

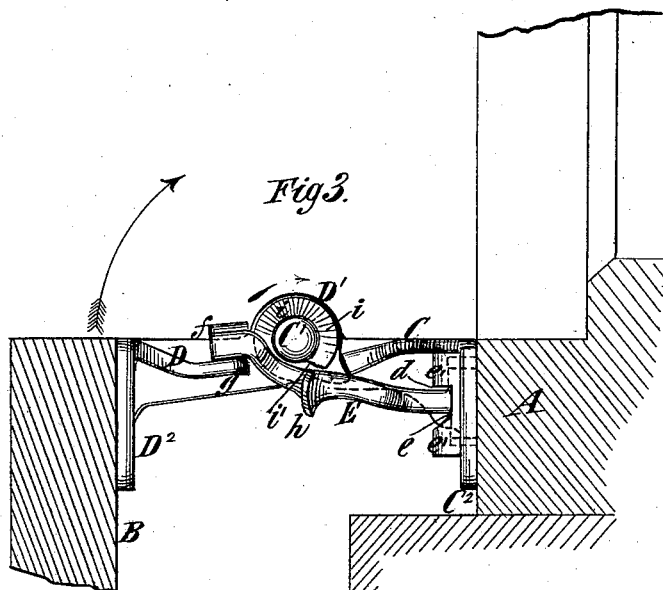
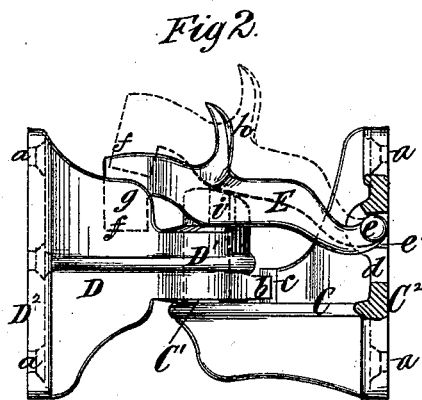
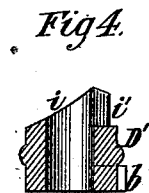
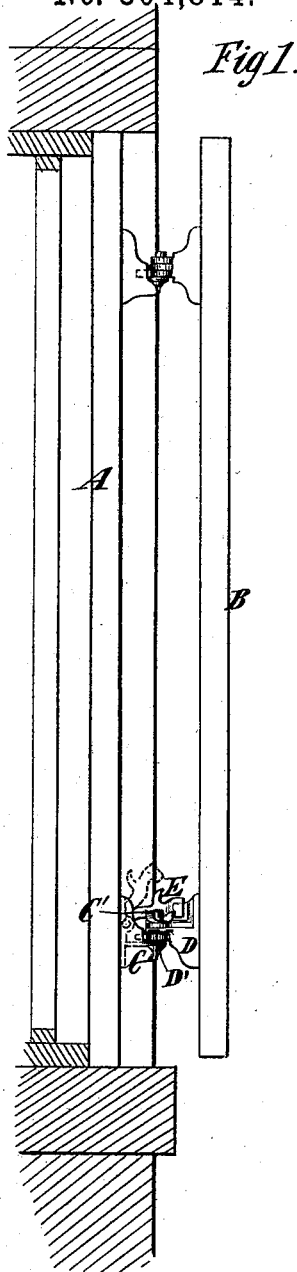
(No Model.)

D. H. FITZGERALD.

LOCK HINGE.

No. 304,814.

Patented Sept. 9, 1884.



Witnesses
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UNITED STATES PATENT OFFICE.

DANIEL H. FITZGERALD, OF READING, PENNSYLVANIA.

LOCK-HINGE.

SPECIFICATION forming part of Letters Patent No. 304,814, dated September 9, 1884.

Application filed October 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, DANIEL H. FITZGERALD, of Reading, in the county of Berks and State of Pennsylvania, have invented a new and useful Improvement in Lock-Hinges, of which the following is a specification.

My invention is applicable more particularly to hinges for blinds and shutters, and relates to that class of lock-hinges in which a swinging latch is pivoted to one of the leaves of the hinges in such manner that it will automatically engage itself with shoulders on the other leaf when the blind or shutter is opened, to hold the blind or shutter in such open position until the latch is raised out of engagement with such shoulders.

My invention consists in a novel mode of combining the latch and the two leaves of the hinge, as hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is an elevation of a portion of a building and a blind hung by my improved hinge, the blind being represented as open. Fig. 2 is a partly sectional side view of the hinge alone upon a larger scale and locked. Fig. 3 is a plan of the hinge locked, and a horizontal section of the blind-stile, to which the hinge is attached, and a portion of the window-casing, on the same scale as Fig. 2; and Fig. 4 is a vertical section of the eye of the female leaf or part of the hinge.

Similar letters of reference designate corresponding parts in all the figures.

A designates the window-casing, and B designates the portion of the blind or shutter here shown.

My invention relates to the lower hinge, and the upper hinge may be of any suitable construction.

C D designate the two leaves of the hinge, the former of which, C, is provided with the upwardly-extending pintle or pivot C', and the latter of which, D, is constructed with an eye or socket, D', fitting the said pintle. The hinge shown being a surface-hinge, the leaves C D are provided with flanges or plates C² D², which are provided with holes *a* for the reception of screws, whereby they are secured to the casing and blind A B; but if the invention were embodied in a mortise-hinge the leaves

would be straight and destitute of such flanges or plates. On the eye D' there is a lug or lateral projection, *b*, and on the leaf C is a shoulder, *c*, which forms a stop to the said lug or projection and prevents the blind B from being swung past the full open position shown in Fig. 3.

E designates the latch of the hinge, the form of which is most clearly shown in Figs. 2 and 3. It is pivoted in the plate or flange C², and in the present example of my invention its end plays in a slot, *d*, in the said plate or flange, and is provided with integral projections *e* on opposite sides, which fit in cavities or bearings *e'*, formed in the back of the plate or flange C²; hence it will be seen that when the plate or flange C² is secured to the casing A the latch E will be securely held in place. The latch E has a downwardly-projecting nose or lug, *f*, which may engage with the leaf D, as shown in Figs. 2 and 3, and the portion *g* of the leaf, with which it so engages, constitutes a shoulder. The latch E is offset laterally toward the pintle C', as best shown in Fig. 3, so that it may cross the leaf in order that its nose *f* may engage with the shoulder *g*, and the said latch is constructed with a thumb-piece or projection, *h*, whereby it may be raised. The upper edge of the eye D' is constructed with a cam-surface, *i*, inclined upward in the direction indicated by the arrow, Fig. 3, and terminating in an abrupt drop or shoulder, *i'*, the said inclined cam-surface and shoulder *i i'* being most clearly shown in Fig. 4. The shoulders *g* and *i'* of the leaf D are on opposite sides of the center of the pintle C', and are so located relatively to each other that when the nose *f* of the latch E drops into engagement with the shoulder *g*, the body of the latch drops into engagement with the shoulder *i'*, and hence any strain on the blind to close it will cause the said shoulders to act on opposite sides of the latch, and the integral projections *e*, forming the pivot of the latch, will be relieved of strain which would be apt to break them. The shoulders *g i'* engage with opposite sides of the latch at different distances from its pivoted end. When it is desired to close the blind, the latch is raised by the thumb-piece *h* out of engagement with the shoulders *g* and *i'*, which will allow the eye D' to turn on the pintle C'

in the direction indicated by the arrows, Fig. 3. When the blind is closed, the latch E rests upon the incline *i*, and as the eye D' turns in opening the blind the said incline raises the latch into the position shown dotted in Fig. 2, to allow the portion *g* of the leaf D to pass under the nose *f* of the latch, and as soon as the drop or shoulder *i'* leaves the latch the latter falls into engagement with the shoulders *i' g*. Any further movement than is necessary to allow the latch to engage with said shoulders is prevented by the lug or projection *b* striking the shoulder *c*, and hence it will be seen that the blind is locked against movement in either direction.

When my invention is embodied in a mortise-hinge, the latch will be pivoted directly to

the side of the leaf C; but the latch may be regarded as pivoted to said leaf C in the hinge shown, as the flange or plate C² is an integral part thereof.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a lock-hinge, the combination, with the leaf C, having a pintle, C', and the leaf D, having an eye, D', formed with the cam *i* and shoulder *i'*, and also having the shoulder *g*, of the latch E, pivoted to the leaf C, and offset laterally, substantially as and for the purpose described.

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Witnesses:

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