E. P. House,

Shutter Worker.

No. 38,680. Patented May 26, 1863.

Fig: 1.

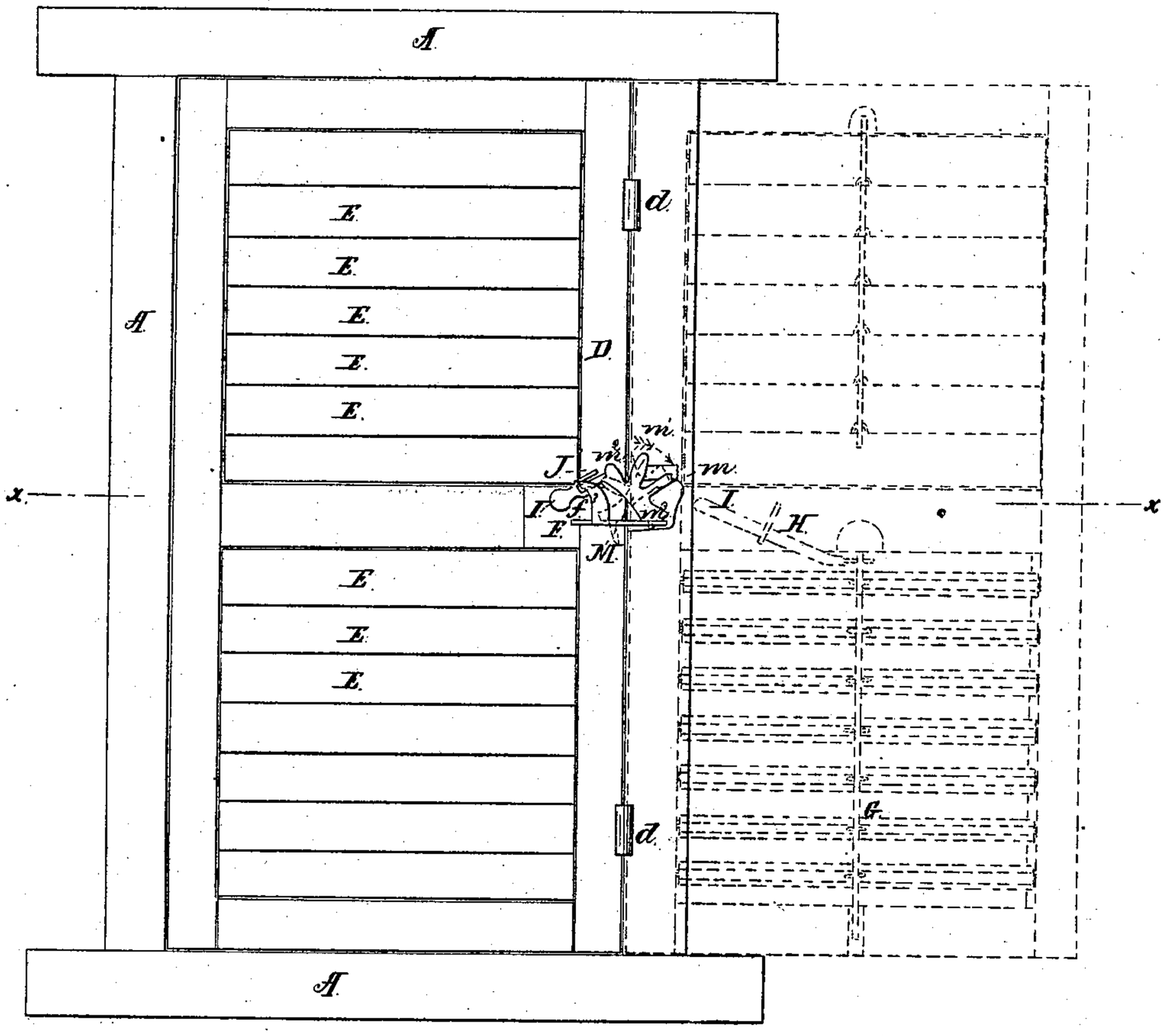


Fig: 2.

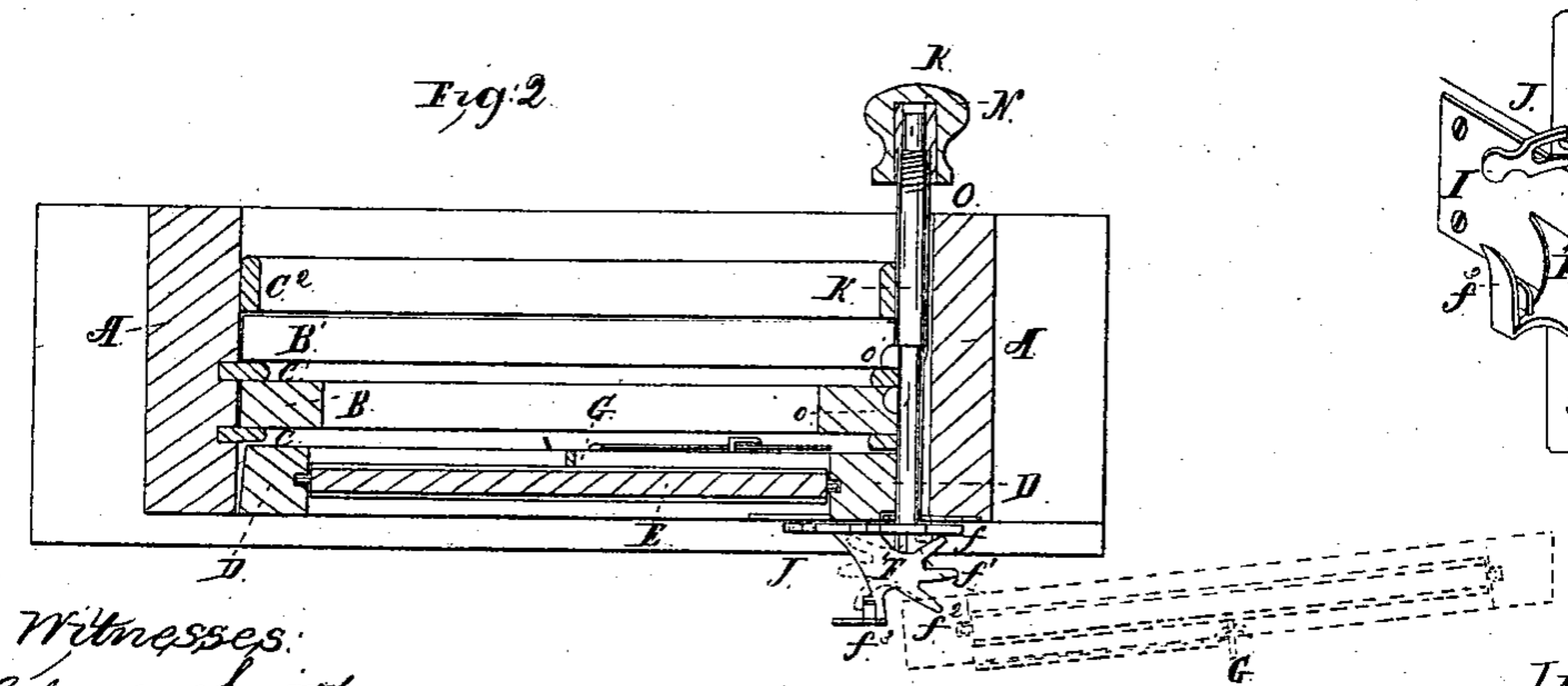
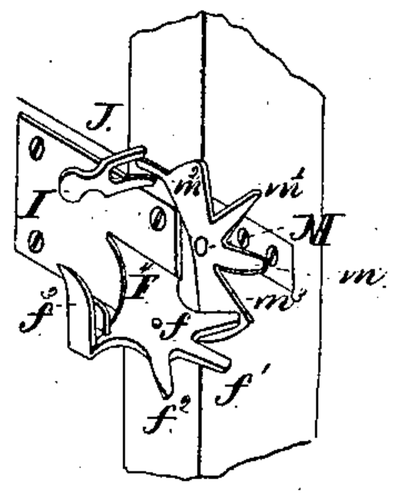


Fig: 3.



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UNITED STATES PATENT OFFICE.

EDWARD P. HOUSE, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVED MODE OF SECURING AND OPERATING WINDOW SASHES, SHUTTERS, AND SLATS.

Specification forming part of Letters Patent No. **38,680**, dated May 26, 1863.

To all whom it may concern:

Be it known that I, EDWD. P. HOUSE, of the city and county of Washington, in the District of Columbia, have invented a new and useful Device for Securing and Operating Window Sash and Shutters; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an outside view of a window-shutter with my invention applied. Fig. 2 is a horizontal section of the window frame and shutter, at *x x*, Fig. 1. Fig. 3 is a fragmentary perspective view of the principal operating parts.

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

The subject of my invention is a combination of devices by means of which a window-shutter may be opened and locked open or closed and locked shut, the slats opened and closed, and the sashes secured in any desired positions by means of a single knob within the frame.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

A A may represent the window-framing.

B B′ are respectively the upper and lower sashes secured by beading C C′ C² in customary manner.

D is a shutter swinging upon hinges *d d*, by which it is secured to the frame A. The said shutter is constructed with pivoted slats E E E.

F is a rigid arm or plate projecting horizontally from the back of the shutter. This plate is formed with two or more horizontal cogs, *f f′ f²*, and may also be provided at its outer edge with a standard, f^3, the form of which is best exhibited in Fig. 3.

G is a rod connecting the slats E, and pivoted at its upper end upon the end of a lever, H, which is rigidly connected to a fulcrum pin or shaft, I, passing completely through the shutter and turned by means of a forked arm, J, on the outside.

K is a shaft extending through the frame A from the inside to the outside.

M is a wheel or serrated disk mounted upon the outer end of the shaft K. The wheel M is formed with cogs or arms *m m′* m^2 m^3, adapted to engage with the cogs *f f′* f^2, standard f^3, and forked arm J, so as to operate the shutter and slats in manner hereinafter explained. The rotation of the shaft K is effected by means of a knob, N, fitting upon square *k* on the end of the said shaft.

O is a sleeve attached by a screw-thread to the knob N and surrounding the shaft K. The said sleeve is provided with one or more projecting flanges, *o o′*, which, engaging in notches in the sashes B B′, prevent them moving up or down.

The arm F and wheel M may be covered to conceal them and protect them from violence and from the weather, or they may be placed on the inside of the shutter.

The operation is as follows: The shutter being in its closed position, as shown by black lines in Figs. 1 and 2, a rotation of the wheel M in direction indicated by the arrows will first bring the cog m^3 in contact with the neck 4 of the arm F, at a point inside of the center line of the pivots on which the hinges *d d* turn. The cog *m* of the wheel is next brought into contact with the cog *f* of the arm, then the cog *m′* with the cog *f′*, and, lastly, the cog m^2 with the cog f^2, continuing to swing the shutter around until completely opened, in which position it is securely held by the cog m^3, engaging with the standard f^3. To close the shutter, the motion of the wheel M is reversed, which first withdraws the cog m^3 from the standard f^3, then brings the cog m^2 in contact with the edge of the said standard or the adjacent edge of the arm F, then the cog *m′* against the cog f^2, the cog *m* against the cog *f′*, and, finally, the cog m^3 against the cog *f*, which effects the closing of the shutter, and the wide cog m^3, passing completely behind the end of the cog *f*, effectually prevents the opening of the shutter until the wheel is moved in the direction first explained. While the shutter is in its closed position the bent end of the cog m^2 enters the forked arm J, so that by a partial rotation of the wheel M the said forked arm may be moved up or down, and the slats thus opened or closed through the medium of the shaft I and lever H. The width of the cog m^3 affords the required play of the wheel to open and close the slats without unlocking the shutter. By drawing out or pressing in the knob N, and with it the sleeve O, the flange *o′* will be removed from the lower sash, B′, so as

to permit it to be raised, after which the knob and sleeve may be returned to the original position, and the sash thus retained at any desired height by the flange engaging in notches cut in suitable places in the sash. By drawing the sleeve still farther out, the flange *o* is withdrawn from the upper sash, B, after which the said sash may be lowered to any required position, and there retained by restoring the sleeve to its original position. If preferred, a separate flanged rod or sleeve may be used on the other side of the window for the upper sash. The fitting of the knob N to the shaft K by means of a square, *k*, and to the sleeve O by a screw-thread admits of the required longitudinal motion to move the sleeve without separating it from the shaft, and at the same time admits of the required rotary motion to rotate the shaft without separating the knob from the sleeve. The said knob is thus adapted to impart the required independent motions to the shaft and sleeve, and is always effective to move either, whatever may be the position of the other. It will also be apparent that if by violence the shaft K should be withdrawn from the outside the flanged sleeve O *o o'* will still remain in position to secure the sashes.

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

1. The combination of the cogged arm or plate F, the cogged wheel M, and the shaft K, all constructed and operating as herein described, to open or close a shutter or door by the turning of a knob, N, within the house.

2. The combination of the lever H, pin I, and forked arm J with the wheel M, operating as herein described, to open or close the slats by a partial revolution of the same knob which opens and closes the shutter.

3. The flanged sleeve O *o o'*, attached by a screw-thread to the knob N, and employed in the manner explained to secure either or both the sashes at any desired points.

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Witnesses:

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