Morton & Lamasure,

Shutter Worker.

No. 49,909. Patented Sep. 12, 1865.

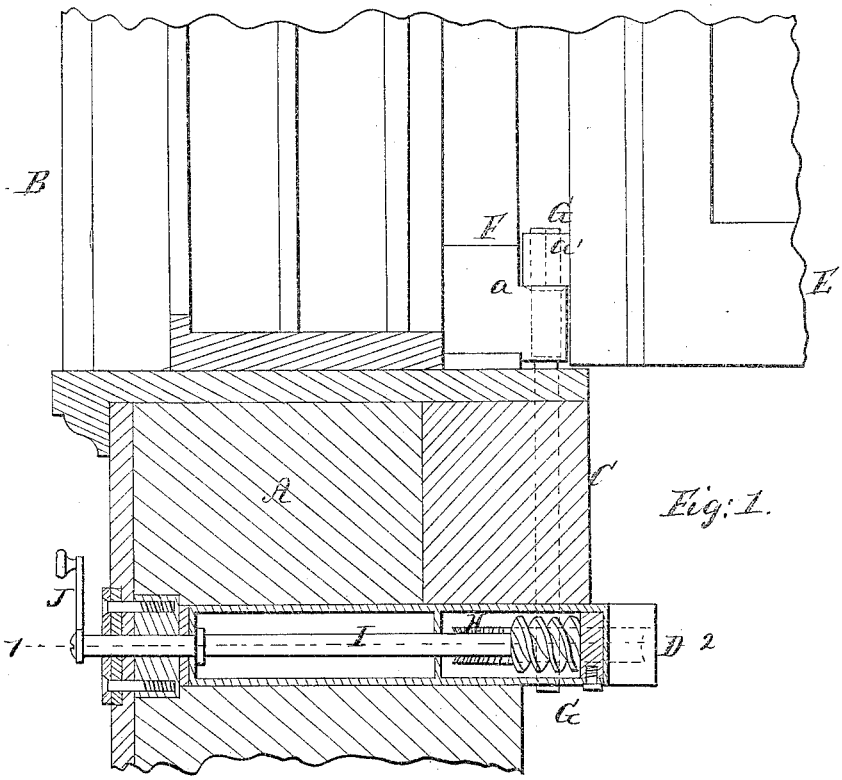

Fig: 1.

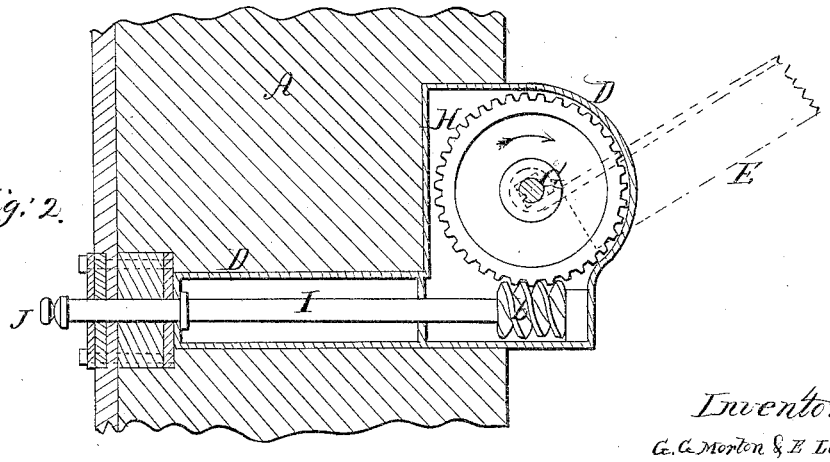

Fig: 2.

Witnesses:
Wm Albert Steel
John Parker

Inventor,
G. C. Morton & E. Lamasure
by their Attorney
H. Howson

UNITED STATES PATENT OFFICE.

G. G. MORTON AND E. LAMASURE, OF PHILADELPHIA, PENNSYLVANIA.

DEVICE FOR CLOSING AND OPENING SHUTTERS.

Specification forming part of Letters Patent No. **49,909**, dated September 12, 1865.

To all whom it may concern:

Be it known that we, G. G. MORTON and E. LAMASURE, of Philadelphia, Pennsylvania, have invented an Improvement in Devices for Opening and Closing Shutters; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our invention consists of a device, fully described hereinafter, for opening, closing, and retaining shutters.

In order to enable others skilled in the art to make and use our invention, we will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a sectional elevation, representing the lower portion of a window frame and shutter with our improved device for opening and closing the shutter; and Fig. 2, a sectional plan on the line 1 2, Fig. 1.

A represents a portion of the wall of a building, to which is secured a window-frame, B, of the ordinary construction, C being the usual sill, beneath which is a metal casing, D, extending nearly through the wall A.

To the window-frame is hung the usual shutter, E, the lower hinge, F, of which consists of the two portions *a* and *a'*, the former being secured to the frame and the latter, which rests on the portion *a*, being attached to the shutter.

In the portion *a* of the hinge F turns a rod, G, the upper square end of which fits into a square opening in the portion *a'* of the hinge, so that the rod cannot be turned without moving this portion of the hinge as well as the shutter. The lower portion of the rod G passes through the casing D and through a horizontal worm-wheel, H, in the same, and into the teeth of the said wheel gear those of a worm, *b*, on a shaft, I, the latter extending through the casing and into the interior of the building, where it is provided with a crank-handle, J.

When it is desired to close the shutter the crank J and the rod I and its worm are turned so as to impart a rotary motion, in the direction of the arrow, Fig. 2, to the wheel H and its shaft G, by which means the shutter will be gradually brought toward the window-frame, the shutter being opened by reversing the motion of the shaft.

It will be seen that by this device the opening and closing of the shutter may be readily effected from the interior of the building without the necessity of raising the window-sash, and that the appliances used are such as can easily be operated even by a child.

It will also be seen that the device can be readily applied to any of the shutters now in use, and that the shutter may be readily removed when the same has to be repainted or repaired.

A most important feature of our invention is the retention by the worm of the shutter in any position to which it may be adjusted.

We claim as our invention and desire to secure by Letters Patent—

1. The casing D, constructed and arranged as and for the purpose set forth.

2. In combination with the subject-matter of the above, the worm-wheels *b* and H, pintle G, and crank-shaft I, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

GEO. G. MORTON.
EDWIN LAMASURE.

Witnesses:
CHARLES E. FOSTER,
JOHN WHITE.