No. 891,723. PATENTED JUNE 23, 1908.

C. H. OCUMPAUGH.

SASH BALANCE.

APPLICATION FILED MAR. 20, 1907.

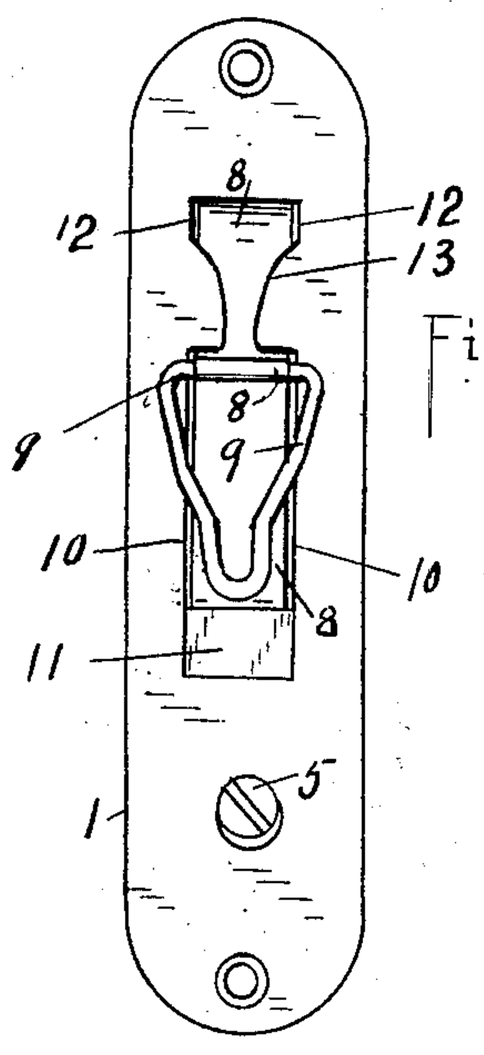

Fig. 1.

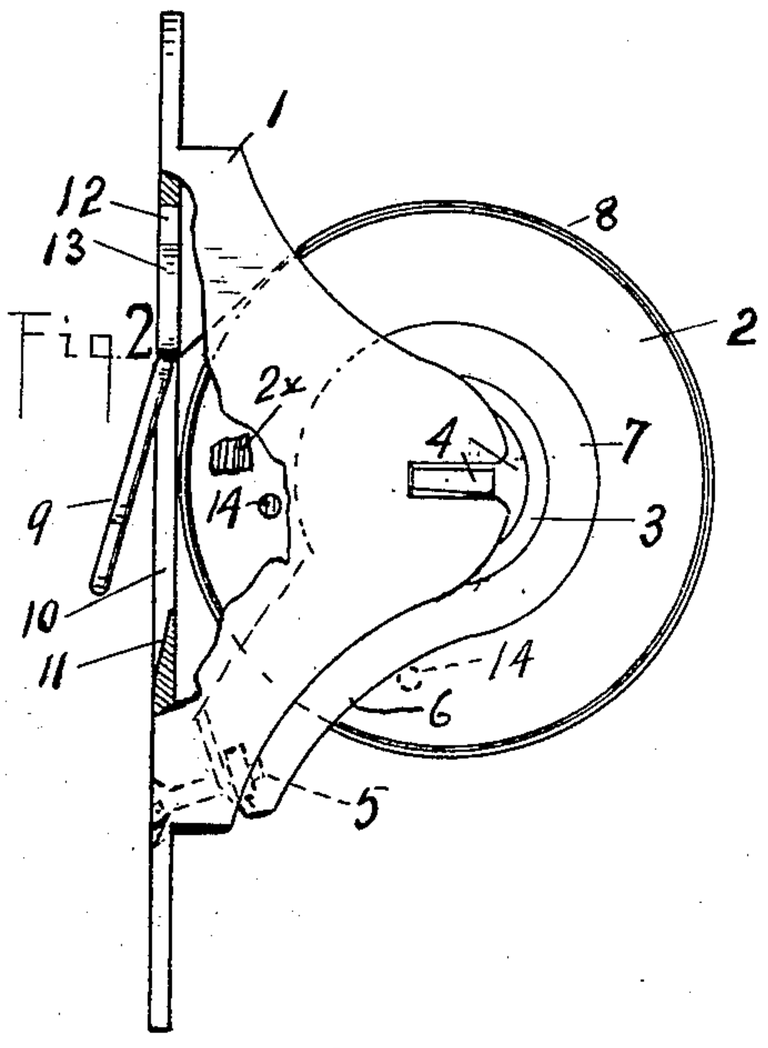

Fig. 2.

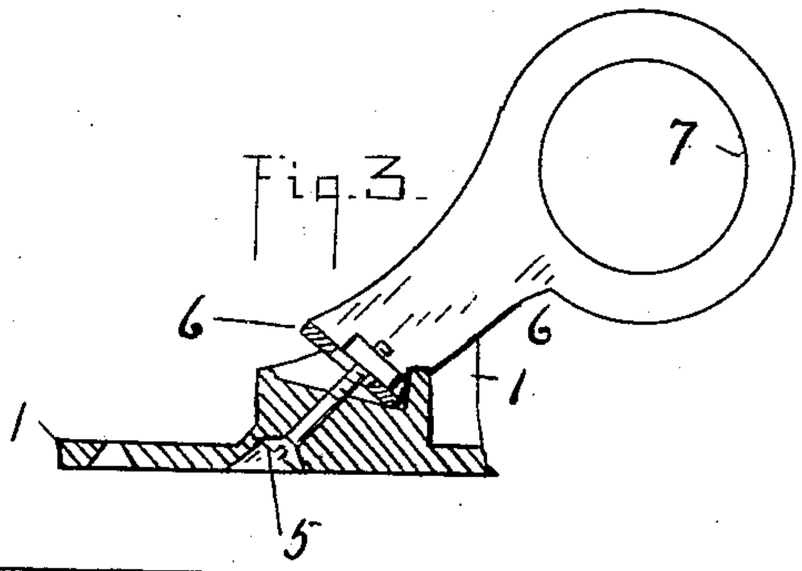

Fig. 3.

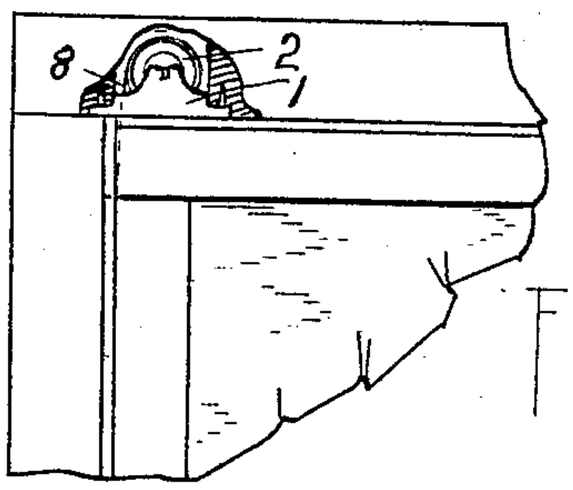

Fig. 4.

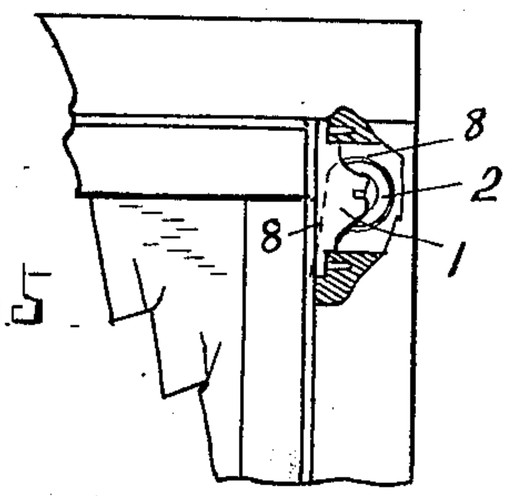

Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

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SASH-BALANCE.

No. 891,723. Specification of Letters Patent. Patented June 23, 1908.

Application filed March 20, 1907. Serial No. 363,434.

To all whom it may concern:

Be it known that I, CHARLES HERBERT OCUMPAUGH, a resident 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 invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to sash balances, and has for its object to adapt such balances for use either at a side or at the top of a sash or in similar situations.

The invention consists in the construction hereinafter described and pointed out.

In the accompanying drawing which illustrates the invention and forms a part of the specification—Figure 1 is a front elevation of a sash balance; Fig. 2 is a side elevation partly in section; Fig. 3 is a partial section of the frame and friction device; Figs. 4 and 5 are side elevations showing the device secured to a casing at a top and at a side of a sash respectively.

Numeral 1 denotes the frame of a sash balance, and 2 a spring drum containing as usual a spring $2^{\times}$ and having a hub 3 rotatably supported on a shaft 4. Fixed to the face plate of the frame by an adjusting screw 5 is a friction device 6 having a ring portion 7 surrounding the hub.

8 denotes a band fixed to and wound upon the spring drum, and 9 is a loop or ring of usual character attached to its outer end.

The face plate is provided with a slot 10 for the operation of the band when the balance is fixed in the casing at the side of the sash or the like (as in Fig. 5) as usual in this class of devices. It is made of considerable length and substantially as represented to avoid excessive friction between the band and the lower edge of the slot, and the plate is channeled or chamfered at 11 for the same purpose.

The described slot 10 which is of usual form and dimensions is in my improvement connected to a second slot 12 in the plate by a passage 13 to permit the band 8 to be passed from one to the other.

The slot 12 is situated in a plane tangential to the band coil, the purpose being to fit the balance for use when fixed to the casing over a window (as in Fig. 4). Being situated substantially as shown and described the band can when the balance is used at the top of a sash pass freely through said opening 12 without binding on the plate. Part of passage 13 is made approximately of the form of a longitudinal section of an hour glass, being flared at its upper end immediately communicating with slot 12 for a reason to be set forth.

Under some circumstances it is desirable to use "top" or overhead balances, as in the case of heavy triple windows, and in such cases it is customary to procure them by special order, which often occasions delay and involves extra expense. By my improvement the same balances can be used either at the side or top by transferring the band from one slot in the face plate to the other through the medium of the connecting passage 13. The flaring end of this passage facilitates this transfer which is effected as follows: The band is withdrawn a short distance and turned approximately forty five degrees and this turned part passed from one slot to the other. The flare at the end of passage 13 facilitates this operation, but that adjacent slot 12 also provides space for the described torsion of the band when it is desired to pass it from slot 12 to slot 10.

To neutralize the tension of the spring $2^{\times}$ that would obstruct these operations the spring drum and frame may be locked together temporarily. For this purpose a hole 14 is provided in or through the drum to receive a nail or the like when exposed by drawing out the band. Such nail when inserted bears on the frame (as indicated by the small dotted circle in Fig. 2) in such manner as to hold the spring. In the present instance such nail would bear against the friction device 6 which is fixed to and is virtually a part of the frame, and the point of the nail would or might pass between coils of the spring $2^{\times}$ in the drum.

In practice the nail may be driven into a carpenter's bench or other fixed object, and the loop 9 placed around such fixed nail and the balance so drawn as to turn the drum and carry the opening 14 to position indicated by broken lines, whereupon the nail may be inserted therein and the loop relieved and the band freely manipulated while the spring drum and casing are thus held in fixed relation.

What I claim is—

1. In a sash balance, a drum, a spring in the drum, a suspending band on the drum, and a frame for the drum embodying a face

plate having an opening for the band consisting of two slots connected by a narrow passage.

2. In a sash balance, a rotatable spring-drum, a spring in the drum, a suspending band on the drum, and a frame for the drum embodying a face plate having an opening for the band, said opening extending to a plane approximately tangential to the drum and cutting the plate at approximately right angles transversely to its length.

3. In a spring sash balance, a face plate having an opening, a spring and drum having a suspending band extending through the opening, the drum being pivoted to the frame, and the suspending band leaving the drum at a right angle to the face plate when the latter is in a horizontal position, and leaving the drum at less than a right angle when the face plate is in a vertical position, and a single adjusting screw at one end of the opening controlling the friction on the drum without regard to whether the face plate extends in a vertical or a horizontal plane.

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

C. HERBERT OCUMPAUGH.

Witnesses:
R. COPLIN,
I. KAUL.