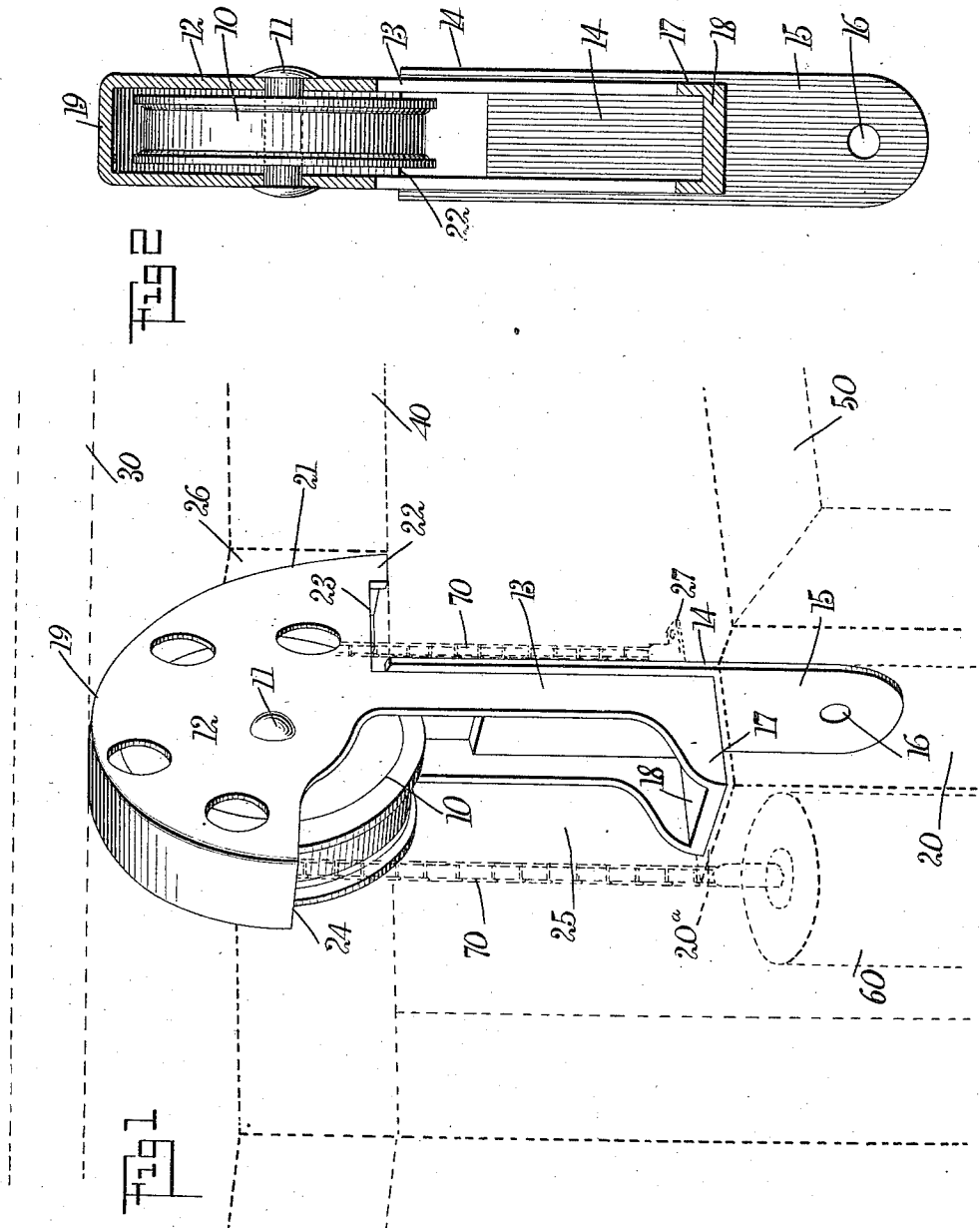


C. TUTEUR.
OVERHEAD SASH PULLEY.
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WITNESSES

C. J. Hachemburg
J. L. McAniff

INVENTOR

Charles Tuteur
BY *Munn & Co*
ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES TUTEUR, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO SAMUEL KAHN,
OF NEW YORK, N. Y.

OVERHEAD SASH-PULLEY.

1,060,145.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES TUTEUR, a subject of the King of Great Britain, at present residing at the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Overhead Sash-Pulley, of which the following is a full, clear, and exact description.

10 The invention relates to the type of pulleys known as overhead pulleys, and an essential characteristic of which is that the chain or cord extends upward from the top of the sash and continues in the upward direction through the top of the window frame, as distinguished from the ordinary style pulley in which the pulley casing is simply mortised into the stile, and in connection with which the sash cord or chain extends laterally over the pulley through the stile.

25 With an overhead pulley formed and arranged in accordance with my invention, an opening for the insertion and removal of the pulley is provided, formed partly in the stile by cutting the same away at its upper end, and partly in the adjacent end of the top member of the frame, the pulley housing and its bracket being so formed and arranged that the face plate of the housing will range vertically, and the pulley housing will project in front and in the rear beyond the face plate, the front projecting portion of the housing being preferably in the form of a laterally deflected member which closes that portion of the opening formed in the top member of the frame, while the rear of the pulley housing will extend rearwardly beyond the face plate and beyond the stile, whereby the chain will drop at the front from the pulley at a point above the stile and parallel with the face of the stile, outside of the same, to a connection with the sash, while the chain or cord at the back will drop to the weight at a point rearward of the back face of the stile from a point on the pulley above the stile and outward and rearward of the latter sufficiently for the weight to clear the end of the stile.

50 In connection with the pulley, a housing, and a face plate as described, I employ a bracket member integral with the housing and face plate, and formed with a foot presenting a horizontal shoulder or under surface ranging in a rearward direction at right

angles to the back of the face plate, and side-wise to present an area approximately equal to the total top surface of the stile at the cut-away portion thereof, whereby the weight of the sash and sash weight will be exerted in a downward direction on the horizontal foot of the bracket and its broad under surface, and directly against the upper end of the stile and in the direction of the length of the stile. By my arrangement I avoid exerting a leverage on the top member of the frame through the bracket and face plate, and I avoid the use of a horizontal face plate engaging the top member of the frame; at the same time while providing a vertical face plate for closing the opening at the top of the stile, I cause the weight, as stated, to be exerted downward directly in line with the stile and through a member at right angles to the face plate, and overcome the tendency of the sash weight to rock the pulley housing and face plate. The form of the opening at the upper angle of the frame and partially in the stile and partially in the top member of the frame facilitates the positioning of the pulley, its housing, and face plate, and when the pulley is in place, the openings are substantially closed by the housing and face plate.

85 The distinguishing features of my invention, and the important structural elements characterizing the preferred embodiment which is illustrated as an example, will be more particularly explained in the specific description hereinafter to be given.

90 Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

95 Figure 1 is a perspective view of my improved overhead pulley and its appurtenances, in position, and indicating in dotted lines portions of the window frame, sash, the chain or cord, and the sash weight; and Fig. 2 is a rear elevation of my improved overhead pulley with parts of the housing and bracket in section.

100 In constructing an overhead pulley and its appurtenances in accordance with the form illustrated, the pulley 10 is journaled at its center, as at 11, to revolve in the housing 12, and integral with said housing and depending therefrom, in a line slightly in front of the center of the pulley are depending webs 110

13 constituting a bracket, integral with the front of which is a face plate 14. The face plate 14 extends below the bracket 13, as at 15, and is provided at its lower end with a screw-hole 16, for securing the face plate at this point to the stile 20. Preferably also the face plate 14 extends laterally beyond the bracket webs 13, to effectively conceal the latter. The lower ends of the vertical bracket webs 13 are extended rearwardly, as at 17, and are formed integral with a foot 18 forming the lower end of the bracket.

The housing 12 of the pulley is generally of rounded form at the top, the upper portion 19 being desirably in the arc of a circle having the axis 11 of the pulley as the center, said upper portion of the housing being in practice, adjacent to the lintel 30. The housing at the front has a wider curve, being deflected outward, as at 21, the lower edge of which, at the outer portion of the housing, terminates as at 22 on a line which when the pulley is in place, will be flush with the top member 40 of the window frame. The lower edge of the front portion of the pulley is advantageously cut away, as at 23, at both sides, to prevent the possibility of the chain catching the lower edge in the raising and lowering of the sash 50.

In practice, the housing carrying the pulley is entered diagonally through an opening formed partially in the stile and partially in the top frame 40 at the angle of said members, the stile being cut away at its upper end as at 25, and the top frame 40 being cut away adjacent to the opening 25, as at 26. After the pulley and the upper end of the housing of the described pulley are entered, the housing with its face plate and its bracket members 13 are brought to such a position that the face plate is let into the face of the stile 20 to lie flush with the latter, and a screw passed into the hole 16 secures the pulley in place, with the foot 18 resting on the top surface 20^a of the stile. It will be observed that the foot 18 extends at right angles to the rear side of the face plate 15, and has a width laterally so that the total area is approximately that of the top 20^a of the stile. The chain 70 leaving the pulley at diametrically opposite sides will cause the sash weight 60 to be raised and lowered in a path clear of the back of the stile 20, and at the front said chain will depart from the pulley at a point within the opening 26 formed in the top member 40 of the frame, and extends to the connection 27 with the sash on a line outside of the face plate. It will be seen also that the horizontal foot 18 of the bracket 13 extends rearwardly to a vertical line passing through the center 11 of the pulley, and therefore is in line with the downward pressure exerted by the sash and weight. The foot presents a broad area and rests directly on the seat

20^a provided by the cutaway upper end of the stile. At the front, the outward and downward extension of the housing, as at 21, 22, fills the opening in the top frame member 40 through which the chain passes from the sash to the pulley.

Thus the improved housing with the apertures described enables me to form the most convenient opening for the entrance and removal of the pulley and housing, which opening is effectively closed by the face plate and the laterally deflected front end of the housing, and by my improved construction I obtain all the advantages of the overhead pulley while providing the most effective resistance against the strain by transferring the same directly in line with the stile. Moreover, the direct downward strain of the sash and sash weight overcomes all tendency of the sash weight to exert a leverage on the face plate, and relieves the frame members of any strain or leverage exerted transversely of the face plate.

In all large buildings it is the custom to make up and fit the window frames as the building progresses, the fitting and placing of the sash pulleys being deferred until the window frames are all in place, in order that the pulleys and their housings may not become rusted, in the case of iron, or tarnished in the case of other metals before the completion of the building.

With my invention it is evident that overhead pulleys may be secured in position after the window frames are in place, which is a very important consideration as compared with pulleys that need to be fitted in the frame before the frame is placed in the building. Moreover, my improved pulley and frame permit of the pulley being readily removed when required, without taking the frame apart.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent,—

1. An overhead sash pulley having a housing formed with a depending vertical bracket having a face plate at the front side, the housing overhanging and extending laterally at the back and at the front of the bracket, said bracket comprising vertical members within the side edges of the face plate and a rearwardly projecting foot near its lower end at substantially right angles to the face plate and at right angles to the mentioned vertical member and projecting rearwardly to the vertical line through the axis of the pulley, the said foot presenting an under surface to seat on the upper end of the stile.

2. The combination with a window frame comprising stiles and a top member ranging between the stiles, one of the stiles being cut away at the upper end to form an opening and provide a horizontal seat, and the top

member of the frame being cut away to form an opening which is a continuation of the opening formed at the upper end of the stile, of an overhead pulley, and a housing therefor of a size to pass either from front to rear, or vice versa through said opening formed in the stile and top frame member, the housing having a depending vertical bracket formed with a face plate fitting against the stile and closing the opening in the stile, and a horizontal foot on said bracket, presenting an under surface seating on the top of the stile in line with the axis of the pulley, the housing furthermore overhanging at the front of the depending bracket and face plate, the front overhanging portion of the housing closing the opening in the top member of the frame, and the pulley being mounted in the housing in position to lie at opposite sides beyond the plane of the stile.

3. An overhead pulley and housing, the housing having a depending vertical bracket and face plate, said housing extending at points adjacent to the pulley beyond the bracket and face plate, the pulley having its opposite, horizontal, peripheral points extending beyond the vertical plane of the bracket and face plate, and the said bracket comprising side plates, and a foot joining said side plates at the lower end of the bracket, and at the rear of the face plate the said foot extending rearwardly of a line passing vertically through the axis of the pulley, and the face plate having means additional to the foot and below the same, permitting it to be secured to the face of the stile.

4. The herein-described pulley and hous-

ing, said housing having a depending bracket formed with a face plate and with a rearwardly projecting horizontal foot presenting an under surface at the back of the face plate near the lower end of the latter to seat on the top of the stile and extending across a vertical line passing through the axis of the pulley, the housing at its upper end extending at the front and back beyond the vertical line of the bracket and face plate, the front extension being deflected outwardly and downwardly and the lower edges of the sides of the housing at said forwardly extended portion being cut away to produce notches in said sides.

5. An overhead pulley and a housing therefor, the housing carrying a face plate disposed vertically below the pulley, and a horizontal seat extending at the back of the face plate near its lower end at approximately right angles thereto to rest directly against the top of a window stile, the housing at the upper end and the pulley projecting both at the front and at the back beyond the plane of the face plate and seat, the face plate having means additional to the said seat and below the same for securing the said plate to the front of the stile, and the said seat being in a vertical plane lying between the forwardly and rearwardly extending upper portions of the housing and pulley.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES TUTEUR.

Witnesses:

J. L. McAULIFFE,
JOHN P. DAVIS.