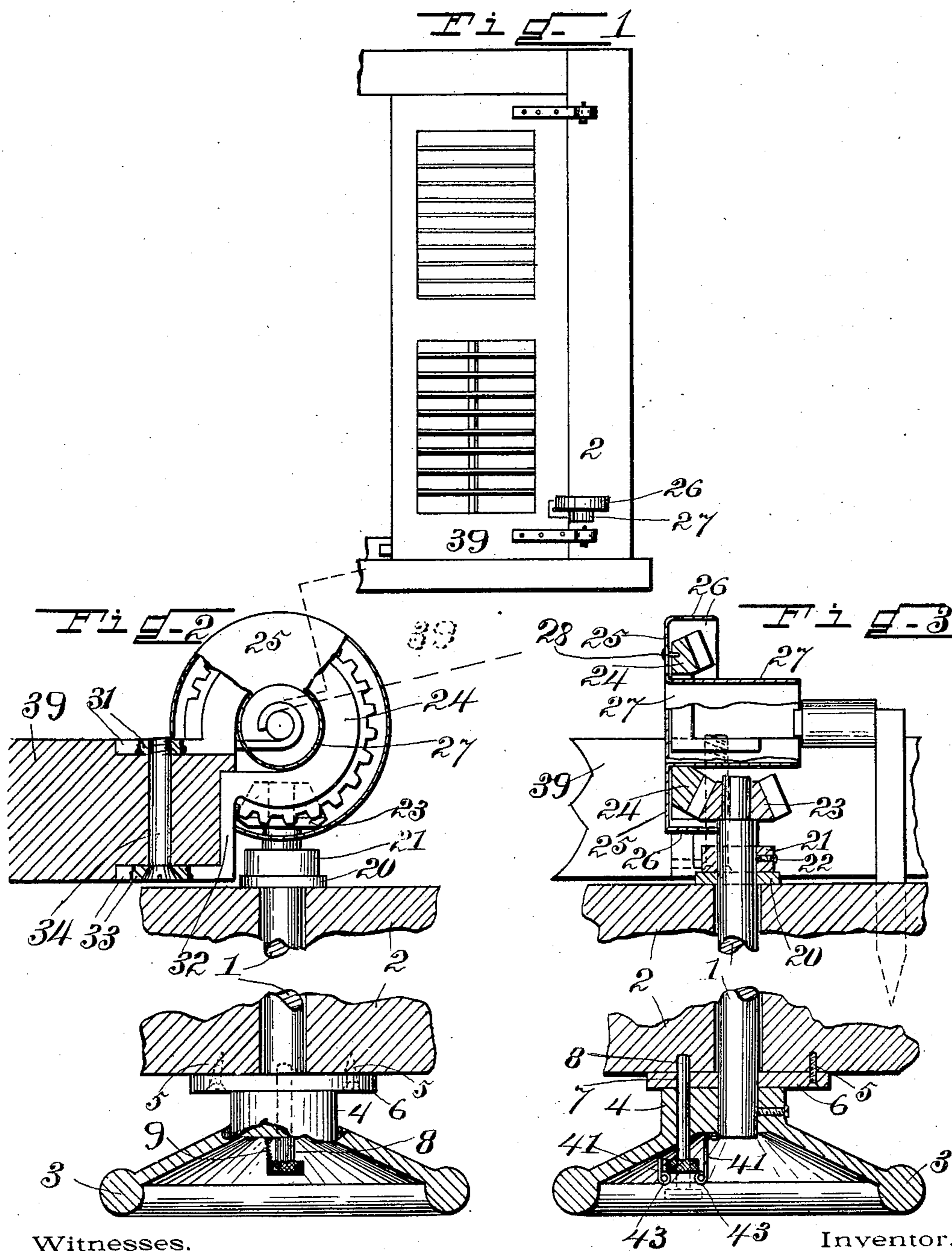


(No Model.)

A. H. WHEELER.
SHUTTER WORKER.

No. 567,016.

Patented Sept. 1, 1896.



Witnesses.

W. H. Jones.
R. M. Jones.

Inventor.

Albert H. Wheeler
by J. L. Bennett.

Attorney.

UNITED STATES PATENT OFFICE.

ALBERT H. WHEELER, OF WARWICK, RHODE ISLAND, ASSIGNOR OF THREE-FOURTHS TO ALBERT H. THORNTON AND FRANKLIN A. DUNBAR, OF SAME PLACE, AND WALTER J. SMITH, OF JOHNSON, RHODE ISLAND.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 567,016, dated September 1, 1896.

Application filed January 20, 1896. Serial No. 576,068. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. WHEELER, a citizen of the United States, residing at Warwick, in the county of Kent and State of Rhode Island, have invented certain new and useful Improvements in Shutter-Workers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to shutter-workers, and particularly to the class of rotary shutter-workers, and its novelty, advantages, and resultant effects will be fully understood from the following description and claims when taken in connection with the annexed drawings.

The invention consists in the novel construction and arrangement of parts herein-after claimed.

In the accompanying drawings, forming part of this application, Figure 1 is an outside elevation of a shutter and part of a window with my worker attached and the shutter closed. Fig. 2 is a cross-section through a shutter and window-frame at the points of connection between the said frame and shutter and the shutter-worker. Fig. 3 is a vertical section of the worker.

The same reference-numerals denote the same parts throughout the several figures of the drawings.

The shaft 1 extends through the window-frame 2 and upon the inner end is provided with a concave hand-wheel 3. Between the hub 4 of the hand-wheel and the inside face of the frame 2 is secured to the latter by screws 5 circular plate 6, having apertures 7, which are engaged by a pin 8, located in the concave of the wheel 3 and is held in the wheel-hub 4 by a spring 9. By having the pin entirely within the hand-wheel it is fully protected from accidental displacement and there is no unseemly mechanism left to view or to disfigure the window-frame.

The outer end of the shaft 1 extends through a washer 20, secured to the outside of the window-frame, and is held with the hub 4 engaging the plate 6 by means of a collar 21

and set-screw 22, said outer end of the shaft being provided with a pinion 23, which meshes with the gear-wheel 24, to be presently more particularly described.

The cover or protector for the gear-wheel consists of a thin metal hood having a closed top 25 and an encircling flange 26 of sufficient depth to entirely cover the gear-wheel and at the same time protect the pinion without interfering with the operation of either. Formed integral with and depending from the center of the hood-top 25 is a cylindrical barrel 27, which passes through the gear-wheel and reaches some distance below said wheel and pinion to balance the hood and warrant it against displacement.

To keep the hood out of engagement with the pinion 23, yet to cover the latter and the gear-wheel 24 and to fix the hood to the gear-wheel, set-screws 28 extend through the top 25 of the hood into the body of the said gear-wheel.

The gear-wheel 24 has arms 31 and 33 and a leg 32, by means of which and a bolt 34 the shutter 39 is firmly fixed to the said wheel.

In Fig. 3 is shown means for holding the locking-pin in and out of engagement with the perforated disk, which means consists of plate-springs 41, secured to the hand-wheel hub with their free ends 43 engaging the head of the said pin to hold it either in or out of the said engagement by simply pushing or pulling the pin past the spring-heads.

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

1. The combination of the shaft, its collar, and hand-wheel whereby the shaft is secured in rotary position to a window, the pinion upon the shaft, the skeleton gear-wheel having a central opening, and a space in which is housed a portion of a shutter and the hood having a barrel projecting through said wheel-opening, and a flange covering the said pinion, substantially as set forth.

2. The combination with the shaft, its pinion and the gear-wheel having an enlarged central opening, of the hood having an encircling flange covering the gear and pinion, and a central barrel projecting from the top

of the hood through said gear-wheel opening, substantially as set forth.

3. The combination with the shaft, its pinion and the gear-wheel having an enlarged
5 central opening, of the hood having its top secured to the body of the gear-wheel, a circular flange depending from the top of the hood and covering said gear-wheel and pinion, and a central barrel projecting from the

hood top through the said gear-wheel opening and below the said flange, as set forth. 10

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT H. WHEELER.

Witnesses:

W. J. SMITH,

ALBERT H. THORNTON.