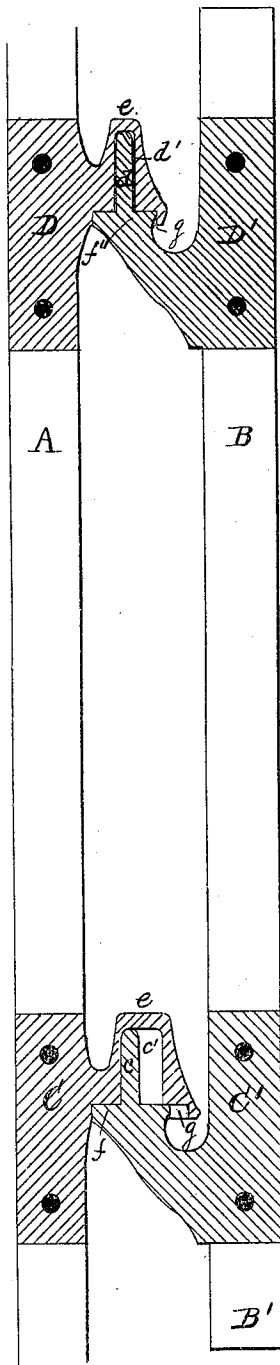


T. F. DULEY.

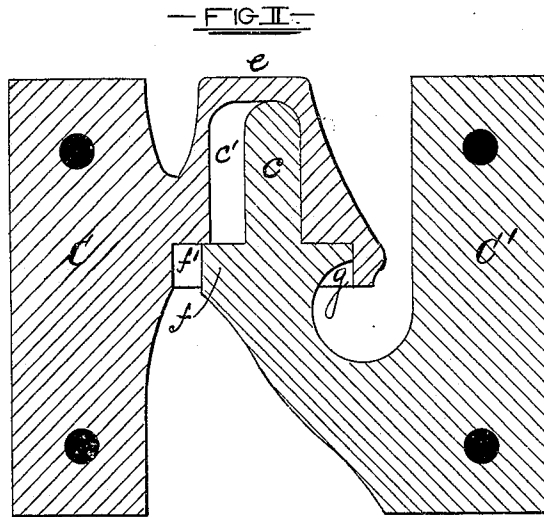
Improvement in Shutter-Hinges.

No. 132,512.

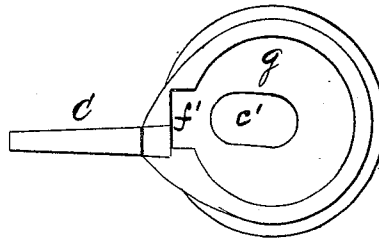
Patented Oct. 22, 1872.



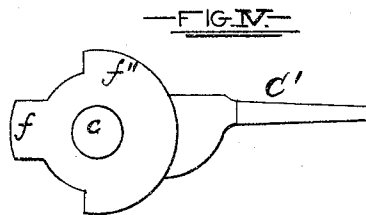
—FIG. I.—



—FIG. II.—



—FIG. III.—



—FIG. IV.—

—WITNESSES:—

Geo. N. Howard.
John Roby.

—INVENTOR:—

Thomas F. Duley
By his Attorney
T. H. Wetherman

UNITED STATES PATENT OFFICE.

THOMAS F. DULEY, OF OLNEY, MARYLAND.

IMPROVEMENT IN SHUTTER-HINGES.

Specification forming part of Letters Patent No. 132,512, dated October 22, 1872.

To all whom it may concern:

Be it known that I, THOMAS F. DULEY, of Olney, Montgomery county, Maryland, have invented certain Improvements in Shutter-Hinges, of which the following is a specification; and I do hereby declare that the same is a full, clear, and exact description of my said invention, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to a device to be used as a lower shutter-hinge, adapted, when the shutter is thrown open, to fasten or lock it back without the use of any other appendages. The upper leaf of the hinge also forms a cap to the lower leaf, guarding it from rain, snow, and the oxidation thereby caused.

In the accompanying drawing, forming a part of this specification, Figure 1 is a vertical elevation of the hinges in section, showing them in the position in which they stand when the shutter is open, thrown back, and locked. Fig. 2 is a vertical section of two leaves forming the lower hinge. Fig. 3 is an inverted view of the upper leaf of the lower hinge. Fig. 4 is a top view of the under leaf of the lower hinge.

Similar letters of reference indicate similar parts of the invention in all the figures.

A represents the window-frame, and B the shutter. C and C' are the two leaves of the lower hinge, and D D' the two leaves of the upper hinge, secured respectively by screws to the window and shutter frames. A pin, *c*, forms a part of the leaf C' which fits within the elongated cavity *c'* of the leaf C. The cavity *c'* is within that part of the leaf C marked *e*, which serves as a cap to cover the pin *c*. The pin *d* of the leaf D' of the upper hinge fits loosely within a circular cavity, *d'*.

In order to further explain my invention, I will describe the mode of adjusting and locking the shutter.

In Fig. 1 the shutter is shown thrown back and locked by means of the point *f* entering the notch *f'*. The point *f* is a portion of the circular part *f''* of the leaf C' of the lower hinge, and when drawn from the notch is brought, with the rest of the circular part *f''*, centrally within the cylindrical recess *g* of the leaf C of the hinge. The circular part *f''* and point *f* revolve within and are steadied by their contact with the recess *g*. If the shutter is to be closed, the point *f* is removed from

the notch *f'* by the action of the hand upon the lower part B' of the shutter-frame, and the pin *c* carried to the other end of the elongated cavity *c'*. The circular part *f''* and the point *f* are thus brought centrally within the cylindrical recess *g*, the looseness of the pin *d* of the leaf D' of the upper hinge within its bearing allowing of the displacement below. The point of suspension and axial motion in the lower hinge is thus removed outwardly from the window-frame, the corresponding point in the upper hinge remaining unmoved. Swinging upon points of suspension thus removed from a vertical line, and with the part *f''* revolving within and guided by the cylindrical recess *g*, the shutter is closed.

When it is desired to open the shutter and throw it back, the closing fastenings are detached. The shutter at once is given a tendency to seek the position sought for the reason that the center of gravity of the shutter is shifted, its points of suspension being changed from a vertical to an oblique line, with reference to each other. As the point *f* naturally turns within the cylindrical recess *g* toward the notch *f'*, upon reaching the notch it enters it at once, because of the tendency of the upper and lower points of suspension to seek a vertical or plumb line with reference to each other.

The upper hinge resembles the lower, excepting that it has, instead of an elongated, a circular cavity for the reception of the pin, and does not require the notch *f'*, nor the cutting away of the circular part *f''*, so as to form the point *f*. Both hinges are provided with weather-caps, *e*, by which the working-parts are guarded from rust, dust, or the accumulation of ice and snow.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent, is—

The leaf C of a hinge having a closed cap, *e*, in which is formed an elongated pintle-hole, *c'*, an annular cavity, *g*, and notch or recess *f'*, in combination with the leaf C', provided with a pintle, *c*, and point *f*, the whole arranged and operating as shown and described.

In testimony whereof I have hereunto signed my name.

THOMAS F. DULEY.

Witnesses:

EDM. F. BROWN,
JOHN ROBY.