

J. HEETER.
WINDOW SHUTTER WORKER.
APPLICATION FILED MAR. 8, 1909.

932,277.

Patented Aug. 24, 1909.

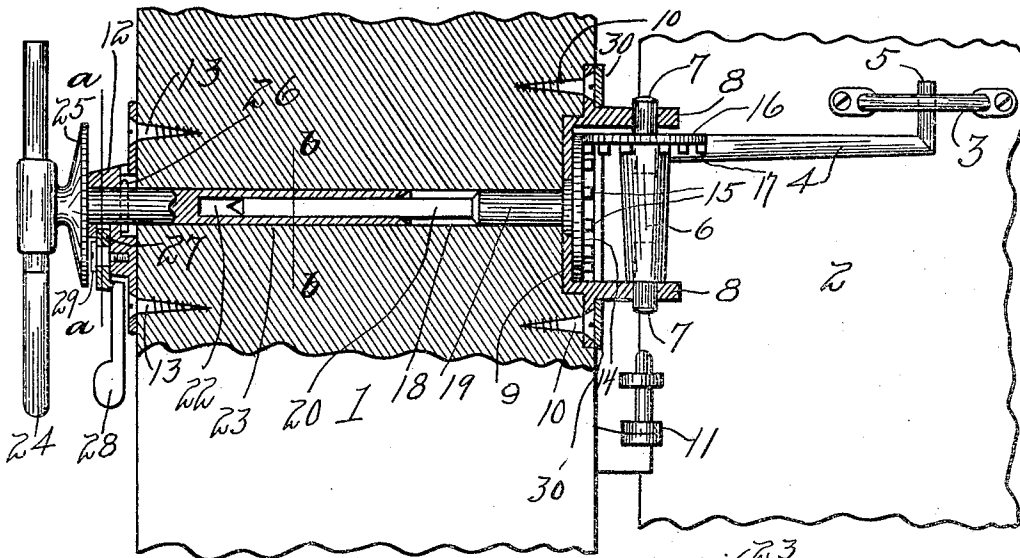


Fig. 1.

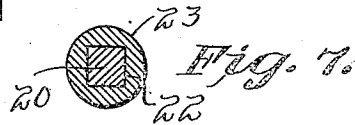


Fig. 7.

Fig. 2.

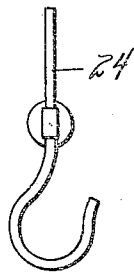
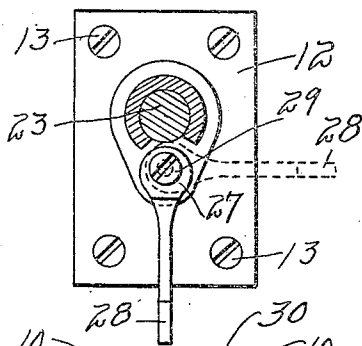


Fig. 3.

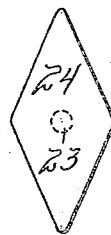


Fig. 4.

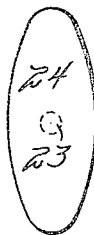


Fig. 5.

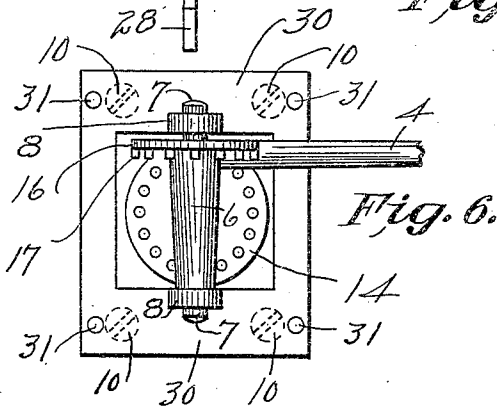


Fig. 6.

Witnesses
M. S. L. S. L.
C. M. Thobald.

Inventor

Joseph Heeter.
By R. J. M. Party
his Attorney

UNITED STATES PATENT OFFICE.

JOSEPH HEETER, OF DAYTON, OHIO.

WINDOW-SHUTTER WORKER.

932,277.

Specification of Letters Patent.

Patented Aug. 24, 1909.

Application filed March 8, 1909. Serial No. 482,015.

To all whom it may concern:

Be it known that I, JOSEPH HEETER, citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Window-Shutter Workers; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in window shutter workers of the type for manipulating the shutters to open or close them from the interior of the building without raising the sash.

The object of the invention is to provide such means having as a characteristic a degree of efficiency as well as simplicity as hereinafter will appear.

In the accompanying drawings, Figure 1, is a vertical elevation of a portion of a side of a window casing and a portion of a window shutter, the shutter being thrown open and a portion of the window casing appearing in section, and the shutter worker shown in connection with the parts made. Fig. 2, is an inner view of the device on the line *a a* of Fig. 1. Figs. 3, 4 and 5, are modifications of the form of hand-piece which may be employed for operating the shutter thrower. Fig. 6, is a detail view of the outer portion of the device. Fig. 7, is a sectional view of a telescopic shaft on the line *b b* of Fig. 1.

In the detailed description of the invention, similar reference characters indicate corresponding parts.

The window shutter 2 may be of any of the well-known forms, and hinged to the window frame 1 by any of the well-known forms of hinges 11. Secured to the inner side of the shutter at a suitable point, is a yoke 3 into which projects the upturned end 5 of an operating arm 4. The movement of the arm opens and closes the window shutter according to the direction of such movement. The said arm is united to an elongated hub 6 which has journals 7, bearings for which are provided in brackets 8 extending from a plate 9 which is secured within a recess in the adjacent side of the casing 1 by a suitable number of screws 10.

The plate 9 provides a housing for a wheel 14 which has a suitable number of teeth 15 extending from the outer face of said plate 9. A similar wheel 16 provided with teeth 17, is rigidly mounted on the upper end of the hub 6, the teeth 17 engaging with the teeth 15, and the arm 4 being rocked in accordance with the direction of rotation of said wheel 16. The wheel 14 is rigidly secured at its axis to a shaft 19 which has a bearing in the plate 9 and in an opening 18 extending through the window casing. A portion of the shaft 19 is reduced as at 20 and is square in cross section, said reduced square portion telescoping into a square opening 22 in a shaft 23 which also lies in the opening 18 in the window casing and extends beyond the inner side of said window casing. The portion of the shaft 23 so extending on the inner side of the window casing has a bearing in a bracket 12 which is secured to the inner side of the window casing by a suitable number of screws 13. On the extreme inner end of said shaft 23 is fixed an operating handle 24 which is joined to a plate or escutcheon 25 which is also rigidly united to said shaft 23. It will be readily seen that by making the shaft connections between the operating handle 24 and the devices on the outside of the window casing telescopic, the device is capable of being applied to windows having varying depths or widths of casings, and thus the necessity of manufacturing a variety of different sizes of window sash workers is avoided. The outer member 23 of the shaft is maintained in position by a pin 26 driven therethrough and lying within a space on the inner side of the bracket 12. The handle 24 may be of any suitable design, such for example, as those shown in Figs. 3, 4 and 5.

The device may be locked on the interior of the building with the shutter open so as to avoid the possibility of its being closed by the wind. This locking device consists of a cam 27 on the inner end of a lever 28 pivoted at 29 to the bearing 12. By turning the lever 28 to the position shown in dotted lines in Fig. 2, the shaft 23 is locked against being turned. When the lever 28 is thrown down as in Fig. 2, the device is free to be moved from the operating handle 24.

On the outer side of the window casing 1 is a plate 30 which incloses the portion of the plate 9 which extends on the outside of the

bearing extensions 8, said plate 30 being riveted to the plate 9 and serving to prevent the screws 10 from being removed and the device interfered with.

5 Having described my invention, I claim:

10 In a window shutter worker, the combination of an operating shaft extending through a window frame, a toothed wheel connected to the outer end of said shaft, a shutter-
15 operating arm geared to said wheel, a handle fixed to the inner end of said shaft for operating the same, a base plate secured within a recess in the outer side of the window frame and providing a bearing for the toothed
15 wheel on the operating shaft, said plate hav-

ing brackets extending therefrom providing a bearing for the shaft of the wheel of the shutter arm, and an apertured plate through which said brackets project, said apertured plate being riveted to the base plate on the 20 outer side of the brackets extending from said base plate, and concealing the means by which the base plate is secured to the window frame.

In testimony whereof I affix my signature, 25 in presence of two witnesses.

JOSEPH HEETER.

Witnesses:

MATTHEW SIEBLER,
C. M. THEOBALD.