C. Lehnert,

Shutter Worker.

No. 62,493. Patented Feb. 26, 1867.

Fig. 4.

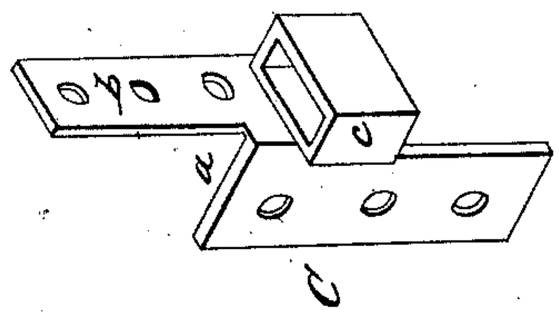


Fig. 1.

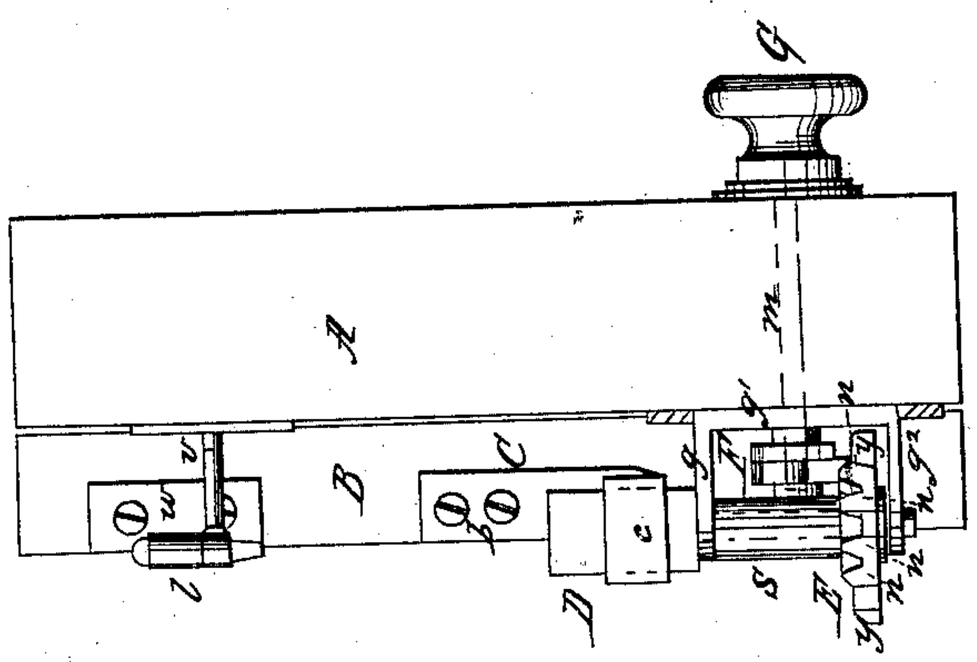


Fig. 2.

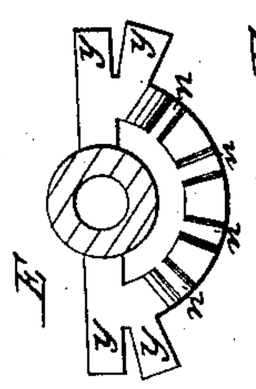
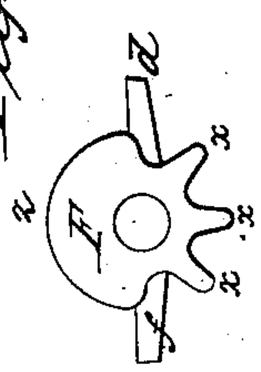


Fig. 3.



Witnesses:

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CARL LEHNERT, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 62,493, *dated February* 26, 1867.

IMPROVED WINDOW-SHUTTER FASTENING.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CARL LEHNERT, of Boston, in the county of Suffolk, and in the State of Massachusetts, have invented certain new and useful improvements in "Window-Shutter Fastenings;" and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification.

In the annexed drawings, Figure 1 represents an end view of the window frame A, with the shutter B attached to it. *u* represents the section of the top hinge, which is fastened to the shutter, and which is provided with a thimble, *l*, to fit over the upright, which is connected to the section *v* attached to the shutter frame. C, Figures 1 and 4, represents the section of the hinge secured to the shutter, and connecting the same to the frame at the lower end. This section is cast of iron, brass, or other suitable metal, and is composed of two plates, *a b*, placed at right angles from each other, one extending above the other, and has small openings in each plate for connecting it to the side and edge of the shutter. Cast with the plates at the lower portion of plate *b* is a small metal band, *c*, of an oblong form. D represents a metal bar, having a stem, and supported by the bearings g g^1 and g^2, which are made in the form as shown, and fastened to the window frame. The bar D is so constructed as to fit snugly within the band *c* of section C, and passes through a metal collar, *s*, between the prongs of the bearings g g^2. E, Figures 1 and 2, represents a semicircular-faced cog-wheel, which is placed horizontally upon the bearing g^2, and is firmly connected to the stem of the bar D, which passes through an opening in the wheel. G represents a knob attached on the inner side of the window, and is provided with a shaft, *m*, which passes through the frame between the bearings g g^2. Secured upon the end of this shaft is a vertical eccentric-wheel, F, Figure 3. This wheel is so made as to form a cam at the one side, *z*, and is provided with three or more teeth, *x*, at its lower, and with a lug, *f* and *d*, at each end, between the cam and the teeth. It will be seen that the lugs upon the wheel F rest against corresponding lugs *y y* upon the horizontal wheel E; and, when the knob is turned, these lugs start the shutter, so that the teeth upon wheel F will mesh into the cogs upon the wheel E, and throw the shutter open or close it. Upon the surface of each end of wheel E, between the cogs and upon the lugs, there is a slight inclination for the cam *z* of wheel F to bear, and by which means the shutter is held rigid, when open, and not swayed to and fro by the wind. The purchase for opening and closing the shutter is extremely great, by means of the hinge sections C D, and a shutter can be closed merely by turning the knob, notwithstanding considerable pressure may be brought to bear in windy or stormy weather.

Having thus fully described my invention, what I clam as new, and desire to secure by Letters Patent, is—

The hinge C D, constructed as described, and used with the wheels E and F, with their arms and cam operated by the knob G and shaft *m*, the whole constructed, arranged, and operating in the manner and for the purposes herein fully set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 26th day of November, 1866.

CARL LEHNERT.

Witnesses:

C. M. ALEXANDER,

J. M. MASON.