No. 877,722. PATENTED JAN. 28, 1908.

W. W. KLIMA.

SASH FASTENER.

APPLICATION FILED JUNE 18, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

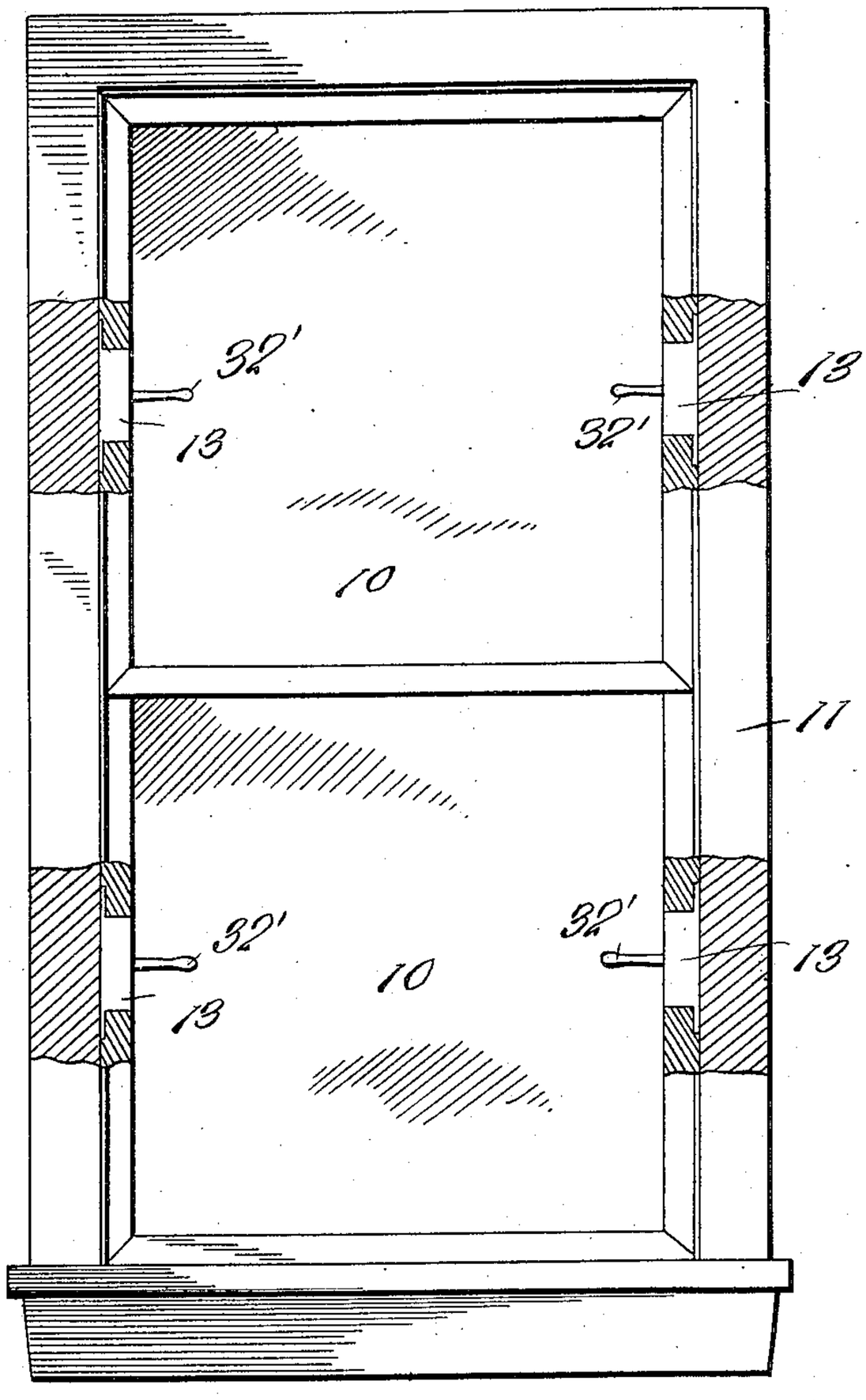
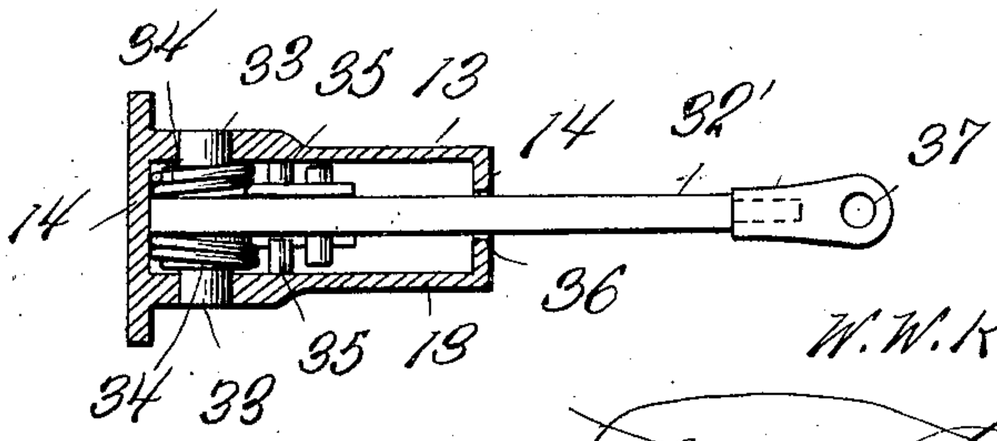


Fig. 5.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

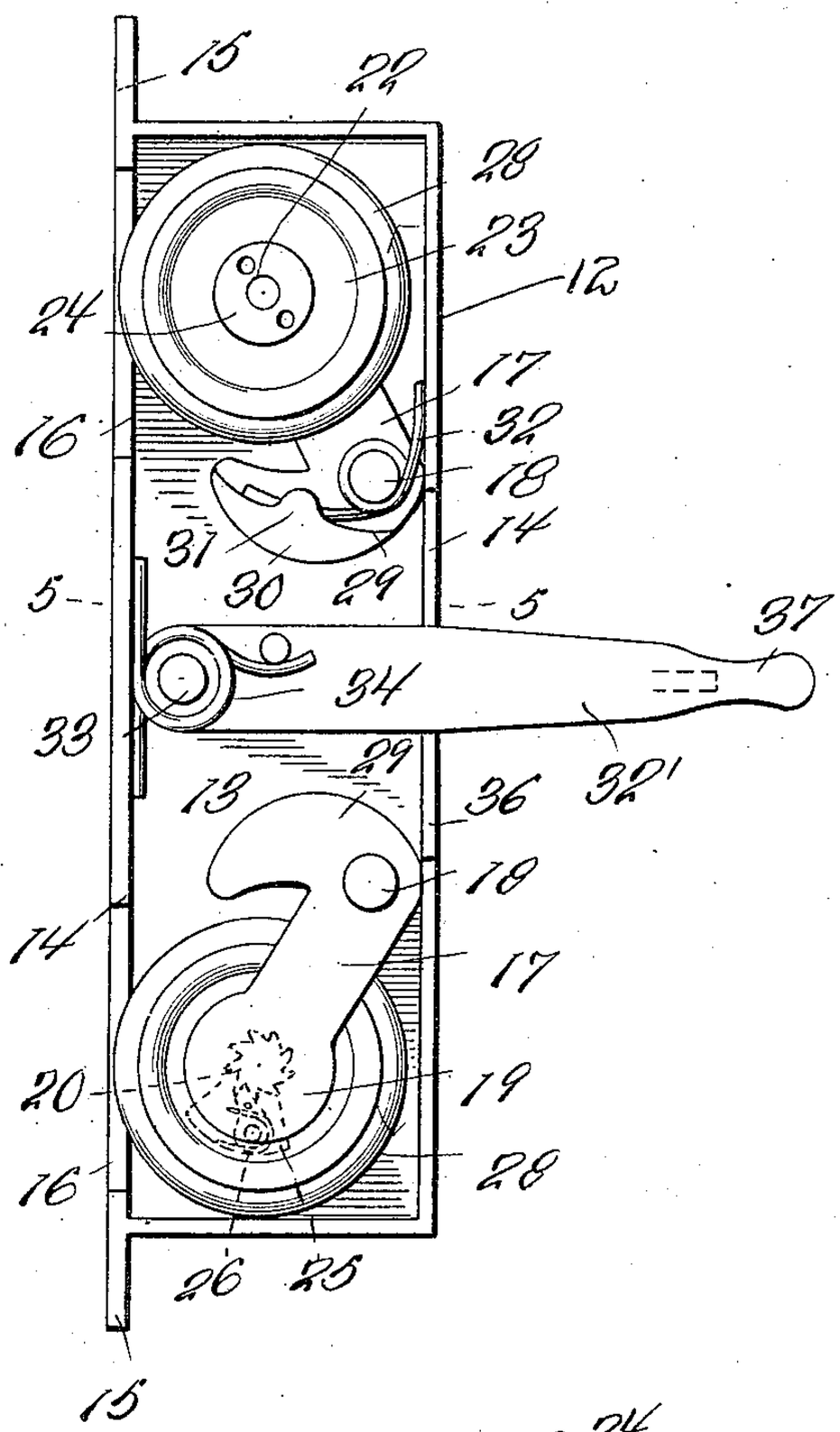
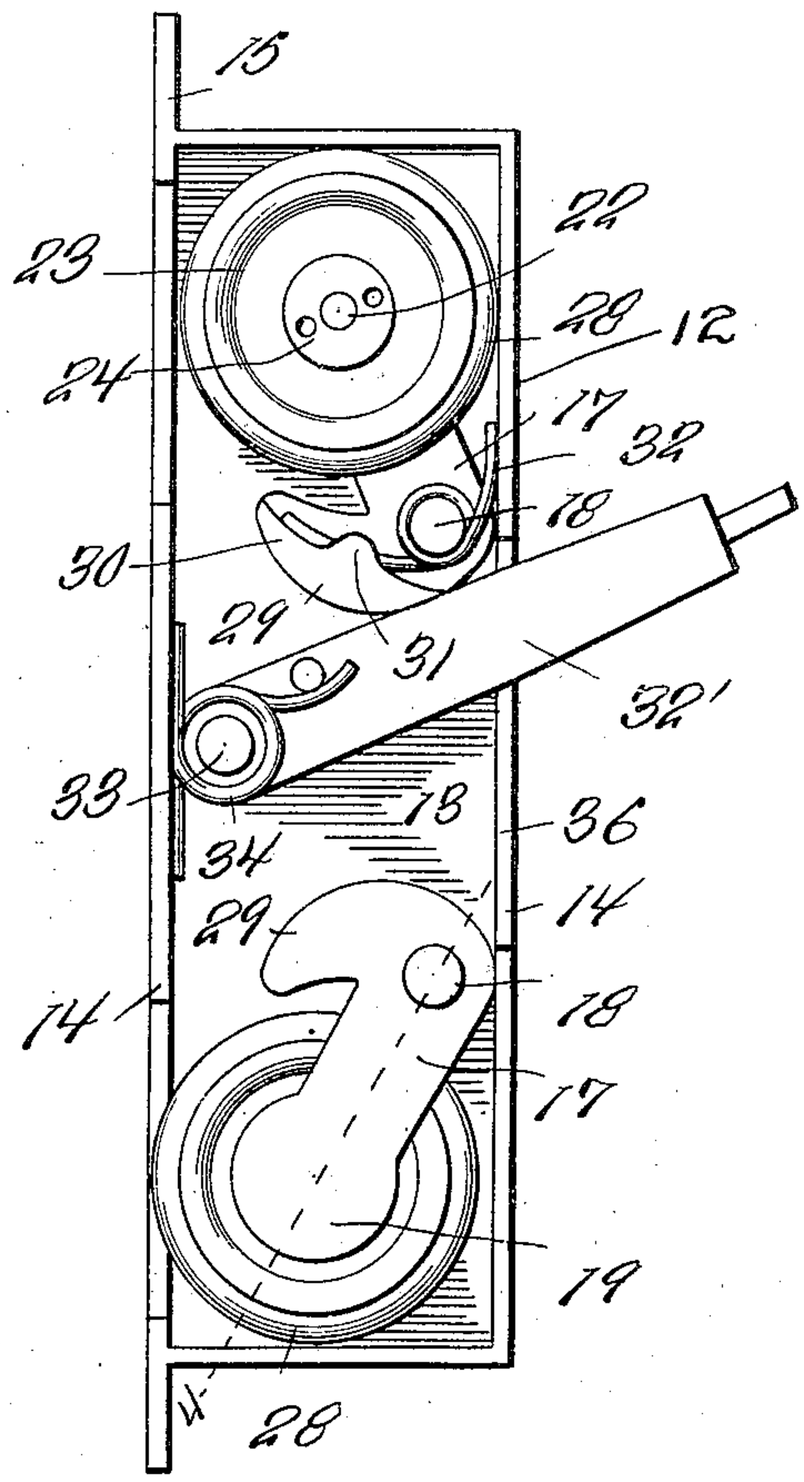


Fig. 3.



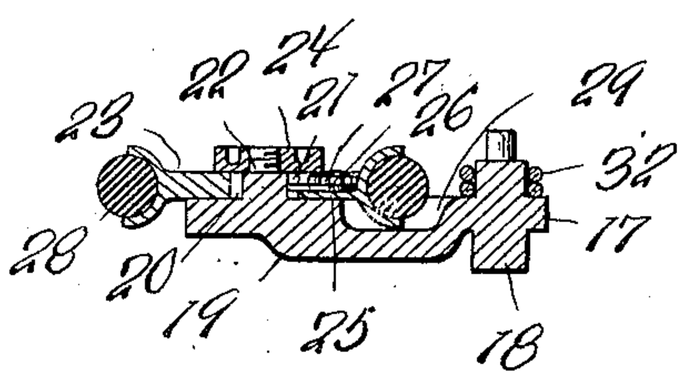


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM W. KLIMA, OF HUTCHINSON, MINNESOTA.

SASH-FASTENER.

No. 877,722. Specification of Letters Patent. Patented Jan. 28, 1908.

Application filed June 18, 1906. Serial No. 322,261.

To all whom it may concern:

Be it known that I, WILLIAM W. KLIMA, a citizen of the United States, residing at Hutchinson, in the county of McLeod, State of Minnesota, have invented certain new and useful Improvements in Sash-Fasteners; 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 combined sash balances and fasteners and has for its object to provide a device of this nature which will securely hold a sash at any desired point and which will prevent raising or lowering of the sash except from the inside.

The invention comprises a pair of rollers which are normally held in engagement with the frame of the window and which are mounted for rotation in one direction only, and means for moving one or the other of the rollers out of engagement with the window-frame to permit raising or lowering of the sash to which the device is applied.

With the above and other objects in view, the present invention consists in the construction and arrangement of parts, shown in the accompanying drawings, in which:

Figure 1 is a view, partly in section, showing the invention applied to a window. Fig. 2 is a detail view in elevation of one of the devices removed from the window sash, one side of the casing for the same being removed. Fig. 3 is a similar view showing one of the rollers swung out of position to engage the frame. Fig. 4 is a detail diagonal sectional view on the line 4—4 of Fig. 3, and, Fig. 5 is a similar view on the line 5—5 of the same figure.

The numerals 10 and 11 denote respectively the sashes and the frame of a window, the sashes being slidably mounted in the said frame in the usual well known manner.

One of the devices contemplated in the present invention is secured in each of the sides of each sash as shown in Fig. 1 so that the sashes will be squarely held in their proper position in the frame and against rattling. Each of the devices comprises a casing 12 including sides 13 and ends 14, one of the sides being detachably connected with the remainder of the casing and one of the ends 14 being extended beyond the upper and lower ends of the casing as at 15 and provided with openings for the passage of attaching screws.

The end 14 above referred to, when the device is in use, lies next to the frame 11 of the window and through the said end adjacent the top and bottom thereof are formed openings 16 for a purpose to be hereinafter described.

Arms 17 are pivotally mounted in the casing 12, above and below the horizontal middle thereof, by means of studs 18 which project from opposite sides of the said arms at their opposing ends and into suitable bearing openings in the sides of the casing. The outer end of each arm is provided with a circular enlargement 19 upon one face of which is formed a circular reduced portion 20 having rack teeth 21 formed in its periphery, and with a threaded stud 22, there being a roller 23 journaled upon each of the said enlarged portions 19 and held thereon by means of a nut 24 which is engaged with the studs 22. Each of the rollers 23 is recessed as at 25 and pivotally mounted in the said recess of each roller is a pawl 26 which is held in engagement with the ratchet teeth 21 on the reduced portion 20 of its respective arm by means of a spring 27. The said pawl and ratchet elements serve to prevent rotation of the rollers in one direction and it will be observed in the drawings that each of the arms is bent laterally to accommodate its roller and that the arms are presented in opposite directions so that the two rollers of each device will be free to rotate also in opposite directions for a purpose to be hereinafter fully set forth. Secured upon the periphery of each roller 23 is a rubber tire 28 which, by reason of the arrangement of the rollers within the casing, projects through the adjacent one of the openings 16 in the end wall 14 thereof for normal engagement with the stiles of the window-frame.

In order that the rollers 23 may be firmly but normally held in this position, I form upon the inner end of each arm a head 29 which is shouldered as at 30 and provided upon its shouldered portion with a lug 31, and engage around one of the studs 18 a wire spring 32 which has its end portions resting one against the adjacent end 14 of the casing and the other against the shouldered portion 30 of the head and between the said head proper and the lug 31.

The opposing edges of the heads 29 are cam-shaped and in order that the said arms may be rocked, I provide a lever 32′ which is pivoted by means of studs 33 in the casing intermediate the sides thereof and in such a manner that it may be rocked vertically to engage one or the other of the said heads and consequently rock the corresponding arm as will be readily understood, to move one or the other of the rollers out of engagement with the adjacent stile of the window-frame. In order however that the lever 32′ may be normally held out of engagement with both of the heads 29, I engage around each stud 33 a coil wire spring 34 which has one end bearing against the end of the casing through which the openings 16 are formed and its opposite end in engagement with a pin or stud upon the corresponding side of the said lever, the end of the springs which bear against the end of the casing being extended in opposite directions. Studs 35 project inwardly toward each other from the corresponding points upon the inner face of the side plates of the casing and intermediate the end of the casing adjacent which the lever 32′ is pivoted, and the studs formed on the said lever and against which the ends of the springs bear, it being understood that by this construction the lever will always be held normally in a horizontal plane by reason of the fact that the ends of the springs are limited in their movement by the lugs 35 and even if one spring should become weakened, it would have the same effect upon the lever as the stronger spring.

The outer end of the lever 32′ projects through an opening 36 formed in the end of the casing opposite the end above referred to and is provided with a detachable eye member 37 with which may be connected a cord in case the window is located at such a height as to not be readily accessible, it being understood however that if the reverse is true, the eye member may be used as a finger-piece.

From the foregoing it will be readily understood that when both of the rollers are in contact with the stiles of a window-frame, the sash will be prevented from movement in either direction due to the fact that the rollers are held against rotation in opposite directions, and that when one of the rollers has been removed out of engagement with the window-frame, the sash may be moved in one direction. It will also be understood that the pressure exerted by the rollers upon the window-frame is sufficient to balance the sash during its vertical movement.

It is to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

What is claimed is:

In a device of the class described, the combination with a window frame and a sash slidably mounted therein, of rollers carried by the sash and being arranged for rotation in opposite directions, spring-actuated arms on which said rollers are mounted for holding them normally in engagement with said frame, and a lever for acting upon said arms to move them whereby one or the other of said rollers may be moved out of said engagement.

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

WILLIAM W. KLIMA.

Witnesses:

H. L. MERRILL,

SAM CHERNAUSEK.