

No. 809,390.

PATENTED JAN. 9, 1906.

W. T. McDERMOTT & W. F. BETZEL.

PULLEY MOUNTING.

APPLICATION FILED JAN. 11, 1905.

Fig. 1.

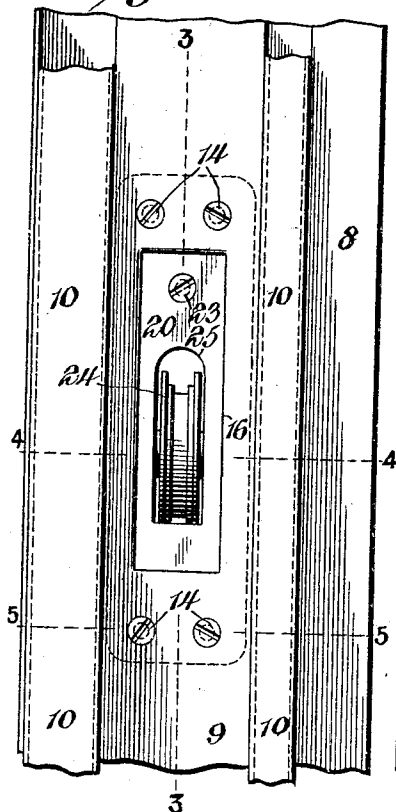


Fig. 2.

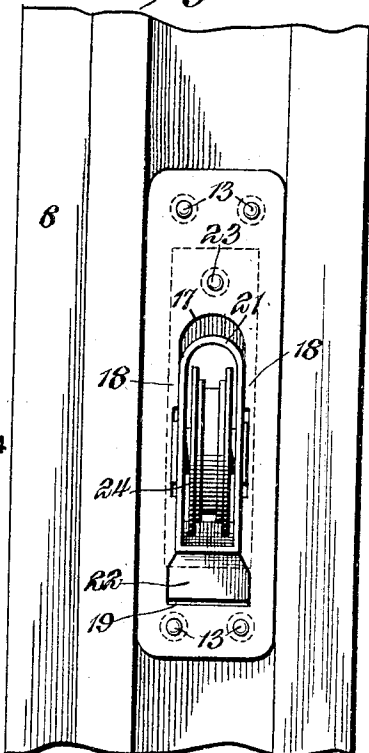


Fig. 3.

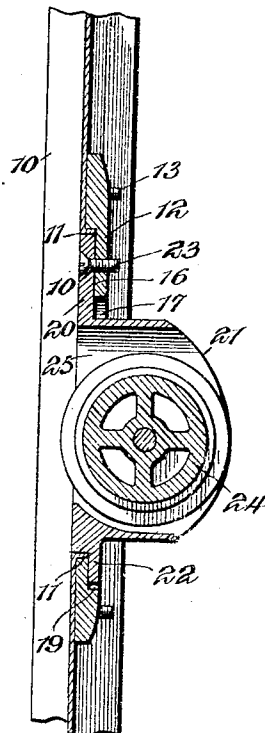


Fig. 4.

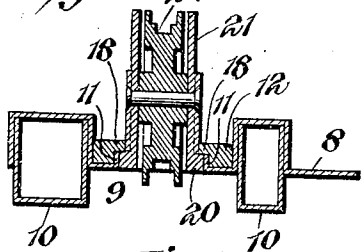


Fig. 5.

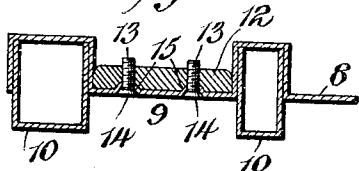


Fig. 6.

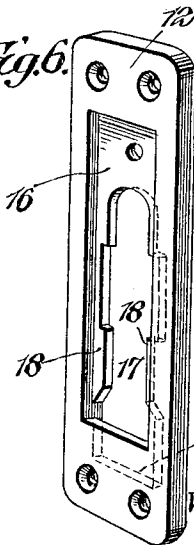
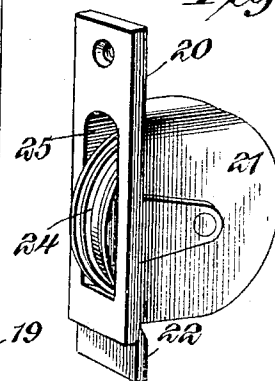


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM T. McDERMOTT AND WILLIAM F. BETZEL, OF BALTIMORE,
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PULLEY-MOUNTING.

No. 809,390.

Specification of Letters Patent.

Patented Jan. 9, 1906.

Application filed January 11, 1905. Serial No. 240,582.

To all whom it may concern:

Be it known that we, WILLIAM T. McDERMOTT and WILLIAM F. BETZEL, citizens of the United States, residing at Baltimore, in the State of Maryland, have invented a new and useful Pulley-Mounting, of which the following is a specification.

The present invention relates to means for mounting pulleys in window or analogous frames, and particularly that type of window-frame constructed of sheet metal, though perhaps useful in other structures.

One of the objects is to provide a simple mounting of a novel nature that can be easily placed and securely fastened in position and at the same time will permit the ready removal and replacement of the pulley should it become necessary to do so on account of such pulley becoming worn, deranged, or defective from any cause.

A further and important object is to provide a mounting that will rigidly maintain its position to effectually withstand the strains to which such structures are necessarily subjected and will, furthermore, reinforce the frame-wall to which it is applied so as to avoid any danger of the wall becoming warped or misshapen.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a view in front elevation of a portion of a window-frame, showing the new pulley-mounting in place thereon. Fig. 2 is a rear elevation of the same. Fig. 3 is a longitudinal sectional view taken on the line 3 3 of Fig. 1. Fig. 4 is a cross-sectional view taken on the line 4 4 of Fig. 1. Fig. 5 is another cross-sectional view taken on the line 5 5 of Fig. 1. Fig. 6 is a detail perspective view of the retaining-plate, and Fig. 7 is a similar view of the pulley-supporting member.

Similar reference-numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated a portion of the inner wall of the side stile of a metallic window-frame is shown and is designated by the reference-numeral 8. The wall is provided with a sash-guideway 9, formed between two beads 10. This wall is provided between the beads with a longitudinally-disposed opening, surrounded by rearwardly-extending flanges 11. The mounting for the sash-cord

pulley is located at this point and is constructed as follows: A retaining-plate 12 is employed that is secured against the rear face of the wall 8 by means of holding-screws 13 passing through said wall above and below the opening therein and being threaded into the ends of the plate. In this connection it is desired to call attention to the fact that the heads 14 of said screws are countersunk into the wall, and the metal surrounding the same is inset, as shown at 15, into the outer face of the retaining-plate, as shown in Fig. 5. This interfitting engagement between the wall and retaining-plate serves to assist in maintaining said plate against relative movement with respect to the wall. Formed in the outer face of the retaining-plate 12 is a longitudinally-disposed recessed seat 16, in which the flanges 11 engage, said flanges fitting snugly against the side and end walls of the seat. An opening 17 in the plate 12 communicates with the seat and is of less width than the same, so that flanges 18 are formed on opposite sides of said opening. In the rear face of the retaining-plate is formed a seat 19, located at one end of the opening 17. The pulley-supporting member consists of a face-plate 20, carrying a pulley-boxing 21. This plate 20 is arranged to fit snugly in the seat 16 and within the flanges 11, so that its outer face is flush with the outer face of the frame-wall, as shown in Figs. 3 and 4. This plate has at one end an inset longitudinally-extending tongue 22, that is adapted to pass through the opening 17 and engage in the seat 19, while through the opposite exposed end of the face-plate is passed a holding-screw 23, that is threaded into the retaining-plate 12. The boxing 21 is narrower than the plate 20 and is adapted to pass through the opening 17, while the sides of said plate on opposite sides of the boxing rest against the flanges 18. In said boxing is journaled a suitable sash-cord pulley 24, that extends through an opening 25, formed in the face-plate. The retaining-plate can be secured to the inner side of the wall 8 during the manufacture of the window-frame; but the pulley-supporting member can be placed in position at any time, as it is only necessary to pass the tongue 22 through the opening 17, at the same time introducing the boxing 21 into said opening, then seating the plate 20 in the recess 16 and fastening it in place by means of the screw 23. It will be

clearly apparent, therefore, that the pulley can be detached and replaced with ease and expedition. Moreover, it will be apparent that this mounting serves as a reinforcement to the frame at the place where the combined weight of the sash and counterbalance is carried, and thus the danger of the frame becoming distorted from such weight is obviated. Furthermore, because of the inter-fitting engagement of the flanges 11 and the portions 15 of the wall with the mounting said mounting is effectually retained in position.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a pulley-mounting, the combination with a retaining-plate to be secured to a window-frame or analogous support, said plate having an opening, of a pulley-support having portions that engage both the inner and outer sides of the plate, a part of the support extending through the opening and said support being removable outwardly through said opening, a pulley journaled on the support, and means on the outside of the plate for detachably securing the support against movement to the retaining-plate, said securing means thus being accessible when the plate is secured to a window-frame to permit the removal of the pulley-support and the pulley carried thereby.

2. In a pulley-mounting, the combination with a retaining-plate to be secured to a window-frame or analogous support and having an opening, of a pulley-boxing fitting in the opening and having a face-plate that engages both the inner and outer sides of the retaining-plate, said boxing being removable outwardly through the opening a pulley journaled in the boxing, means for detachably fastening the boxing to the outer side of the retaining-plate, said means being accessible when the plate is secured to a window-frame to permit the detachment of the boxing and pulley carried thereby and means for fastening the retaining-plate to a support.

3. In a pulley-mounting, the combination with a retaining-plate to be secured to a window-frame or analogous support, said plate having a seat in its outer face and an opening that communicates with said seat, of a pulley-support that passes through the opening, said support having a face-plate that fits in the seat, a tongue carried by the face-plate and

engaging the rear face of the retaining-plate, means for securing the retaining-plate to a frame or other support, means for detachably securing the face-plate in the seat, and a pulley journaled in the support.

4. In a pulley-mounting, the combination with a retaining-plate having a seat in its inner side and an opening located at one end of the seat, of a pulley-support that passes through the opening, said support engaging over the front face of the plate and being provided with a tongue that passes through the opening and engages in the rear seat, means for securing the retaining-plate to a frame or other support, means passing through the face-plate and engaging the retaining-plate for detachably securing the pulley-support in place, and a pulley journaled in the support.

5. In a pulley-mounting, the combination with a retaining-plate to be secured to a window-frame, said plate having a longitudinally-disposed opening, a seat in its front face that substantially surrounds the opening, and a seat in its rear face located at one end of the opening, of means for fastening the retaining-plate to the frame, a face-plate that fits in the front seat of the retaining-plate, a tongue carried by one end of the face-plate, passing through the opening, and engaging in the rear seat, a screw passing through the other end of the face-plate and engaging the retaining-plate for holding said face-plate in position, a boxing carried by the rear side of the face-plate and passing through the opening in the retaining-plate, and a pulley journaled in the boxing.

6. In a pulley-mounting, the combination with a window-frame wall having an opening, of a retaining-plate secured thereto and having an opening alined with the wall-opening, a pulley-boxing passing through the plate-opening and having a tongue engaging the rear portion of said plate, said boxing also having a portion located over the front face of the plate, holding means passing through said latter portion, and a pulley in the boxing.

7. In a pulley-mounting, the combination with a frame-wall having an opening, of a retaining-plate secured to the rear face of the frame-wall, said plate having an opening alined with the wall-opening and a seat in its outer side, a flange carried by the frame-wall and engaging in the seat, a pulley-boxing passing through the plate-opening and having a tongue engaging the rear portion of the plate, a face-plate carrying the boxing and fitting in the seat of the retaining-plate alongside the flange, a pulley located in the boxing, and means for detachably fastening the face-plate to the retaining-plate.

8. In a pulley-mounting, the combination with a metallic frame-wall having an opening and rearwardly-extending flanges surrounding the said opening, of a retaining-plate secured to the rear face of the wall and having

a seat that receives the flanges, said retaining-plate being also provided with an opening, a face-plate fitting snugly in the seat within the flanges, means for detachably securing said
5 plate in place, a pulley-support carried by the face-plate and extending through the opening in the retaining-plate, and a pulley journaled on the support.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures 10 in the presence of two witnesses.

WILLIAM T. McDERMOTT.

WILLIAM F. BETZEL.

Witnesses:

THOS. KELL BRADFORD,

AUG. W. BRADFORD.