April 28, 1925. 1,535,672

H. S. LOCKWOOD

CASEMENT ADJUSTER

Filed Sept. 8, 1921

FIG. 1.

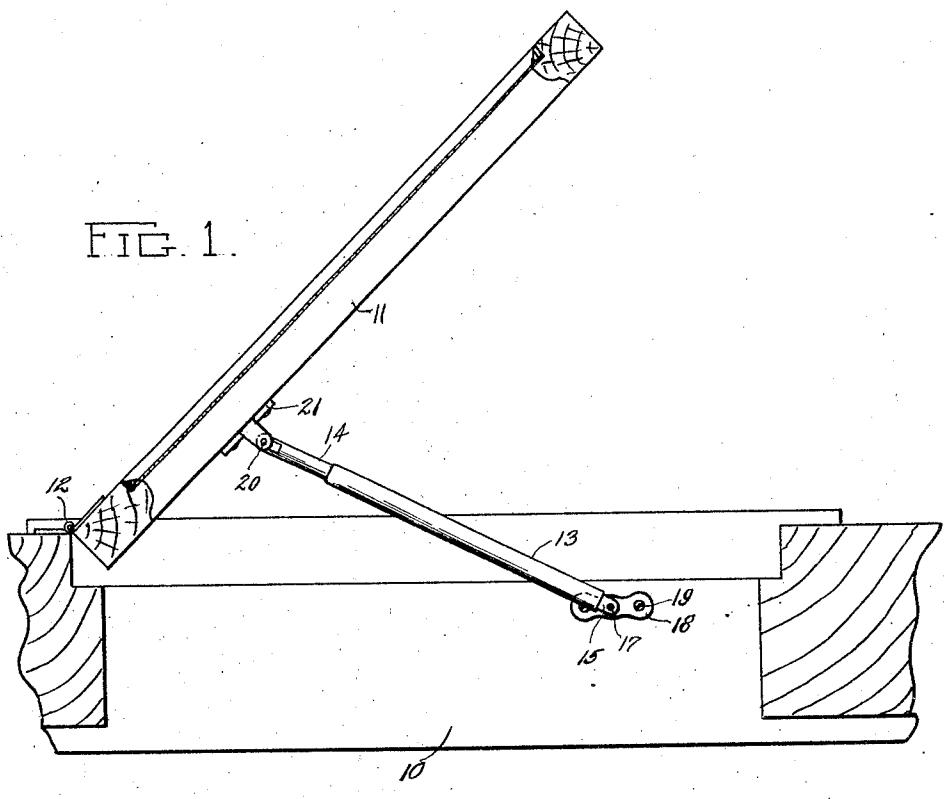


FIG. 2.

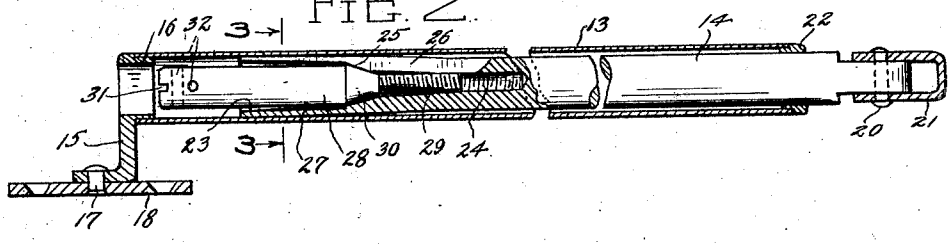
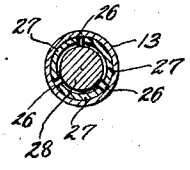


FIG. 3.



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UNITED STATES PATENT OFFICE.

HENRY S. LOCKWOOD, OF SOUTH NORWALK, CONNECTICUT, ASSIGNOR TO THE LOCKWOOD MANUFACTURING COMPANY, OF SOUTH NORWALK, CONNECTICUT, A CORPORATION OF CONNECTICUT.

CASEMENT ADJUSTER.

Application filed September 8, 1921. Serial No. 499,225.

To all whom it may concern:

Be it known that I, HENRY S. LOCKWOOD, a citizen of the United States, residing at South Norwalk, county of Fairfield, State of Connecticut, have invented an Improvement in Casement Adjusters, of which the following is a specification.

This invention relates to casement adjusters and particularly to devices for securing the casement window in any position desired.

It is an object of the invention to provide such a device that will secure the casement in the desired position without setting a set screw or other locking means, and which will also allow movement of the casement from one position to another without the necessity of unlocking or releasing a securing means.

It is a further object of this invention to provide a device of this type in which the resistance or holding effect thereof may be easily and quickly varied at will to suit the conditions met in any particular installation.

It is a still further object of the invention to provide a casement adjuster which is simple in construction comprising few parts and which will not easily get out of order.

Adjusters of this type are usually made with a sleeve made of wood fibre, or composition metal, mounted on a rod sliding in a tube. These adjusters are not satisfactory because in damp weather the wood fibre swells so that the adjuster cannot be operated, and the composition metal sleeve adds greatly to the cost and is apt to get out of order as it is complicated.

The preferred form of my invention consists of a tube secured to the casement or its frame and a rod sliding in the tube secured to the other member. The rod is bored and internally threaded at one end and then slotted for a sufficient distance to make it flexible. I also provide a special screw which is inserted in the bored and threaded end, and which acts on adjustment thereof to expand the flexible parts of the rod to produce the necessary friction between the rod and the tube to hold the casement in any adjusted position, at the same time allowing movement of the casement, if desired.

Referring to the accompanying drawings,

Fig. 1 is a sectional plan view of a casement showing my adjuster attached thereto.

Fig. 2 is a central longitudinal section through the adjuster, and

Fig. 3 is a transverse section substantially on the line 3—3 of Fig. 2.

Reference numeral 10 represents the frame for the casement 11 which is hinged to the frame by suitable hinge mechanism 12. The adjuster comprises a tube 13 within which is slidably mounted a rod 14 adapted for frictional engagement with the interior of the tube. An arm 15 is secured at one end to the tube by an internal flange 16 inserted in the tube which may be secured by any suitable means, such as brazing, the arm 15 being pivotally connected at 17 to a plate 18 which may be secured to the frame by screws 19. The rod 14 is flattened at its outer end and pivoted by any suitable means, such as a pin 20 to a bracket 21, adapted to be secured to the casement. The body of the rod 14 is guided in the end of the tube by a suitable collar 22 secured in the end of the tube.

The inner end of the rod 14 is bored at 23 and internally threaded for a suitable distance at 24, the threaded portion being of smaller diameter than the bored portion 23, with a preferably tapered portion 25 between the two. The tube is then provided with a number of slots 26, in the form shown, three, but any desired number may be employed, these slots providing separable portions 27, the slots extending a sufficient distance to render the separable portions flexible. A pin 28 is reduced at one end 29 and threaded to fit the internal threads 24 of the rod and, between the threaded portion and the body, is provided with a tapered portion 30. At its outer end, the pin 28 is provided with suitable means whereby it may be turned for adjustment, such as a channel 31 for a screw driver, or transverse openings 32 for a pin.

In assembling, the rod 14 is inserted in the tube and then the pin 28 is inserted in the bored end of the rod, and is screwed in sufficiently to spread the separable portions of the rod into engagement with the inner walls of the tube by the reaction of the surfaces of the tapered portions 25 and 30, and it will be apparent that the amount of friction between the two members may be in-

creased or decreased, as desired, by adjustment of the pin 28. This is usually made sufficient to hold the casement in the position desired but sufficiently free to allow its forcement from one position to another. As the tube and rod are made of metal, there is nothing to swell and change conditions in damp weather, and it will be apparent this construction is very simple and so is not apt to get out of order. Also that it is durable and may be easily and cheaply manufactured.

Having thus set forth the nature of my invention, what I claim is:

1. A casement adjuster comprising a tube open at both ends, a rod slidable within the tube through one end thereof and having frictional sliding engagement therewith, and means accessible through the other end of the tube for varying the amount of friction between the two elements.

2. A device of the class described comprising an open ended tube, a rod slidable within the tube through one end thereof and bored and slotted at its inner end, and adjustable means for separating the portions between the slots to vary the frictional engagement between the rod and tube, said means being accessible through the other end of the tube for adjustment by a suitable tool.

3. A device of the class described comprising an open ended tube, a rod slidable within the tube through one end thereof and internally threaded at its inner end, said rod being slotted adjacent said threaded portion to provide separable portions, and threaded means engaging said threaded portion for spreading the separable portions to vary the frictional engagement between the rod and tube, said means being accessible through the other end of the tube for adjustment by a suitable tool.

4. A device of the class described comprising an open ended tube, a rod slidable within the tube through one end and having frictional engagement therewith, the inner end of the rod being bored and threaded and also slotted to provide separable portions, and a threaded pin provided with a tapered portion inserted within the rod and movable longitudinally thereof to spread the separable portions to vary the frictional engagement between the rod and tube, said pin being provided with means to coact with a suitable tool inserted through the other end of the tube for adjusting the pin.

5. A device of the class described comprising a tube, a rod slidable within the tube and having frictional engagement therewith, said rod being slotted at one end to provide separable portions, a pin inserted in the rod, coacting means between the rod and pin for moving the pin longitudinally of the rod, and coacting means between the rod and pin to spread the separable portions of the rod to vary the frictional engagement between the rod and tube, said tube being provided with an opening, and means carried by the pin adapted to coact with a suitable tool inserted through said opening for adjusting the pin.

6. A device of the class described comprising a tube, a rod slidable within the tube and having frictional engagement therewith, said rod being slotted at one end to provide separable portions, a pin inserted in the rod and movable longitudinally thereof, one of said latter members being provided with an inclined surface adapted to coact with the other member upon longitudinal movement of the pin to spread the separable portions to vary the frictional engagement between the rod and tube, said tube being provided with an opening, and means carried by said pin accessible through said opening for adjusting the pin.

In testimony whereof I affix my signature.

HENRY S. LOCKWOOD.