

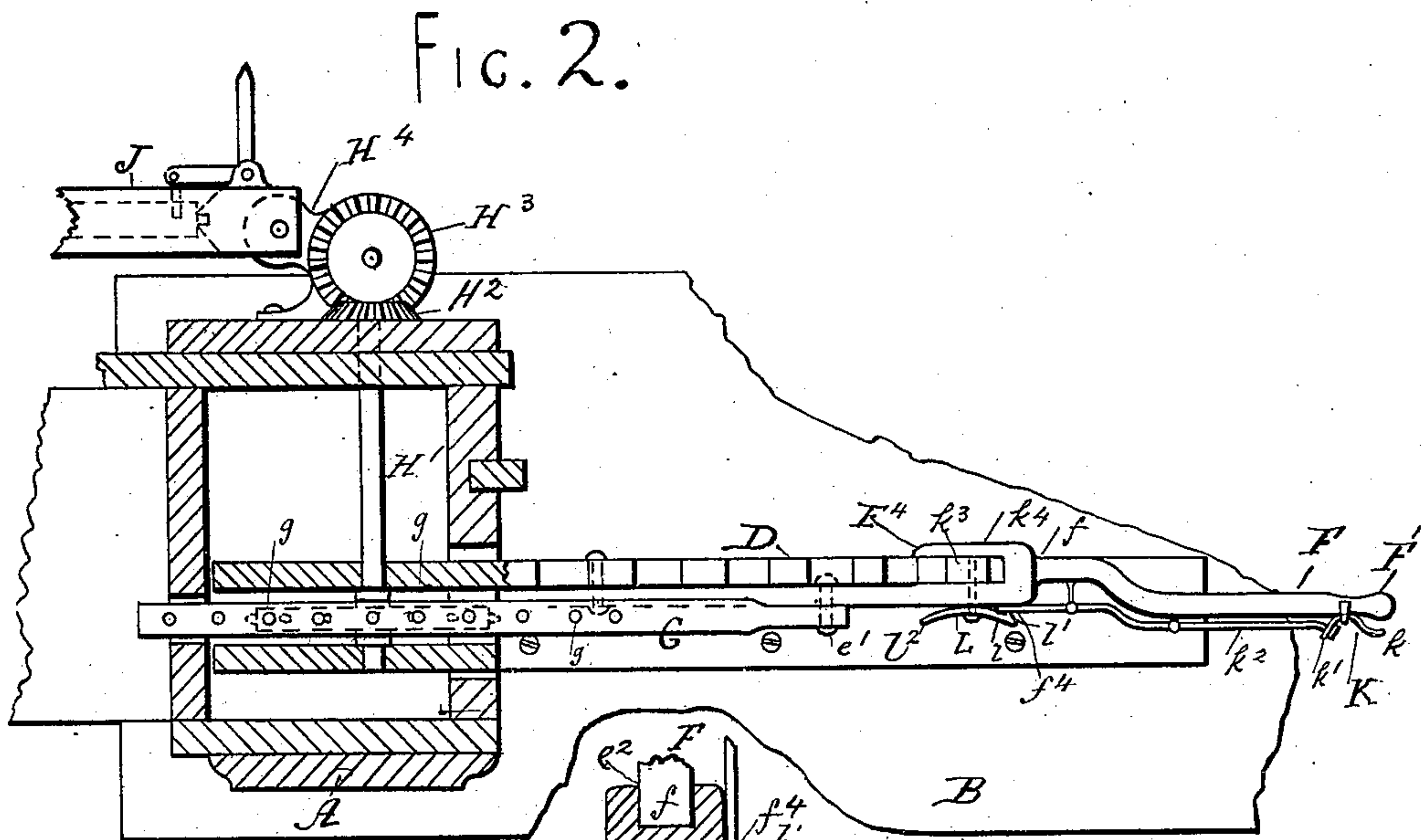
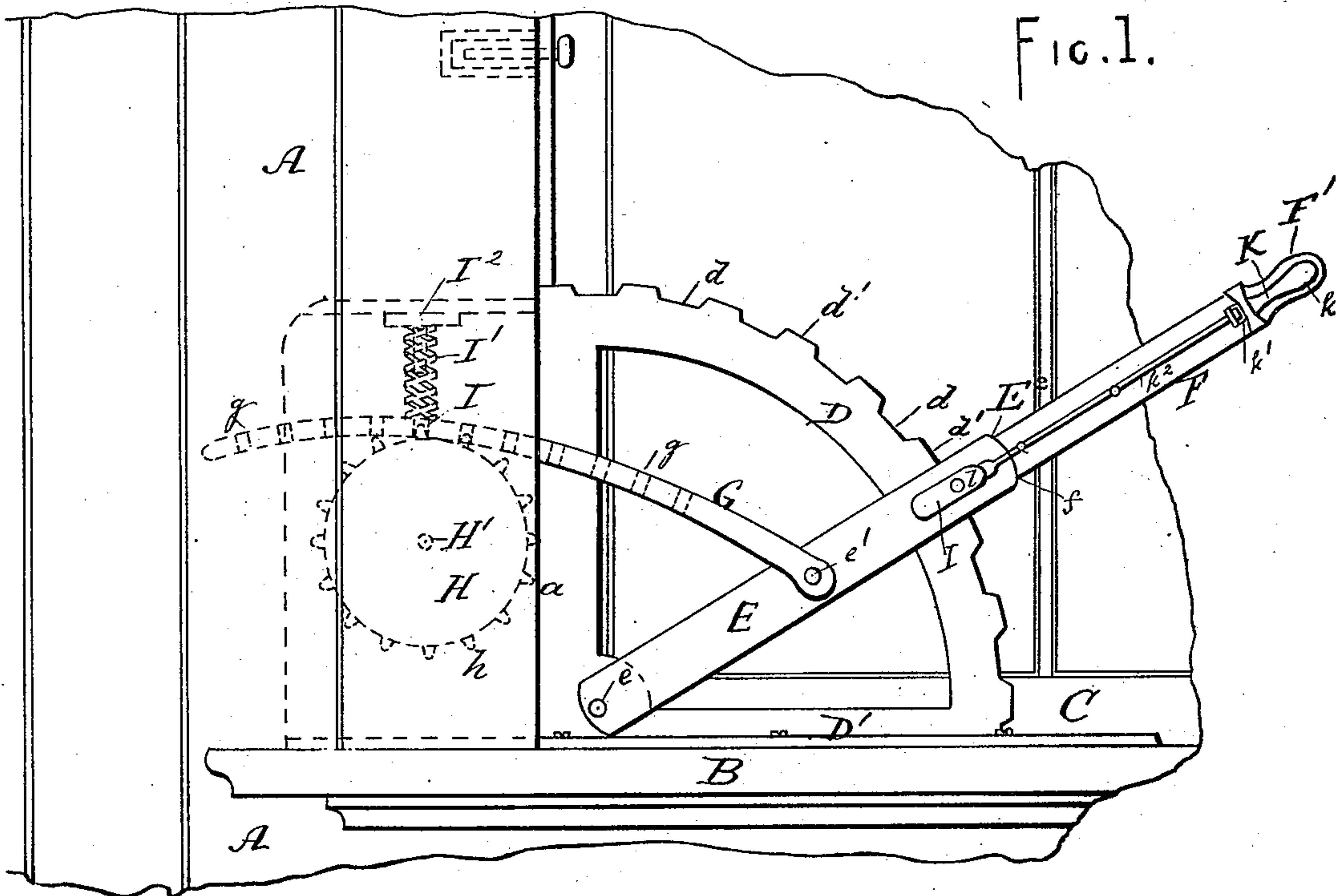
(Model.)

M. E. PETERSON.

SHUTTER WORKER.

No. 308,194.

Patented Nov. 18, 1884.



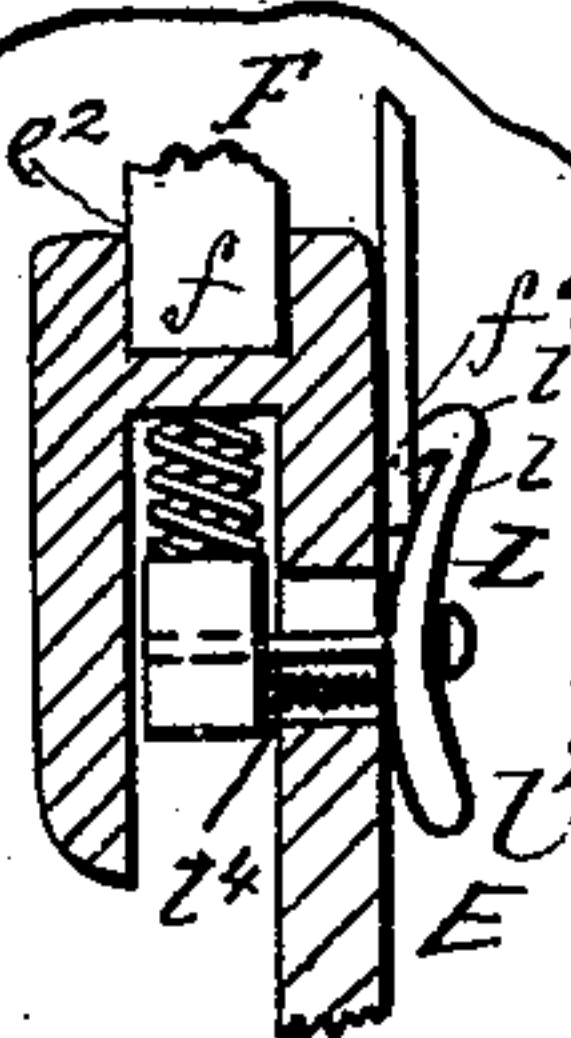
WITNESSES:

W. Colborne Brooks

W. Dissaway

K³
E⁴

Fig. 3



INVENTOR

M. E. Peterson,

BY

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ATTORNEYS

UNITED STATES PATENT OFFICE.

MILES E. PETERSON, OF CHILTON, WISCONSIN.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 308,194, dated November 18, 1884.

Application filed December 12, 1882. (Model.)

To all whom it may concern:

Be it known that I, MILES EDWARD PETERSON, a citizen of the United States, residing at Chilton, in the county of Calumet and State of Wisconsin, have invented new and useful Improvements in Shutter-Workers, of which the following is a specification.

My invention relates to improvements in shutter-workers; and it consists in means or apparatus for effecting the opening and closing of the same without necessitating the opening or raising of the sash.

The nature of my invention will be fully explained by reference to the following specification and the drawings annexed, which form part of the same.

Referring to the drawings, Figure 1 is a partial internal front view. Fig. 2 is a horizontal section of so much of a window-casing as will illustrate my invention. Fig. 3 is a detail view.

In each of the views similar letters of reference are employed to indicate corresponding parts wherever they occur.

A represents a portion of a window-frame, B a part of the sill thereof, and C a portion of the sash. D is a quadrantal rack, formed with notches d and teeth d' . The rack D has its horizontal side attached to a bed-plate, D' , which is screwed or otherwise affixed to the sill B, and its vertical side is attached to or rests against the vertical side of the window-frame B. Near the angles of the quadrant is a pivot, e , upon which is mounted a lever, E, which is operated as hereinafter explained.

To the lever E, at e' , is pivoted a curved, slotted, or toothed bar, G, the slots or teeth g of which engage with the teeth h of a toothed wheel, H, mounted on a shaft, H' , revolving in bearings in the window-frame. The slotted or toothed bar G is kept in contact with the teeth of the wheel H by means of a follower, I, controlled by a spiral or other suitable spring, I' , supported in position by a bearing or stud, I^2 . Upon the outer end of the shaft H' is a bevel-wheel, H^2 , arranged outside of the window-frame, and engaging with a correspondingly-formed bevel-wheel, H^3 , formed on or affixed to one of the hinge-pieces H^4 (by preference the lower) of the blind-frame J. The pivoted lever E, at its

forward end, is provided with a socket, e^2 , adapted to receive the end f of a bent lever, F, which is provided with a handle, F' , on the side of which is pivoted a lever, K, to the short arm k' of which is pivoted one end of a rod, k^2 , the opposite end of which is formed into a hook, f^4 . The rod k^2 works in keepers, between which is a spiral spring surrounding said rod, and having one end attached thereto.

In the lever E in line with the socket e^2 , and separated therefrom by a partition, is another socket, in which works a block or plunger, k^3 , between which and the partition is a spiral spring. This block or plunger is arranged to engage in the notches d between the teeth d' of the quadrantal rack D and hold the levers E and F in any desired position. The levers E and F are connected together, when desired, by means of a latch, L, pivoted to a pin extending outward from the plunger k^3 through a slot in the lever, E, as shown in Fig. 3. The forward end, l , of said latch L is formed with a projection or detent, l' , adapted to engage with the hook f^4 , formed in the end of the rod k^2 , while the rear end, l^2 , is extended so as to form a lever, by means of which the projection or detent l' may be disengaged, and the hook f^4 and the levers E and F separated, when desired. The latch L is provided with a coiled or other suitable spring, l^4 , for the purpose of keeping the projection or detent in position when the levers E and F are latched together. The lever E, at its forward end, is provided with an extension, E^* , adapted to embrace the quadrantal rack D, so as to prevent lateral motion thereof and consequent strain on the axis or pivot e .

The levers E and F, if desired, may be rigidly connected together; but in such case each device must be provided with a lever, F, and its operating parts, whereas by forming the lever F detachable one lever will serve for a series of blinds, either in the same or adjacent room or chambers.

By my improvements it will be readily seen that by simply raising or lowering the lever E by the lever F, so as to operate the bevel-wheels H^2 H^3 , the blind J will be opened or closed without necessitating the raising or opening of the sash or window. By grasping the handle F' and depressing the long arm k

of the lever K, the rod k^2 is drawn in such a manner that, by its connection with the block or plunger k^3 through the latch L, said block or plunger is disengaged from the notches, so as to pass over the teeth while the lever is in motion, and when the lever K is released the spring forces the rod back, and the plunger again engages with the notch.

Although my invention is particularly designed and intended for blinds or shutters having movable slats, it will be seen that I can with facility apply the opening and closing mechanism to solid or paneled shutters supported on hinges on the exterior of a building or structure.

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

1. The combination, with a window-casing and external hinged blind or shutter, of a pivoted lever, E, quadrantal rack D, bar G, spring-follower I, wheel H, shaft H', bevel-

gear H², bevel-gear H³, and hinge-piece H⁴, substantially as shown and described.

2. The combination, with a window-casing and an external hinged blind or shutter, of a pivoted lever, E, quadrantal rack D, bar G, wheel H, and a removable lever F, provided with a holding-catch, k^3 , and a retaining-catch, $k^2 f^4$ L', substantially as shown and described.

3. The combination, with the operating mechanism of a device for opening and closing window blinds or shutters, of the notched or toothed quadrantal rack D, pivoted lever E, block or plunger k^3 , lever K, connecting-rod k^2 , and latch L, substantially as shown and described.

In witness whereof I have hereunto set my hand.

MILES EDWARD PETERSON.

Witnesses:

WM. J. PAULSEN,
J. W. MILTON.