(No Model.)

R. PENNINGTON.

SASH CORD CLAMP.

No. 456,277. Patented July 21, 1891.

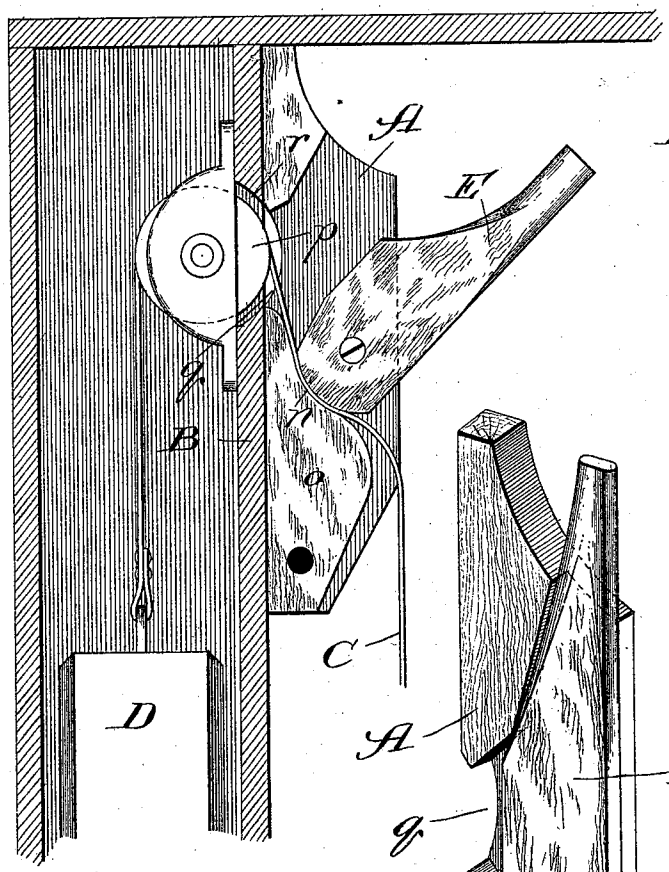

Fig. 2.

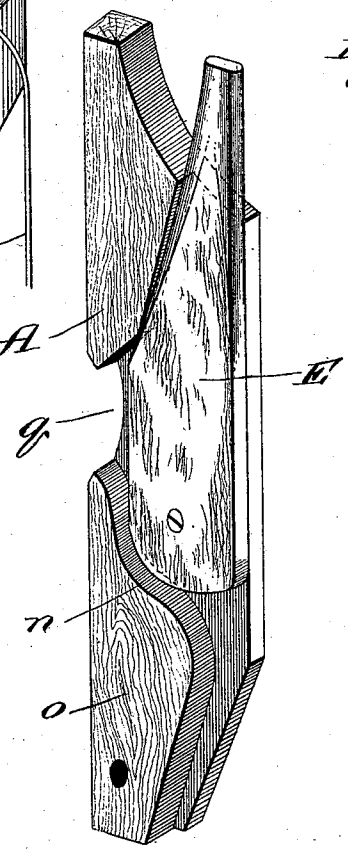

Fig. 1.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

RICHARD PENNINGTON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO OSWALD LOCKETT, OF SAME PLACE.

SASH-CORD CLAMP.

SPECIFICATION forming part of Letters Patent No. 456,277, dated July 21, 1891.

Application filed January 5, 1891. Serial No. 376,777. (No model.)

To all whom it may concern:

Be it known that I, RICHARD PENNINGTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Clamps, of which the following is a specification.

My invention relates to an improved construction of clamp to adapt it for application to a particular purpose—namely, that of facilitating the fastening of the weighted flexible suspending medium (rope, chain, or metal tape) for windows to the window-sashes. A common method hitherto practiced of supporting such a weight in the box at the side of a window-frame during the operation of fastening to the window-sash the free end of the flexible suspending medium passed over a pulley in the inner side of the said box and carrying the weight on its opposite end has been to prop the weight in the box by piling up therein blocks under the weight. This method is not only tedious, but expensive, considering the time it consumes, and dangerous by reason of the liability of the pile of blocks to be upset. Another method known to me is to wedge the suspending medium to hold it and thereby sustain the weight in elevated position. Besides affording unreliable means for producing the desired support, the wedge is liable to kink and thus weaken the metal tape, forming a commonly-used medium for the suspension, and for use with which my improvement is especially designed, since it serves to hold the tape with unyielding firmness without any liability to kinking and thus weakening it.

The object of my improvement is to provide a portable clamping-tool which shall afford ready means for holding the sash-weight in elevated position to enable the free end of the flexible suspending medium to be conveniently and safely handled in fastening it to the window-sash.

To this end my invention consists in the particular construction of a clamp, whereby it is adapted to serve the said purpose.

In the accompanying drawings, Figure 1 is a perspective view of my improved clamp, showing it open—that is, with the clamping-lever raised or out of operation. Fig. 2 shows the clamp in side elevation as operatively applied to its purpose of holding a sash-weight in elevated position.

My improvement is especially designed for use with the more recently-introduced metal-tape form of the said suspending medium. For that reason the drawings so represent it, and the description hereinafter contained is limited to such particular use.

A is a block formed, for the sake of lightness, preferably of wood, though it may be formed of metal, one edge forming the bearing-edge of the block A, which should be as long as due consideration for strength and its "stop" function, hereinafter referred to, require, and should be straight to bear flat against the inner side of the window-frame box B above and below the opening *r* therein for the sash-pulley *p*, over which the tape C passes from the sash-weight D, secured to it inside the box B. Between the aforesaid straight or flat portions of the bearing-edge of the block it is provided with a concave or other form of recess *q* to let in the protruding portion of the perimeter of the pulley. One side of the block A is cut away or reduced to form the shoulder *o*, having provided in it close to the recess *q* the concave bearing-surface *n*, which should conform to the arc of a circle and to the convex bearing end of a lever E, eccentrically fulcrumed at its head, as shown, upon the reduced portion of the block to enter and permit of its being wedged into the concavity *n*.

To use my improved tool it is applied to the protruded free end of the tape C by inserting the latter between the convex end of the lever and concave surface of the bearing *n*, and then pulling downward on the eccentrically-fulcrumed lever to clamp the tape, which should have been previously drawn out to raise the weight D to the desired elevation. As will be seen, when once adjusted in the manner described the clamp bears against the side of the box B, forming an effective stop to the descent of the weight, the gravity of which tends to increase the clamping strain of the lever.

The best service is afforded by the use of

two of my improved clamps for each sash-weight, one being applied to the protruding end of the tape with the weight in its lowest position as a means for raising the latter to the desired height by drawing against the clamping-lever, and the other being applied to the position illustrated in Fig. 1, while the clamp first applied is being utilized to hold the weight up, being removed from the tape after adjustment of the last-applied clamp.

It will thus be seen that my improvement affords a simply-constructed but highly-effective and convenient tool for the purpose for which it is designed, the extent and form of the clamping-surface avoiding all injury to the tape by kinking it. That its use is attended with great economy is manifest from the fact of an actual saving it has permitted (on a large building now undergoing construction and having seven hundred and thirty large windows) of fully fifty per cent. of the estimated cost of attaching to them the sash-weights by the methods hitherto employed.

What I claim as new, and desire to secure by Letters Patent, is—

A portable clamping-tool comprising, in combination, a block A, adapted to bear at one edge against the inner side of a window-frame box B both above and below the sash-pulley *p* therein and provided in said bearing-edge with a recess *q* to admit the protruding-portion of the pulley, a shoulder *o*, provided on one side of the block below the recess *q* and formed with a smooth concave bearing-surface *n*, and a lever E, eccentrically fulcrumed at its head to the said side of the block A above the shoulder and having a smooth convex bearing end to enter and permit of its being wedged into the concave bearing *n*, the whole being constructed and arranged to operate as and for the purpose specified.

RICHARD PENNINGTON.

In presence of—
J. W. DYRENFORTH,
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