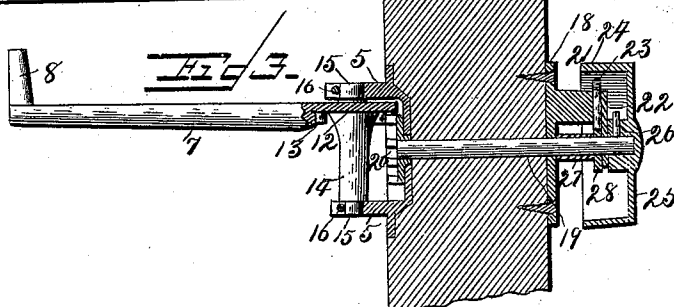
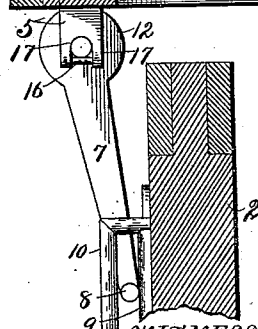
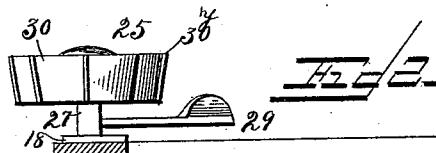
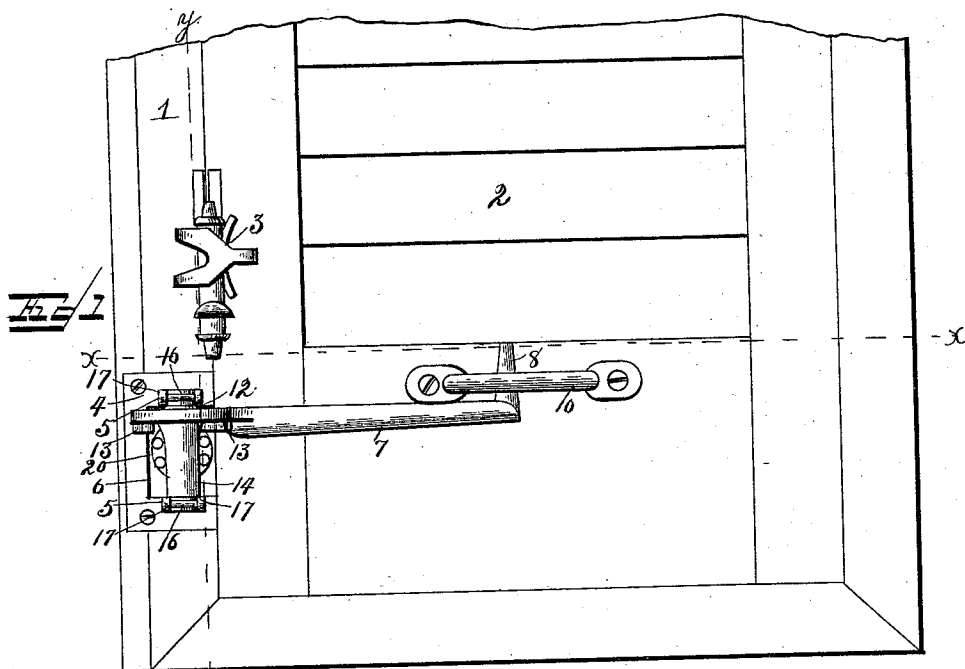


(No Model.)

C. HOTTES.
SHUTTER WORKER.

No. 487,071.

Patented Nov. 29, 1892.



WITNESSES
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UNITED STATES PATENT OFFICE.

CHARLES HOTTES, OF DAYTON, OHIO.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 487,071, dated November 29, 1892.

Application filed August 3, 1892. Serial No. 442,041. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HOTTES, a citizen of the United States, and a resident of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Devices for Operating Window-Shutters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in devices for operating window-shutters, whereby the shutters may be opened or closed from the interior of a house or other building without opening the window and may be locked when wholly closed or opened or when in any intermediate position.

The object of the invention is to provide an improved construction of such devices which shall possess superior advantages with respect to simplicity and efficiency.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is an elevation of a window-frame and shutter with my improvements applied thereto, looking from the outside. Fig. 2 is a horizontal section on the line *x x*, Fig. 1, the shutter in this instance being shown opened. Fig. 3 is a longitudinal section on the line *y y*, Fig. 2.

In the said drawings the reference-numeral 1 denotes a window-frame, and 2 a shutter connected therewith by means of hinges 3. These parts may be of any ordinary or suitable construction.

Secured to the window-frame on the outside thereof and preferably just below the lower hinge is a bracket consisting of a plate 4, having holes for the passage of screws or other fastening devices. This plate is formed with two outwardly-projecting arms 5, recessed at their outer ends to form bearings for the journals of an operating-arm hereinafter described. The outer face of the plate 4 is formed with a central recess 6.

The numeral 7 designates the operating-arm, formed at its outer end with an upwardly-projecting lug 8, adapted to engage in a

slot 9 of a bracket 10, secured to the shutter near the lower end thereof. The inner end of the arm is formed with a circular head or gear-wheel 12, provided with a series of downwardly-depending studs or cogs 13. The arm is also formed with a downwardly-depending hub 14 and journals 15. These journals are seated in the bearings formed in arms 5 and are retained in place by pins 16, passing through apertures in the lugs 17, formed by recessing said arms, as before stated.

Passing through the window-frame and journaled in the plate 4 and in a plate 18, secured to the inner side of said frame is a shaft 19, provided at its outer end with a gear-wheel 20, which meshes with wheel 12.

Formed with the plate 18 is a projecting-lug 21, having a downwardly-depending arm 22, with an aperture therein through which the shaft 19 passes. This lug is formed with a vertical aperture in which is located a vertically-movable gravity-pin 23, the upper end of which is formed with a double bevel and is adapted to engage with the inner surface of a flange 24, formed with a hand-wheel 25, secured to shaft 19 by means of a set-screw 26. Intermediate of the arms 22 and the plate 18 is a sleeve 27, embracing and loosely turning on the shaft 19, and provided with an eccentric 28 and an operating-rod 29. The periphery of the flange 24 of the hand-wheel 25 is formed with a series of ribs 30 to enable the same to be firmly grasped.

The arm 7 with its lug 8, gear-wheel 12, hub 14, and journals 15 are preferably cast or formed integral or of a single piece of metal for the sake of economy, although they may be made separate and secured to each other, if desired. It is also desirable to make the other parts of the device in single castings wherever practicable.

The operation is as follows: By rotating the hand-wheel 25 the shaft 19 is correspondingly rotated and the gear-wheel 20, meshing with the gear-wheel 12 of the arm 7, will cause the said arm to be moved in or out, according to the direction in which said wheel is turned, and by means of the lug 8, engaging with the bracket 10, to close or open the shutter. It will be noted that the pin 23, when not elevated by the eccentric 28, will not contact with the flange 24 of the hand-wheel, so that

said wheel can be freely rotated. When, however, it is desired to lock the shutter in any position it may occupy with respect to the frame, the rod 29 is actuated by turning it upward, when the eccentric will engage with the gravity-pin and force its beveled upper end tightly against the interior of the flange, thus preventing the hand-wheel and the connections from being rotated and the shutter to consequently belocked and any movement thereof prevented until the pin is disengaged or thrown out of contact with said flange by a reverse movement of the eccentric.

From the above it will be noted that the shutter can be opened and closed without raising the window, which will be found of great benefit, especially in stormy weather.

Having thus described my invention, what I claim is—

The combination, with a window-frame and a shutter hinged thereto and provided with a

slotted bracket, of the bracket secured to said frame, the arm having a lug at its free end engaging with said slotted bracket, a gear-wheel and journals working in bearings in the bracket on the window-frame, the shaft passing through said frame having a gear-wheel meshing with the gear-wheel of the arm, a hand-wheel having an annular flange secured to said shaft, a bracket secured to the inner side of said frame, provided with a lug and gravity-pin, and the eccentric on said shaft having an operating-rod, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

CHARLES HOTTES.

Witnesses:

CHARLES J. MCKEE,
ALFRED M. SCOTT.