

(No Model.)

C. R. MULLEN.
SASH WEIGHT.

No. 577,561.

Patented Feb. 23, 1897.

FIG. 1.

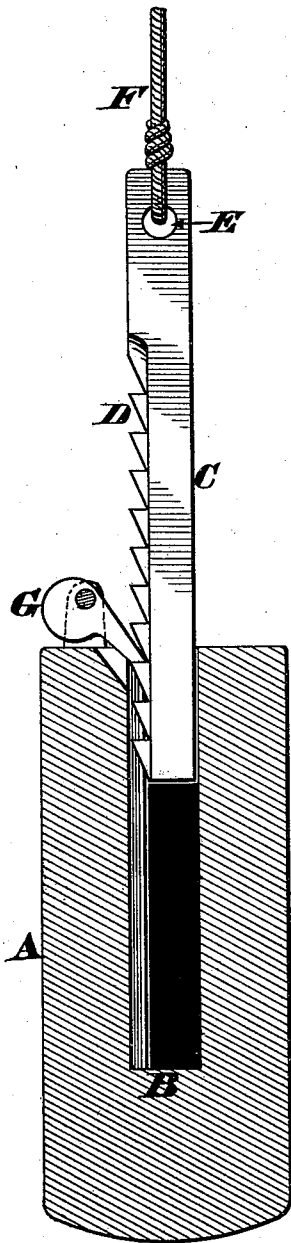


FIG. 2.

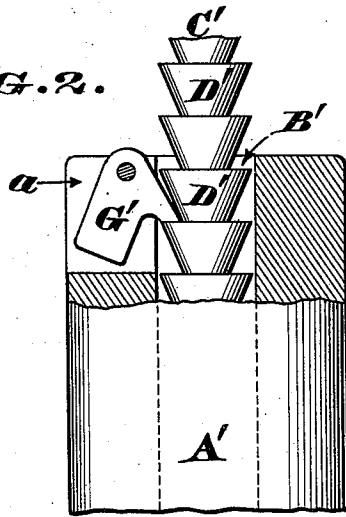


FIG. 3.

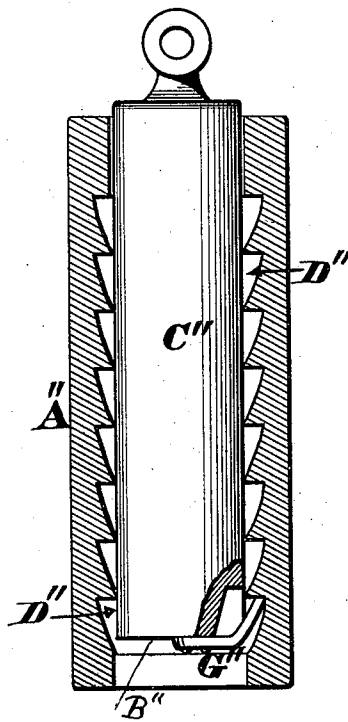
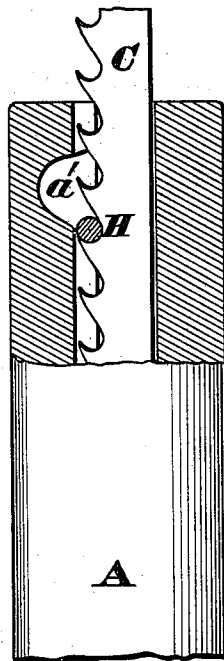


FIG. 4.



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UNITED STATES PATENT OFFICE.

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SASH-WEIGHT.

SPECIFICATION forming part of Letters Patent No. 577,561, dated February 23, 1897.

Application filed December 19, 1896. Serial No. 616,291. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. MULLEN, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Sash-Weights; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form a part of this specification.

The object of my invention is to furnish a sash-weight that will automatically take up or compensate for any stretching of the cord from which it is suspended, the construction of said device being as follows: I make the weight of two distinct parts or sections, one of which is capable of sliding longitudinally within the other, and provide either of these sections with a ratchet, while the other section is furnished with a pawl or detent. Consequently when a sash-cord stretches so far as to permit the lower section to strike the bottom of a window-frame or weight-box the upper section slides with reference to said lower or stationary section and is automatically engaged therewith by the ratchet mechanism, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a vertical section of one form of my compensating sash-weight. Figs. 2, 3, and 4 are modifications of the invention.

As seen in Fig. 1, the weight proper, A, is a casting of any appropriate size and shape and has a longitudinal bore or socket B to receive a bar C, said socket and bar being preferably square in transverse section. This bar has ratchet-teeth D, projecting from one side, and terminates at top with an eye E, to which latter is attached a sash-cord F.

G is a pawl so pivoted upon the weight A as to normally swing toward the bar C.

In fitting up this window attachment the cord F is first fastened to the bar C, after which act the weight A is applied to said bar and is run up until the pawl G engages with one of the lower notches or ratchets D, it being understood as a matter of course that said cord has been cut to a proper length to prevent the section A striking the bottom of the weight-box. It is evident these two sections A C now constitute a single weight, and

as long as there is no stretching of the cord F they will remain as first adjusted. As soon, however, as the cord stretches far enough to allow the weight A to rest upon the bottom of the window-frame the bar C instantly descends within the socket B, and thereby enables the pawl G to engage with another tooth of ratchet D. Consequently these sections A C are automatically coupled together in this new relation, and their combined weight is again effective in supporting the sash. At every material stretching of the cord this automatic coupling of the sections takes place, and by making these of a proper length any possible elongation of said cord may be compensated for without requiring personal attention. Again, by making the socket B and bar C square or non-circular in transverse section they will turn around together within the weight-box, and for this reason the pawl G will always be in a proper position for engaging with the teeth D of said bar.

In the modification of my invention seen in Fig. 2 the socket B' is circular in cross-section, and the bar C' is similarly shaped, but consists of a number of conical bearings D' for a pawl G' to engage with, the pawl being pivoted in a vertical slot *a* of the weight A'. By this arrangement either one of the sections A' or C' may turn around with reference to the other section, and yet the pawl will always have a secure bearing against the base of one of the cones; but in another modification (seen in Fig. 3) the central section C'' constitutes the weight, and has at bottom a spring-catch G'', adapted to engage with either one of a set of ratchet-bearings D'' of an inclosing shell or sleeve A''. These bearings run completely around a cylindrical bore B'', extending the entire length of said shell. This construction imparts considerable weight to the drop-section C'' and renders its descent in the other section D'' very prompt and certain.

In yet another modification (seen in Fig. 4) a rolling cylindrical detent H is so housed within a recess *a'* of the weight A as to permit a free descent therein of the ratchet-bar C, but to lock the latter against any raising within said weight.

I claim as my invention—

1. A sash-weight including a pair of sections, one of which slides longitudinally within the other, and a ratchet mechanism that automatically couples them together as soon as
5 the lower section is arrested, in the manner described.

2. The sash-weight A, having a pawl G and

longitudinal passage B, in combination with the ratchet-bar C D, for the purpose stated. 10

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

CHARLES R. MULLEN.

Witnesses:

JAMES H. LAYMAN,
HARRY WERNKE.