

(No Model.)

G. L. FOWLER.
SASH CORD FASTENER.

No. 469,689.

Patented Mar. 1, 1892.

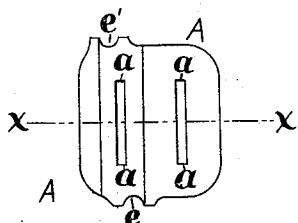


Fig:1

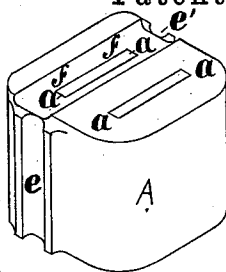


Fig:3

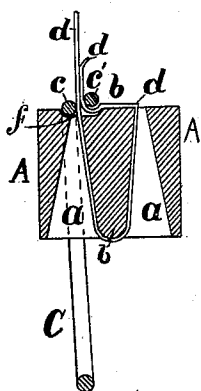


Fig: 2

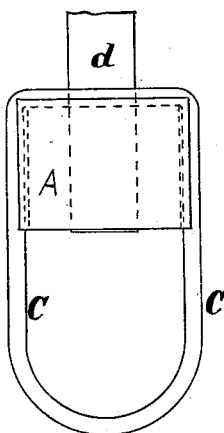


Fig:7

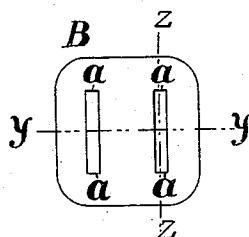


Fig: 4

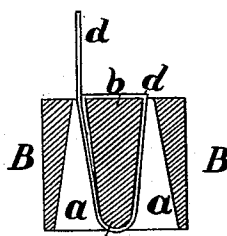


Fig:5

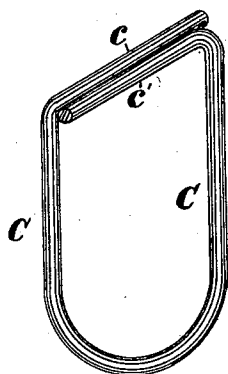


Fig: 6

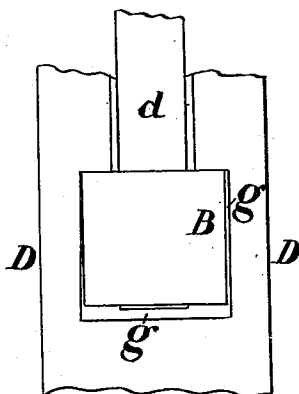


Fig:8

WITNESSES

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UNITED STATES PATENT OFFICE.

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SASH-CORD FASTENER.

SPECIFICATION forming part of Letters Patent No. 469,689, dated March 1, 1892.

Application filed October 27, 1891. Serial No. 409,979. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. FOWLER, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Sash-Weight Holder, of which the following is a specification.

My invention relates to that class of sash-balancing devices in which the sash-weight is secured to the window-sash by means of a metallic strap instead of a fibrous cord; and the object of my device is to provide the means of conveniently, securely, and cheaply fastening the metallic strap, one end thereof to the sash and the other end to the weight.

The nature of my invention consists of two simple castings, each consisting of one piece only having two tapering slotted apertures extending vertically through them and through which apertures the ends of a metallic strap are reversely passed and automatically bound by a tight upon itself caused by the downward pull of the weight. The two castings are alike, except that the one employed at the weight end of the strap is grooved on its top and sides to receive and secure to itself a shackle for attaching the balance-weight, the purpose of one of the said castings being to secure the metallic strap to the window-sash and the other casting to secure the other end of the strap to the weight-shackle, which I will term, respectively, the "sash-holder" and "weight-holder," which are illustrated by the accompanying drawings, in which—

Figure 1 is a plan view of the weight-end holder; Fig. 2, a vertical section of Fig. 1 on the line *x x*, including also the weight-shackle as isometrically shown by Fig. 6 and the corresponding end of the metallic strap; Fig. 3, an isometrical view of Figs. 1 and 2, but not including weight-shackle and said strap; Fig. 4, a plan view of the sash-end holder; Fig. 5, a vertical section of Fig. 4 on the line *y y*, including the corresponding end of the metallic strap; Fig. 6, an isometrical view of the weight-shackle, a vertical section of which is seen in Fig. 2; Fig. 7, a vertical view of the weight-shackle and weight end of the metallic strap; and Fig. 8, a vertical view of the window-sash containing the sash-end holder, as seen on the line *z z* of Fig. 4, with the sash end of the strap.

Similar letters refer to similar parts throughout the several views.

A A represent the weight-end holder; B B, the sash-end holder; C C, the weight-shackle; D D, the window-sash; *a a*, the tapering apertures through the weight-holder and sash-holder, in which is shown the end portions of the metallic strap *d d*; *b b*, a tapering partition between and formed by the slots *a a*; *e e* and *e'*, grooves or recesses in the sides of the weight-end holder to receive the vertical portions of the weight-shackle, these side grooves or recesses standing in an offset position from each other to correspond with the position of the said portions of the weight-shackle, while across the top of the weight-end holder A A is a broader groove or recess *f f* to receive both of the horizontal portions *c* and *c'* of the weight-shackle. To secure the metallic strap *d d* to the weight-end holder A A, it (the strap) is first passed down through one of the tapering slots *a a*, (the one standing in line between the side grooves *e* and *e'*), then up through the other slot, then bent at right angles, and carried across the top of the partition *b* and passed up between the two horizontal portions *c* and *c'* of the weight-shackle, whereby the downward pull of the weight binds the strap between the top of the weight-holder A A and one of the horizontal portions *c'* of the shackle, as shown in Fig. 2. To secure the metallic strap to the sash-end holder B B, it (the strap) is passed down through one of the tapering slots *a a*, then up through the other slot, then bent toward itself across the top of the partition *b*, and down by the side of itself in the first slot, whereby the end is bound between the partition *b* and itself where it first entered the holder, whereby by the several turns thus formed in the strap by passing around the partition *b*, together with the tight upon itself, it is prevented from being drawn out of the holder by the action of the weight.

The weight-shackle C C is secured to the weight-end holder A A by the spring action of the metallic rod of which it is made, which binds its vertical portions in the side-grooves *e* and *e'*, while the pull of the weight keeps the horizontal portions *c* and *c'* in the groove *f f*. I am aware of Patent No. 429,212, issued June

3, 1890, in which a holder for the same purpose is provided with a tapering slot, through which the metallic strap is passed, and, after being looped, is reversely passed through the same slot, depending either alone upon the loop to keep it (the strap) from being pulled out of the holder or upon passing a pin or bar through the loop; but the loop alone is not a secure fastening, while the pin or bar, being a detached part, is liable to fall out of place and is difficult of adjustment. I am also aware of Patent No. 441,757, issued December 2, 1890, in which a holder for the same purpose is provided with a tapering slot, through which the metallic strap is passed, and, after being looped, is reversely passed through the same slot, and a detached wedge-shaped piece is placed in the loop and drawn into the slot by the loop of the strap to bind it (the strap) in the slot of the holder; but in my device I am able to dispense with the detached portion of the holder, be it a pin, cross-bar, key, or wedge, and so to simplify the holder and reduce it to a single piece by providing a holder for the specified purpose having two slots with a partition formed by and between them, through

one of which the metallic strap is first passed and the reverse passage of which is made through the other slot, so that the partition between the two slots accomplished without looping the strap what requires in the patents above cited the looping of the strap and the employment of a detached piece or part. Therefore,

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

In a sash-balance, the combination of the weight-holder A, having two slots *a a*, partition *b*, grooves *e, e'*, and *f*, weight-shackle C, having the two transverse arms *c* and *c'* and having the said transverse arms resting in the transverse groove *f* and its vertical portions resting in the vertical grooves *e* and *e'*, and flat metallic strap *d*, having a turn around the partition *b* and under the transverse arm *c'* of the said shackle, substantially in the manner and for the purpose set forth.

GEO. L. FOWLER.

Witnesses:

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