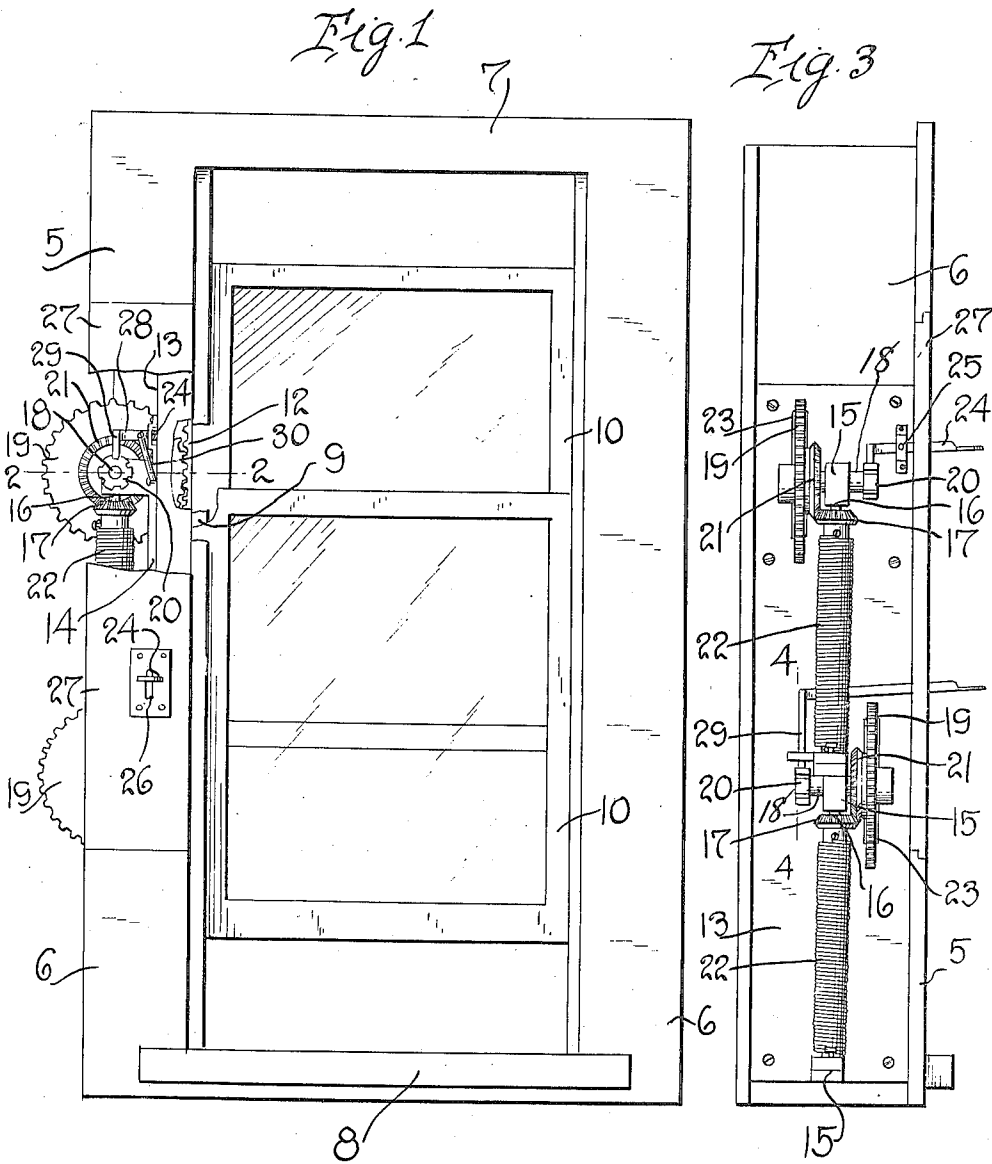


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 WINDOW OPERATING MECHANISM.
 APPLICATION FILED NOV. 4, 1914.

1,153,404.

Patented Sept. 14, 1915.
 2 SHEETS—SHEET 1.



Witnesses
 Robert M. Sutphen
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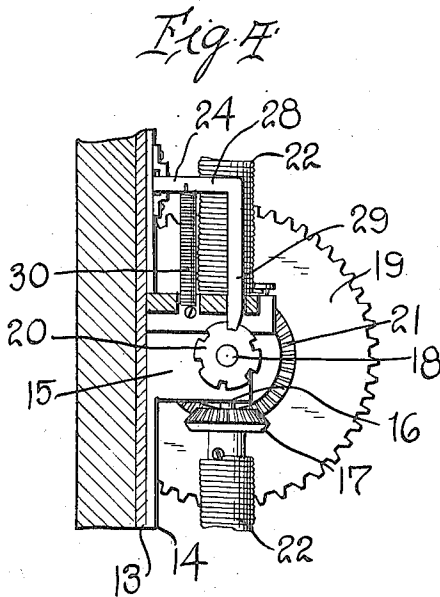
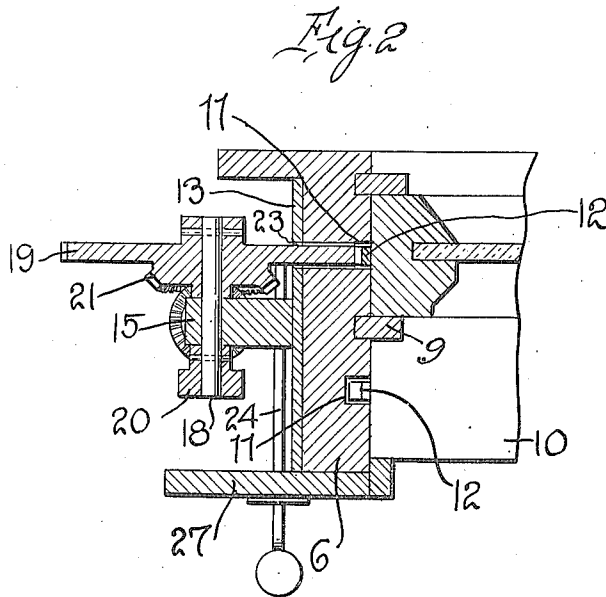
By *Watson E. Coleman*
 Attorney

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UNITED STATES PATENT OFFICE.

PETER RASMUSSEN AND MANOEL F. GOULARTE, OF SELMA, CALIFORNIA.

WINDOW-OPERATING MECHANISM.

1,153,404.

Specification of Letters Patent.

Patented Sept. 14, 1915.

Application filed November 4, 1914. Serial No. 870,294.

To all whom it may concern:

Be it known that we, PETER RASMUSSEN and MANOEL F. GOULARTE, citizens of the United States, residing at Selma, in the county of Fresno and State of California, have invented certain new and useful Improvements in Window-Operating Mechanism, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improved window operating mechanism and has for its primary object to provide simple and efficient means for moving a window sash, and retaining the same in a partly open position.

The invention has for a further object to provide a device of the above character which is so mounted and arranged that access may be readily had to the parts thereof when it is necessary to repair the same, the device being simple and durable in its construction and capable of manufacture at comparatively small cost.

With the above and other objects in view, our invention consists in the novel features of construction, combination, and arrangement of parts to be hereinafter more fully described, claimed, and illustrated in the accompanying drawings, in which,

Figure 1 is a side elevation of a window showing the sashes in partly open position, a portion of the removable section of the window frame being broken away to show the operating mechanism; Fig. 2 is a section taken on the line 2—2 of Fig. 1; Fig. 3 is an edge view of the window; Fig. 4 is a section taken on the line 4—4 of Fig. 3.

Referring in detail to the drawings, 5 designates a window frame of any ordinary or approved construction which includes hollow vertical side members 6, a lintel 7, and a sill 8. To the inner faces of the members 6, the vertically standing parting strips 9 are secured which are disposed between and separate the sashes 10 from each other. One of these inner walls of the hollow side members of the frame is further provided upon each side of the parting strip 9 with longitudinally extending grooves 11. To the corresponding vertical stiles of the sashes 10, the rack bars 12 are secured, said bars fitting into the respective grooves 11.

In the hollow side member 6 of the window frame, in the inner face of which the grooves 11 are provided, the operating mechanism for the window sashes is arranged.

This mechanism is mounted upon a suitable base plate 13 which is secured to the inner wall of the frame member 6. Upon this base plate, the longitudinally extending metal bars 14 are secured, said bars being provided upon their opposite ends with bearing lugs 15. In the bearing lugs of each of the bars 14, the opposite ends of a vertically disposed shaft 16 are journaled, and to the upper end of each shaft, a beveled pinion 17 is fixed. A horizontally disposed shaft 18 is also mounted in the bearing on the upper end of each of the bars 14, and said shafts are provided upon relatively opposite ends with the large gear wheels 19. Upon the other end of each shaft 18, a ratchet 20 is secured. Each of the gears 19 is provided upon its inner face with a beveled gear 21 which meshes with the gear 17 upon one of the shafts 16. A coil spring 22 is arranged upon each of these shafts and has its upper end fixed to the gear 17 and its lower end suitably secured to one of the bearing lugs 15. The base plate 13 upon which the operating mechanism is mounted, is provided with a longitudinally extending slot 23 which coincides with a similar slot provided in the inner wall of the side member 6 of the window frame. Through the slots, the respective gear wheels 19 extend and engage with the racks 12 secured upon the respective window sashes.

24 designates the locking levers which are fulcrumed intermediate of their ends as at 25 and project outwardly through slots 26 in a removable wall section 27 of the frame member 6. The inner ends of these levers are laterally extending as at 28 and terminate in the downwardly projecting portions 29 which are adapted for engagement with the teeth of the respective ratchets 20 to lock the shafts 18 against rotation under the action of the springs 22. Each of the levers 24 is normally held in its locking position by means of a coil spring 30.

From the foregoing description, taken in connection with the accompanying drawing, the construction and arrangement of the several parts of our invention will be clearly and fully understood. When the lower sash is moved from its open to its closed position, the operator must first press upon the lowermost lever 24 to lift the inner end thereof from engagement with the ratchet 20. Thus, when the window sash is forced down-

wardly in the frame, the rack thereon meshing with the gear 19, will rotate the lower vertical shaft 16 and place the coil spring 22 under tension. When the upper sash is lowered to its open position in the frame, the same action takes place. It will be understood that the sashes may be disposed in an intermediate position at any desired point in order to properly ventilate the room or apartment, and are retained in such partially open positions by means of the locking levers 24. When it is desired to elevate either of the sashes in the frame, the operator presses the proper lever 24 so that the spring 22 may act to rotate the shaft 16 and thus transmit rotation to the gear 19. This gear meshing with the rack 11, moves the sash, as will be readily understood. It is, of course, obvious that by simply reversing the direction of turn of the coils of either spring, the lower sash may be moved to its closed position under the action of the spring or the upper sash moved to its open position instead of vice versa, as above explained.

By means of our invention, it will be appreciated that the sashes may be very easily and quickly operated and the manual labor incident to the raising or lowering of the sashes, thus avoided.

The several parts of the mechanism are all of exceedingly simple form and may be manufactured and assembled in the window structure at comparatively small cost.

While we have shown and described the preferred construction and arrangement of the several elements employed, it will be understood that the invention is susceptible of considerable modification therein, and we therefore reserve the privilege of resorting to all such legitimate changes as may be

fairly embodied within the spirit and scope of the invention as claimed.

Having thus fully described our invention, what we desire to claim and secure by Letters Patent is:—

The combination with a window frame and sash mounted therein, of a base plate secured upon one side of said frame and provided with spaced bearing lugs, said base plate and the frame having coinciding slots therein, a vertically disposed shaft journaled at its ends in said bearing lugs, a transversely disposed shaft rotatably mounted in one of the lugs above said vertical shaft, a coil spring engaged upon said vertical shaft to rotate the same in one direction, a beveled gear fixed upon the upper ends of said shaft, a gear fixed upon one end of said transverse shaft and provided with a bevel gear of relatively small diameter meshing with the gear on the vertical shaft, said first named gear on the transverse shaft extending through the registering slots in the base plate and the frame, a rack bar fixed upon the sash and meshing with said gear, a ratchet secured upon the other end of the transverse shaft, and a manually operable latch device pivotally mounted upon the base plate and engaging at one end with said ratchet to normally hold the shafts against rotation under the action of said spring.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

PETER RASMUSSEN.
MANOEL F. GOULARTE.

Witnesses:

J. F. PERRY,
WALTER E. STREET.