

W. BENNETT.
 SASH BALANCE.
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1,254,647.

Patented Jan. 29, 1918.

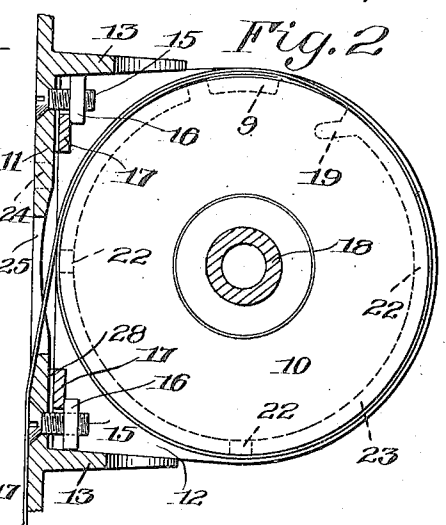
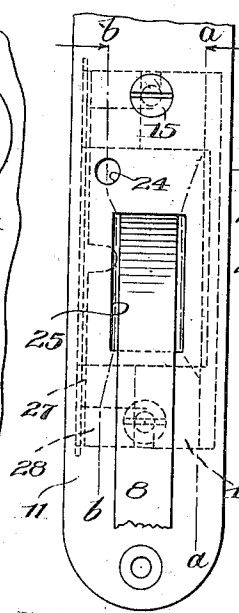
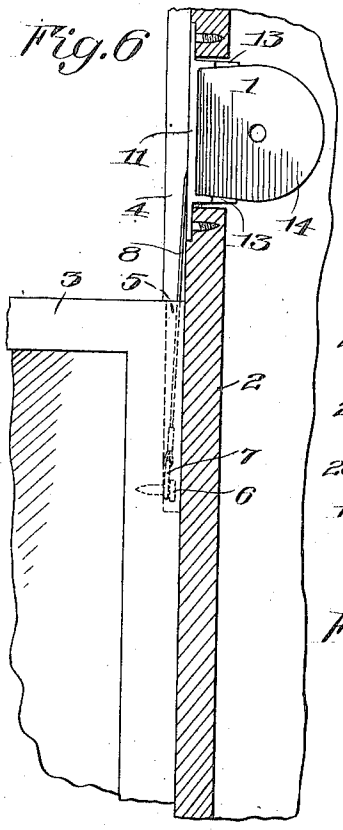


Fig. 1

Fig. 4

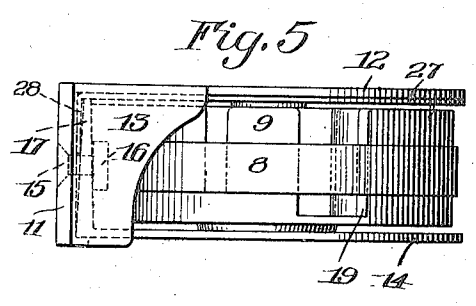
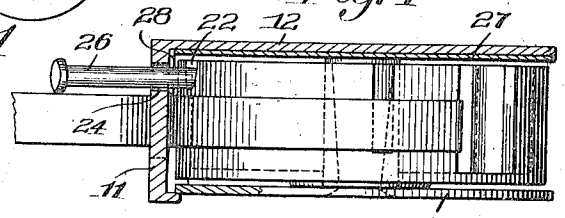


Fig. 5

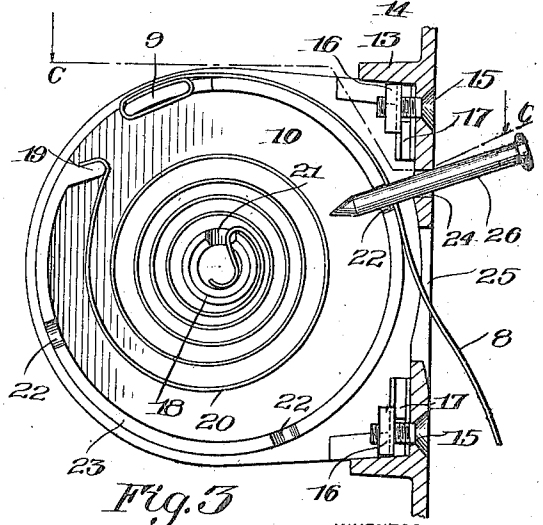


Fig. 3

WITNESSES:

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SASH-BALANCE.

1,254,647.

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To all whom it may concern:

Be it known that I, WILLIAM BENNETT, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Sash-Balances; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to an improved sash balance and has for its object to provide in a device of this kind a simple, durable and economical form of construction adapted to be set in flush with a window frame on which a sash is to be guided, said device being provided with a supporting tape or other flexible member connecting with the sash for balancing the same in its up and down movement.

A further object of the invention is to provide a sash balance having a tape or cable or other flexible sash supporting member mounted on a spring actuated drum capable of being locked in any desired position after a predetermined amount of tape has been withdrawn from the device to be attached to the sash for supporting the same. To these and other ends the invention consists in certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claim at the end of the specification.

In the drawings:

Figure 1 represents a front elevational view of the improved device;

Fig. 2 is a sectional view taken on line *a-a* of Fig. 1;

Fig. 3 in a sectional view taken on line *b-b* of Fig. 1;

Fig. 4 is a sectional view taken on line *c-c* of Fig. 3;

Fig. 5 is a top plan view, and

Fig. 6 is a sectional view through a window frame showing the manner of mounting the device therein and of connecting the supporting tape or cable to the side of a sash adapted to be guided in the frame.

Similar reference numerals in the several figures of the drawings indicate the same parts.

Referring to the drawings by numerals 1 represents a sash balance mounted upon a

window frame 2 in which a sash 3 is adapted to be raised and lowered between the usual guides 4 positioned upon the frame. The sash 3 is provided with a groove 5 formed in the side thereof and in said groove near the bottom of the same is positioned a pin or other suitable member 6, adapted to receive a ring or loop 7 on one end of a flexible tape or cable 8, the other end of which is preferably connected with a projection 9 carried by a drum 10. A supporting member for the drum comprises a bracket having a front plate 11 adapted to be secured to the window frame 2 and from which extends rearwardly and preferably integral therewith a side member 12 connected to the front plate by substantially triangular braces 13. A removable side member 14 is connected to the back of the front plate 11 between the braces 13 preferably by the means of suitable bolts 15 passing through the front plate and provided with nuts 16 adapted to engage right angle projections 17 on the side member 14 as shown in Figs. 2, 3 and 5. The side member 14 is provided with a hollow extension or shaft 18 upon which the drum 10 is rotatably mounted as shown in Fig. 2. On the inner periphery of the drum 10 is provided a shoulder 19 to which is attached one end of a main or actuating spring 20 the other end of which is secured in a slot 21 formed in the wall of the hollow extension or shaft 18. A series of openings or notches 22 is formed in the outer periphery 23 of the drum 10 as shown in Fig. 3. An aperture 24 is formed in the front plate 11 in position to register with the openings 22 formed in the outer periphery 23 of the drum 10 as the same is revolved upon the shaft 18. The supporting tape 8 is wound upon the drum to one side of the openings 22 and is adapted to extend through an opening 25 in the front of the plate 11 as shown in Figs. 1, 2 and 3. A nail or other suitable member 26 is adapted to be inserted through the aperture 24 to be positioned in one of the registering notches or openings 22 of the drum 10 when it is desired to lock the same against rotation after a predetermined amount of tape has been unwound therefrom. A wearing plate 27 is positioned on the inner face of the side member 12 and is held in position by projections 28 engaging the projections 17 as shown in Figs. 4 and 5. Heretofore in applying sash to window

frames in which a sash balance has been used comprising a flexible supporting member wound upon a spring actuated drum, it has been necessary for the operator to retain
 5 control of the sash and both of the flexible supporting members at the same time, the flexible supporting members being under considerable tension, due to the action of the spring, and therefore making it difficult
 10 for the operator to hold and attach the members to the sash at the same time. In order to overcome this objection I have provided the improved mechanism of the present embodiment in which each of the flexible sup-
 15 porting members may be pulled out separately a predetermined amount and allowed to hang loosely from the device by locking the drum in the manner previously described. The operator may then insert the
 20 bottom of the sash between the sash guides, with the top held out at an angle while attaching the free ends of the flexible supporting members to the pins 6 in the grooves 5 of the sash, after which the top of the sash

is pushed into the frame in the proper position as shown in Fig. 6, thus rendering the operation of attaching the flexible members to the sash a comparatively easy one.

I claim as my invention:

In a sash balance, the combination with 30 a drum, a casing inclosing it embodying a face plate located beyond the periphery of the drum and a spring for rotating the latter in one direction, of a flexible sash sustaining member wound upon the drum, said 35 face plate and drum each having an aperture located at one side of the plane occupied by the flexible member and adapted to register, a removable pin insertible in said apertures in a direction transversely to the 40 axis of the drum and cooperating therewith to temporarily lock the drum to facilitate the attachment of the sustaining member to the sash.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."