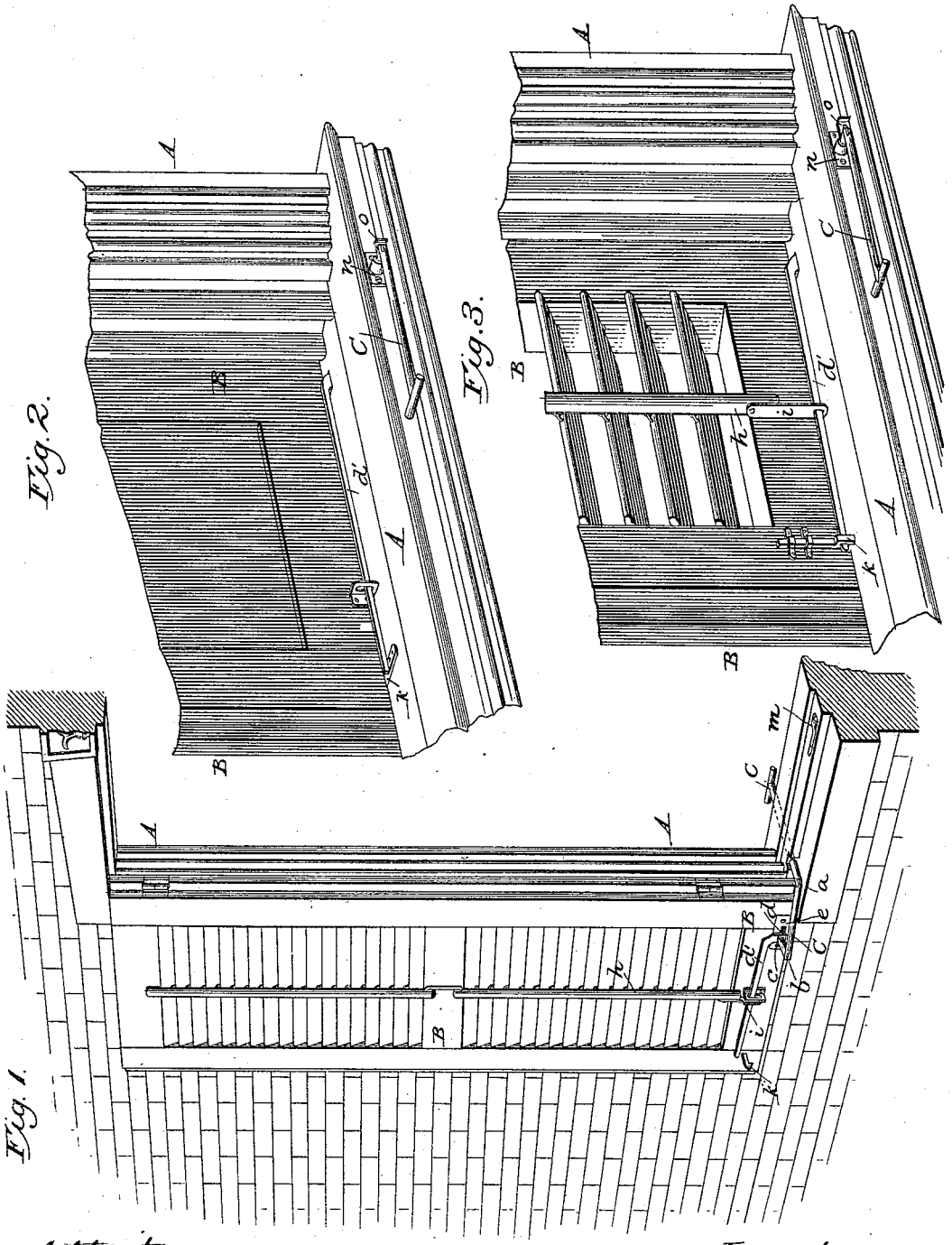
(No Model.) 2 Sheets—Sheet 1.

D. H. ROYER.

SHUTTER WORKER.

No. 348,142. Patented Aug. 24, 1886.



Attest.

Sidney P. Hollingsworth

Wm. B. Kennedy

Inventor.

D. H. Royer

By his Atty.

P. T. Dodge

(No Model.) 2 Sheets—Sheet 2.

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SHUTTER WORKER.

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Fig. 4

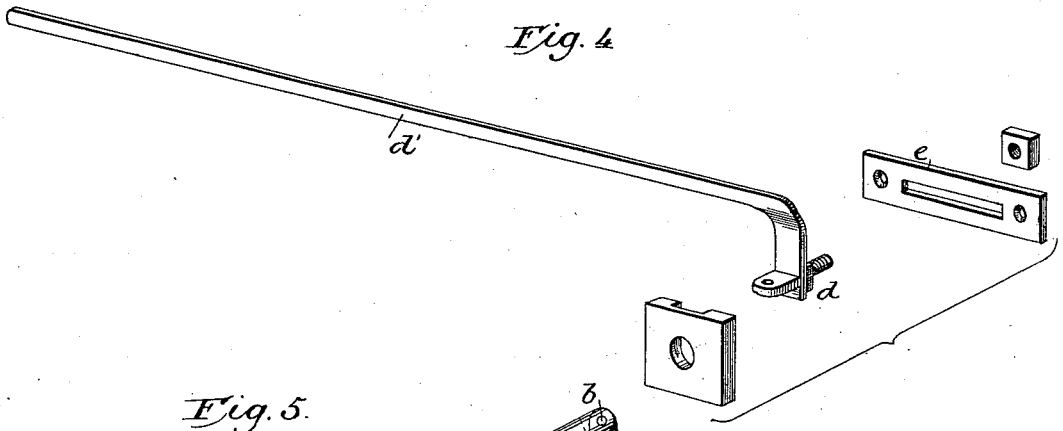


Fig. 5.

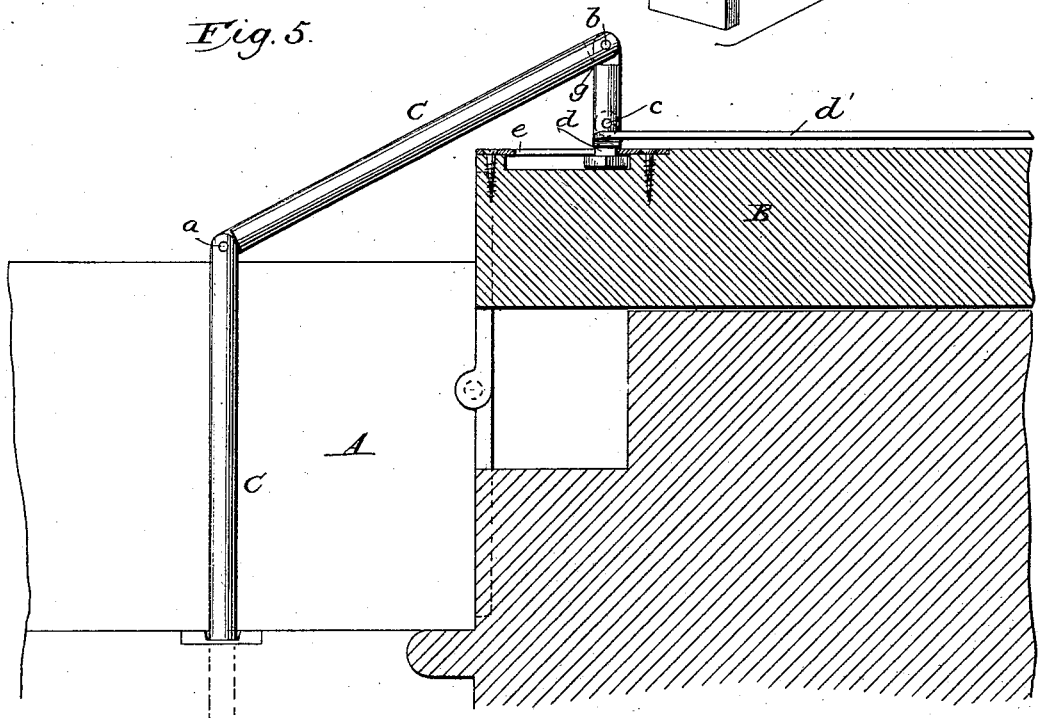


Fig. 6 on line x-x

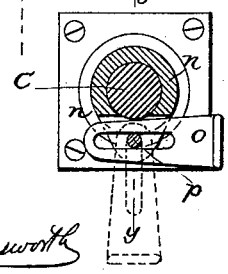
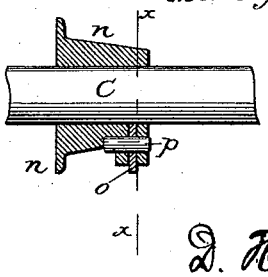


Fig. 7. on line y-y



Attest.

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W. L. Kennedy

Inventor.

D. H. Royer

By P. T. Dodge Atty

UNITED STATES PATENT OFFICE.

DAVID H. ROYER, OF MILLMONT, PENNSYLVANIA.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 348,142, dated August 24, 1886.

Application filed December 17, 1885. Renewed July 30, 1886. Serial No. 209,562. (No model.)

To all whom it may concern:

Be it known that I, DAVID HENRY ROYER, of Millmont, in the county of Union and State of Pennsylvania, have invented certain Improvements in Shutter-Workers, of which the following is a specification.

The present invention relates more particularly to improvements upon the devices for opening and closing shutters and adjusting their rolling slats, represented in my application for Letters Patent of the United States filed on the 24th day of August, 1885, No. 175,178. The device therein represented consists, essentially, of a jointed rotating and sliding rod extended through the window-sill from the interior to the exterior, and connected at its outer end by a sliding joint, and also provided at the outer end with a finger, which serves to adjust the slats.

The present improvements consist in the combination, with the adjusting rod and finger, of a catch, bolt, or other device for locking the shutter in a closed position; also, in an improved device for securing the rod against longitudinal motion; also, in the peculiar formation of the joints at the outer end of the rod, whereby it is enabled to lock the shutter the more securely in an open position.

Referring to the accompanying drawings, Figure 1 represents a perspective view of a portion of a window-frame and a single shutter with my device attached thereto, the shutter being shown in an open position. Figs. 2 and 3 are perspective views of the shutter in a closed position, and of the adjacent parts. Fig. 4 is a perspective view of the various parts of the device. Fig. 5 is a top plan view showing the peculiar construction of the joints to maintain the shutter in its open position. Fig. 6 is a cross-section of the operating-rod and its fastening devices. Fig. 7 is a longitudinal section of the same on the line *y y* of the preceding figure.

In the drawings, A represents the window frame or casing, and B the shutter, hinged thereto in the ordinary manner.

C represents a round rod extending through the window-sill from the inside to the outside, and provided with joints at *a* and *b*, that its outer end may swing horizontally. At its extreme outer end it is pivoted at *c* to a slide, *d*, which moves horizontally in a slotted plate, *e*, secured to the outer face of the shutter. When the rod is drawn inward, it pulls the shutter to a closed position; but when it is pushed outward the parts force the shutter open, and the outer jointed sections assume the positions shown in Fig. 5. The joint at *b* is of the form known as the "knuckle-joint"—that is to say, with shoulders *g*, which limit the pivotal connection, so that the two outer sections interlock firmly when they reach the position shown in Fig. 5. In consequence of this fact the outward movement of the main or body portion of the rod causes the slide to be pushed to the outer end of its slot and the several parts to lock rigidly together, so that the closing of the shutter is impossible.

The devices herein described are identical with those in my previous application, except as to the employment of the knuckle-joint *b*, which forms a feature of the present invention, and which causes the devices to hold the shutter with greater security. At its outer end the sliding plate *d* is secured rigidly to or formed in one piece with an arm, *d'*, which extends horizontally across the face of the shutter. When the shutter is provided with rolling slats, this arm will be connected with their operating-bar *h* by an intermediate link or plate, *i*, as shown in Figs. 1 and 3, or connected with the bar in any other suitable manner, so that the vibration of the finger, produced by rotating the rod C, will have the effect of opening or closing the slats in substantially the same manner as in my previous application. I propose to utilize this finger for locking the shutter in a closed position. This may be effected, as shown in Fig. 2, by arranging the end of the finger to engage a latch-plate, *k*, secured to the window-sill, as shown in Fig. 2, or by connecting the end of the finger to an ordinary sliding bolt attached to the shutter and arranged to lock into the sill, as shown at *k*, Fig. 3, or by providing the shutter with an ordinary locking-hook, *k*, as shown in Fig. 1, arranged to engage a spring-catch, *m*, on the window-sill, this spring being in such position that when the shutter is closed it will lie beneath the end of the finger *d*, in position to be depressed thereby. The essence of my invention in this regard consists in applying the finger *d'* to lock and unlock the shutter; and to this end it may be combined with locking

devices of any suitable character, there being many known devices with which it may be used. On shutters which are without the rolling slats, or on which it is not desired to adjust the slats, the finger may be employed for the sole purpose of operating the locking devices.

For the purpose of locking the rod C against longitudinal motion, I pass the same through a stationary sleeve or plate, *n*, which is slotted transversely to receive a sliding wedge, *o*. This wedge is slotted and prevented from being disconnected by a pin, *e*, passing through the slots. When out of action, the wedge is withdrawn and permitted to assume a pendent position, as shown by dotted lines in Fig. 6. When the rod is to be locked, the wedge is turned to a horizontal position and forced endwise tightly against the under side of the rod.

Having thus described my invention, what I claim is—

1. In combination with a window-shutter, the jointed sliding and rotating rod connected at its outer end to the shutter, the arm or finger attached to the rod and extending across the face of the shutter, and a locking device to hold the shutter in a closed position, arranged to co-operate with said finger, substantially as described.

2. The combination of the swinging shutter, the jointed sliding and rotating rod connected at its outer end to the shutter, a finger attached to the rod and extending across the face of the shutter, the shutter-fastening spring *m*, arranged to be controlled by said finger, and the hook secured to the shutter and interlocking with spring or plate *m*, attached to the window-frame.

3. In combination with a window-shutter provided with rolling slats, a sliding and rotating jointed rod connected thereto, for the purpose of opening and closing the same, a locking or fastening device to hold the shutter in a closed position, and a finger attached to the jointed rod and operating both the slats and the locking device, substantially as described.

4. In combination with the sliding jointed rod attached to a window-shutter, the guide or plate encircling the same, and the sliding wedge mounted therein to confine the rod in position.

5. In combination with the jointed sliding rod for attachment to a window, the encircling-plate slotted transversely, the slotted wedge, and the pin to prevent the disconnection of the wedge.

6. The devices for opening and closing a window-shutter, consisting of the rod provided with the joints, as specified, the slide attached to its end, and a slotted bearing-plate for said slide, said rod having its middle joint constructed with a knuckle or stop, *g*, as and for the purpose described.

In testimony whereof I hereunto set my hand, this 8th day of December, 1885, in the presence of two attesting witnesses.

DAVID H. ROYER.

Witnesses:
JOHN T. ARMS,
W. H. SHIPLEY.