(No Model.)

J. A. ROGERS.

SASH BALANCE.

No. 389,248. Patented Sept. 11, 1888.

Fig. 2.

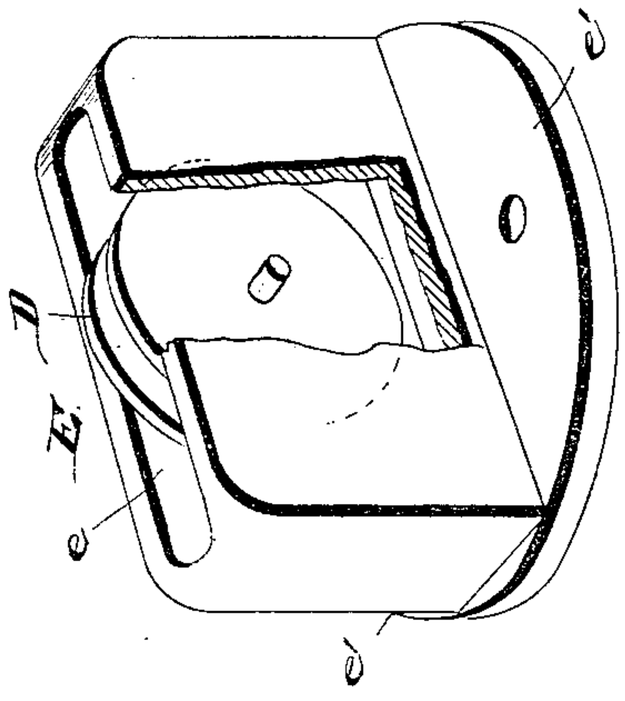


Fig. 3.

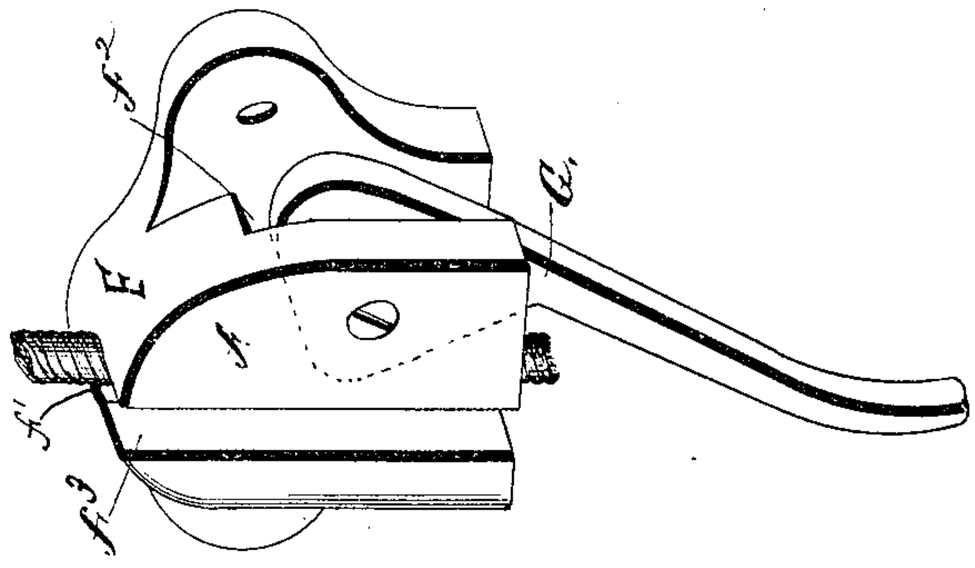
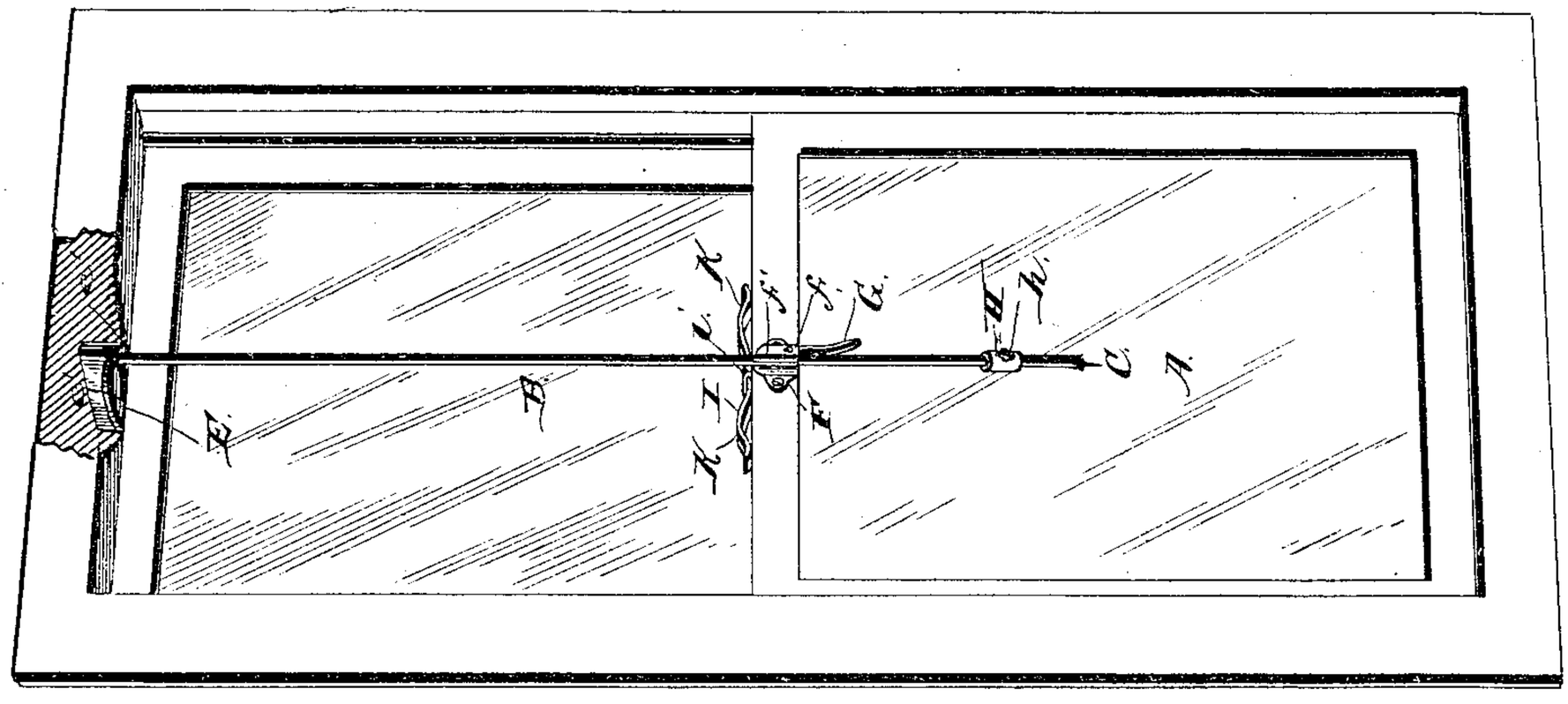


Fig. 1.



Witnesses:
Geo. J. Troyer.
C. E. Doyle.

Inventor,
J. A. Rogers.
By his Attorneys
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UNITED STATES PATENT OFFICE.

JOHN ALEN ROGERS, OF HARTSELL'S, ALABAMA.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 389,248, dated September 11, 1888.

Application filed June 21, 1888. Serial No. 277,720. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALEN ROGERS, a citizen of the United States, residing at Hartsell's, in the county of Morgan and State of Alabama, have invented new and useful Improvements in Sash-Balances, of which the following is a specification.

My invention relates to improvements in sash-balances; and it consists in a certain novel construction and combination of devices, fully set forth hereinafter in connection with the accompanying drawings, wherein—

Figure 1 is a perspective view of a window in which the sashes are provided with the improved balance. Fig. 2 is a detail view of the sheave and the casting in which it is mounted. Fig. 3 is a similar view of the device for securing the free end of the cord and the adjustable stop.

Referring to the drawings by letter, A designates the lower and B the upper sash, and C designates a cord which is rigidly attached at one end to the top rail of the upper sash and passes over the sheave D, which is mounted in a casting, E, in the top of the frame or casement of the window. This casting consists of the recessed body *e*, countersunk in a recess in the frame or casement, and the lateral ears *e'*, secured to the face of the frame or casement by means of screws or equivalent means.

F represents the clamp, which is affixed to the front or inner side of the meeting-rail of the lower sash, and it consists of the body *f*, provided with the vertical tubular opening *f'*, and a slot, f^3, in its front side communicating with the opening *f'*; and G represents a cam-lever mounted in a recess, f^2, which communicates with the said opening, and the lever is adapted to project into the opening. The cord C, after passing through the casting at the top of the frame, passes vertically down and through the opening *f'*, and is adapted to be clamped at any point therein by the cam to hold the sashes at the desired elevation. An adjustable cylindrical stop, H, is arranged on the cord below the clamp, and is provided with the set-screw *h*, engaging the cord to hold it in the desired position. This stop is arranged at such a point on the cord that if at any time the clamp should be accidentally loosened the raised sash cannot reach the bottom of the casement before the stop strikes the bottom of the clamp. Further, this stop may be arranged in contact with the bottom of the clamp when the sashes are in their closed positions, so as to obviate the necessity of using the clamp except when the cord is to be shortened to hold both sashes raised above the center of the casement. Thus the stop acts, in combination with the hollow body of the clamp, to provide convenient means for operating the sashes.

This balancing device, as will be seen, is simple, and with it the sashes may be arranged in any desired position. When the cord is secured in the clamp, the lower sash may be moved either up or down and the upper sash will be moved in the opposite direction an equal distance; also, either sash may be moved while the other remains stationary. A curved spring, I, is arranged on the meeting-rail of the lower sash in such a position that when the sash is raised the spring will strike against the top of the casement and prevent a jar. The spring is affixed to the sash at its center by a staple or keeper, *i*, and it consists of the upwardly-convex arms K K, extending on opposite sides of the staple or keeper. Similar springs may be arranged on the upper and lower edges of the upper sash; but only one is shown in the drawings, as this will illustrate the device.

I am aware that various devices of this character have been heretofore employed, and I do not wish to claim its features, broadly. The advantages of the improved clamp are, the cord may be inserted thereinto by passing it through the slot f^3 in its face without drawing it longitudinally therethrough, thus saving time, saving trouble, and saving wear on the cord, for when the cord is to be adjusted to any considerable extent it may be removed, drawn down to the desired point, and replaced.

Having described my invention, I claim—

In a sash-balance, the combination, with the upper and lower sashes, of the hollow clamp secured to the meeting-rail of the lower sash, the cord secured to the upper sash, passing around a suitable sheave at the top of the win-

dow-frame, and extending through the opening in the clamp, and the adjustable stop secured on the running portion of the cord near its free end and adapted to bear against the lower side of the clamp, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN ALEN ROGERS.

Witnesses:
D. W. DAY,
R. H. BOTELER.