United States Patent [19]

Adickes, deceased

[11] **3,837,693**

[45] **Sept. 24, 1974**

[54] **LOCKS FOR SLIDING MEMBERS**

[76] Inventor: **Edward J. Adickes, deceased,** P.O. Box 3385, late of Idialantic, Fla. 32903 Dorothy Randall Frisch, executrix

[22] Filed: **Dec. 7, 1972**

[21] Appl. No.: **312,959**

[52] **U.S. Cl.**..... **292/207,** 292/DIG. 9, 292/DIG. 20

[51] **Int. Cl.**..... **G05c 3/04**

[58] **Field of Search**..... 292/DIG. 20, 207, 210, 292/DIG. 9; 16/191, 144, DIG. 40; 70/90; 248/205 A, 467

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Assistant Examiner—Richard P. Tremblay
Attorney, Agent, or Firm—Hal H. McCaghren

[57] **ABSTRACT**

This invention is directed to locking mechanisms for overlapping parallel sliding members, such as sliding doors, double sash windows and the like, comprising a hinge member having two leaf members, each of which has knuckles aligning with the other to receive a pivot pin; one of said leaf members being provided with means for permanently affixing it to one sliding member, and the other leaf member being freely pivotal. The freely pivotal leaf member has a spring loaded detent positioned transversely thereof, and the fixed leaf member has an aperture in a pivot knuckle positioned to receive the detent when the said leaf members are substantially perpendicular to each other. The freely pivotal leaf member has an arcuate recess in the free edge thereof adjacent the spring loaded detent, to provide access to said detent to release the locking of the detent from the aperture.

4 Claims, 7 Drawing Figures

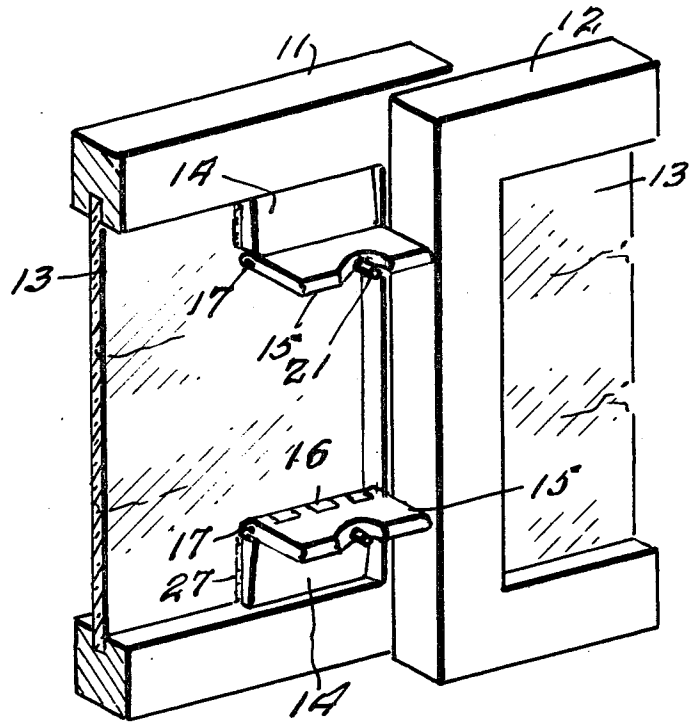


Fig. 1.

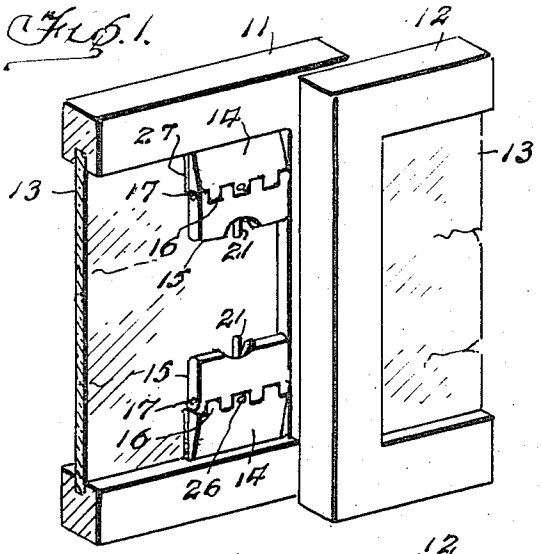


Fig. 2.

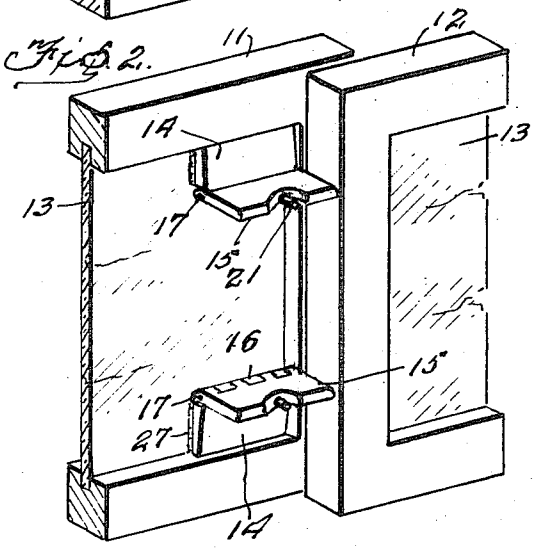


Fig. 3.

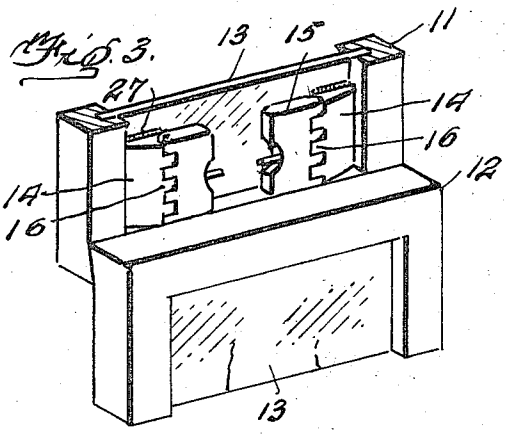


Fig. 4.

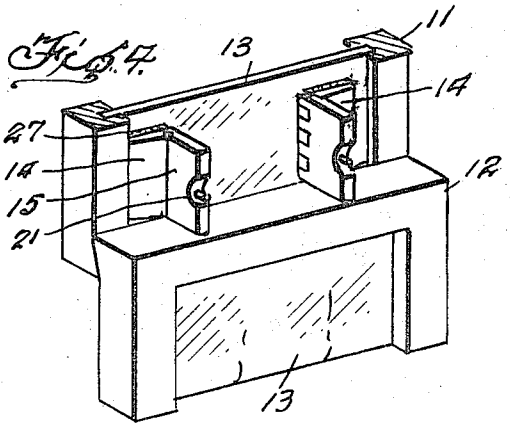


Fig. 5.

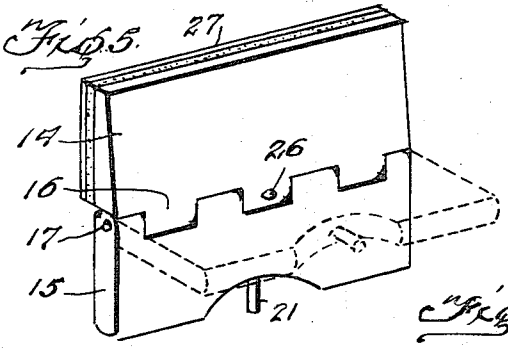


Fig. 6.

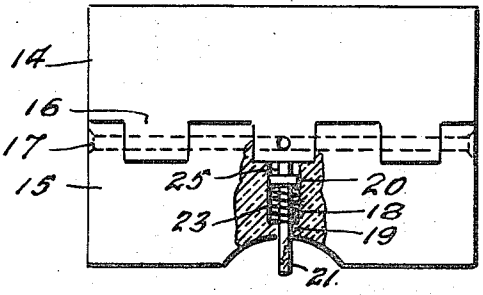
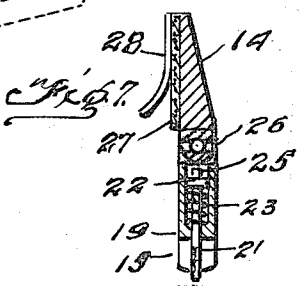


Fig. 7.



LOCKS FOR SLIDING MEMBERS

An object of this invention is to provide a simple inconspicuous element attached to one member of overlapping parallel sliding members, which may be positioned to permit free sliding of overlapping members with respect to each other, and positioned in another position to obstruct or prevent movement of said overlapping sliding members with respect to each other.

A further object of this invention is to provide a hinge type member having one leaf thereof permanently secured to one of overlapping sliding members, and the second leaf thereof freely pivotal to permit sliding of said overlapping members in one position; and, when turned 90° angle, to abut the face of one of said overlapping members to prevent displacement therebetween; and, means for locking said freely pivotal leaf member against displacment or rotation.

A still further object of this invention is to provide a device of the described which will be simple and economical in construction and efficient and durable in use.

The foregoing and other objects of this invention will be more fully understood from the following specification, taken in conjunction with the drawings, forming a part thereof, wherein:

FIG. 1 is a partial view of the meeting or adjacent edges of sliding glass doors, having frames therefore, in closed position, but the locking mechanism in open position to permit free longitudinal movement of the overlapping sliding doors:

FIG. 2 is a partial view of FIG. 1 wherein the locking member is set in position to abut the face of one sliding member, while being secured to the other member, to prevent longitudinal movement or sliding relationship between the two members;

FIG. 3 is a partial view of the application of the device of this invention to double hung sliding windows with the device secured to one member and permitting slidable relationship with the other member;

FIG. 4 is a partial view of FIG. 3 with the locking mechanism in locked position to prevent longitudinal displacement of one member with respect to the other;

FIG. 5 is a plan view of the device of this invention ready for application to sliding members, with the locked position shown in dotted lines;

FIG. 6 is a plan view of the device of this invention with parts cut away to show the construction of the spring loaded detent locking means; and,

FIG. 7 is a vertical sectional view of the device of this invention with the removable adhesive strip partially removed.

Referring to the drawings wherein like parts are given the same reference numeral, a sliding member such as a sliding glass door or window frame **11** and an overlapping sliding member or mating door or window frame **12**, has a glass pane **13** inserted therein, in the usual conventional construction manner. The device of this invention comprises a leaf **14** permanently secured to the glass pane and a movable leaf **15** hingedly connected to the fixed leaf **14** by means of knuckles **16** formed on each of said leafs and aligned to receive a pivot pin or pintle **17**.

The movable leaf **15** has a recess bore or aperture **18** formed centrally therein having two diameters to present or provide a shoulder **19**. A detent or pin **21** is slidably mounted in this bore or aperture and has a shoulder **22** provided on said pin or detent **21**. A compression spring **23** surrounding said detent is held under compression by said shoulder **22** on the detent **21** and the shoulder **19** provided in the recess, aperture or bore **18** in the leaf member **15**. When the freely pivotal leaf **15** is angular disposed substantially 90° with respect to the fixed leaf **14**, the spring loaded detent **21** forces the free end **25** of the detent extending beyond the shoulder **22**, into an aperture **26**, provided in the knuckle **16** of the fixed leaf **14**, to lock the two leafs in fixed position, and pivotal leaf abutting the frame **12** of the movable member to prevent displacement between the frame members. To permit free movement between the slidable members, the detent **21** is retracted and the pivotal leaf **15** is pivoted into the same plane as the fixed leaf **14**.

The fixed member may be secured to one of the sliding members **11**, in any conventional manner. However, a preferred method is to provide an adhesive film **27**, of which there are many suitable films on the market and commercially available, having one side of the adhesive film secured to the back face of the fixed member **14**; and, a removable protective strip or masking patch **28**, which may be removed and the second adhesive surface of the film **27** placed against the glass pane **13** adjacent the corner of the frame **11**, with the longitudinal axis of the pivot pin **11** parallel to the plane of travel of the frames **11** and **12** and firmly pressed against the pane in this position. The adhesive, will hold the leaf **14** in fixed position on the pane **13** thereafter.

Liquid contact adhesive, of which there are several commercially available, may be used in place of the adhesive film **27**.

Having described the invention what is claimed is:

1. A locking mechanism for overlapping parallel sliding members, comprising a hinge member having two leafs,

each of said leafs being provided with apertured knuckles which are aligned,

a pivot pin inserted in said knuckles and having its longitudinal axis parallel to the plane of the direction of movement of said sliding members,

means securing one of said leafs to one of said sliding members,

the other and freely pivotal leaf being provided with a spring loaded detent positioned transversely thereof,

an aperture in the secured leaf to receive said detent when said leafs are positioned substantially 90° with respect to each other,

said overlapping members have frames supporting glass panes, and

the secured leaf is secured to the glass pane.

2. The device of claim **1**, wherein said overlapping members are doors.

3. The device of claim **1**, wherein said overlapping members are windows.

4. A locking mechanism for overlapping sliding doors having frames and glass panes supported therein, comprising a hinge member having two leafs,

each of said leafs being provided with knuckles which are aligned,

a pivot pin inserted in said knuckles,

means securing one of said leafs to the glass pane of one of said sliding doors near the corner thereof

adjacent the other said sliding door with the pivot pin having its longitudinal axis parallel to the plane of the direction of movement of said sliding members,

the other of said leafs being freely pivotal and provided with a spring loaded detent positioned transversely thereof,

and an aperture in a knuckle of the secured leaf to receive said detent when said leafs are positioned substantially 90° with respect to each other.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,837,693 Dated September 24, 1974

Inventor(s) Edward J. Adickes , deceased, by Elizabeth A. Adickes, executrix

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the cover sheet item [76] "Dorothy Randall Frisch, executrix" should read -- Elizabeth A. Adickes, executrix --.

Signed and sealed this 19th day of November 1974.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

FORM PO-1050 (10-69)

USCOMM-DC 60376-P69
U.S. GOVERNMENT PRINTING OFFICE : 869-930