H. SMITH.
SHUTTER-WORKER.

No. 193,047. Patented July 10, 1877.

Fig: 1.

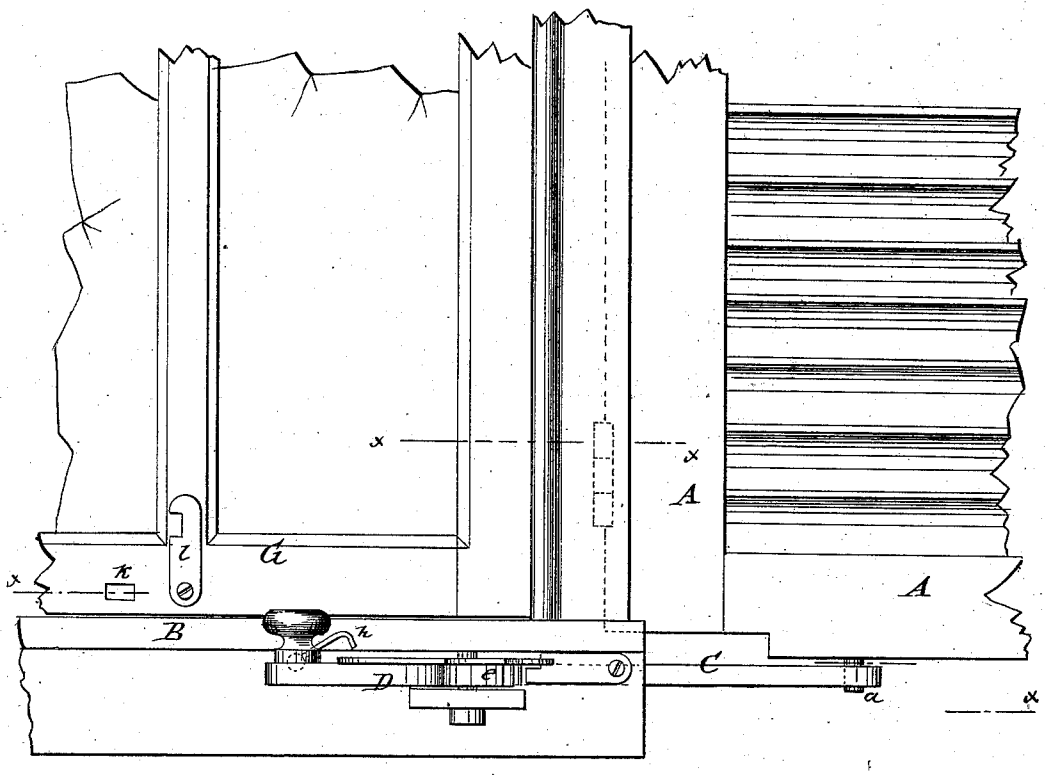
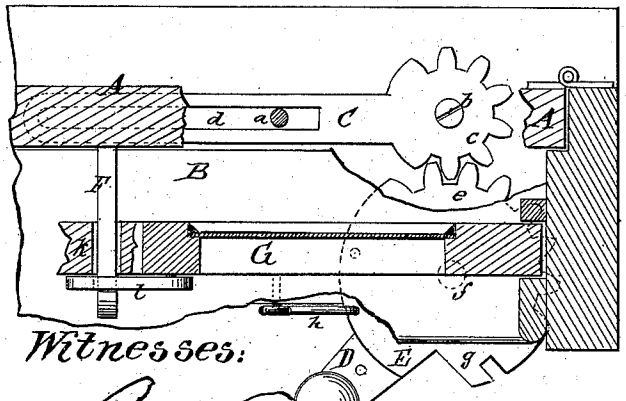
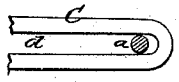


Fig: 2.





Witnesses:
Chas. Nida
H. L. Wattenberg

Inventor:
Henry Smith
per Munn & Co.
Attys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY SMITH, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM V. SMITH, OF SAME PLACE.

IMPROVEMENT IN SHUTTER-WORKERS.

Specification forming part of Letters Patent No. **193,047**, dated July 10, 1877; application filed February 26, 1877.

To all whom it may concern:

Be it known that I, HENRY SMITH, of the city, county, and State of New York, have invented a new and Improved Blind or Shutter Fastening; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification.

This invention is in the nature of an improvement in blind or shutter fastenings; and the invention consists in a window blind or shutter constructed with a slotted and geared lever, combined with a second geared lever, which passes through the window-sill and into the interior of the room, both levers operating in the same plane, whereby the shutter or blind may be opened to any extent or closed from the inside of the room, and at the same time be locked in the closed or unclosed position, as will be hereinafter more fully described and definitely claimed.

In the accompanying sheet of drawings, Figure 1 is a front elevation from the interior of the room of a portion of window and shutter opened to full extent, and showing my invention; and Fig. 2 is a horizontal section through the line *x x*, Fig. 1.

Similar letters of reference indicate like parts in the several figures.

A represents a shutter or blind of a window, suitably hinged to the outside of the building, in the ordinary manner. To the under side of this shutter is affixed a pin *a*. To the window-sill B is secured, by a pivotal bolt, *b*, one end of a lever, C, which end is provided with gears *c*. This lever C extends from this geared end, and has formed in it, and in the direction of its length, a slot, *d*, into which slot enters the pin *a* on the under side of the shutter.

Meshing into the gears *c* of the lever C are the gears *e*, formed in one end of a second lever, D, which second lever is also secured to the sill or under side of the window-casing, with a pivotal bolt, *f*, the other end of this lever D extending beneath the window-casing and into the room. To this lever is also secured a plate, E, with holes *g* formed therein.

Now, my shutter and blind being constructed and combined as above described, it is operated by simply moving the end of the lever D that enters into the room to the right or to the left, which motion opens or closes the shutter, as may be desired, and this is effected by the action of the gears *e* in the end of the lever D acting upon the gears *c* in the end of the lever C, when the lever C is compelled to describe an arc on the pivotal bolt on which it turns, and in describing this arc the pin *a* in the under side of the shutter is forced to travel in the slot *d* in the lever C, thereby forcing the shutter A open, or closing it tight, as may be desired; and the shutter may in this way be thrown entirely open and against the side of the house, or it may be opened to any desired angle or extent, or closed.

In whichever position the shutter is adjusted, it may be fixed by a catch, *h*, which enters into the holes *g* in the plate E on the lever D, or any other means of retaining the shutter in the desired position may be used instead of the catch *h* and plate.

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

1. A window-shutter constructed and combined with a slotted and geared lever, C, into the gears of which lever mesh the gears of a second and operating lever, E, both of said levers operating in the same plane, and the end of said second or operating lever passing into the room, substantially as and for the purpose described.

2. In a device for opening and closing shutters, a geared and pivoted lever, E, constructed with a perforated arc, and combined with a hook or catch, *h*, whereby the shutter may be retained fully open, closed, or in an intermediate position, substantially as described.

H. SMITH.

Witnesses:
H. L. WATTENBERG,
G. M. PLYMPTON.