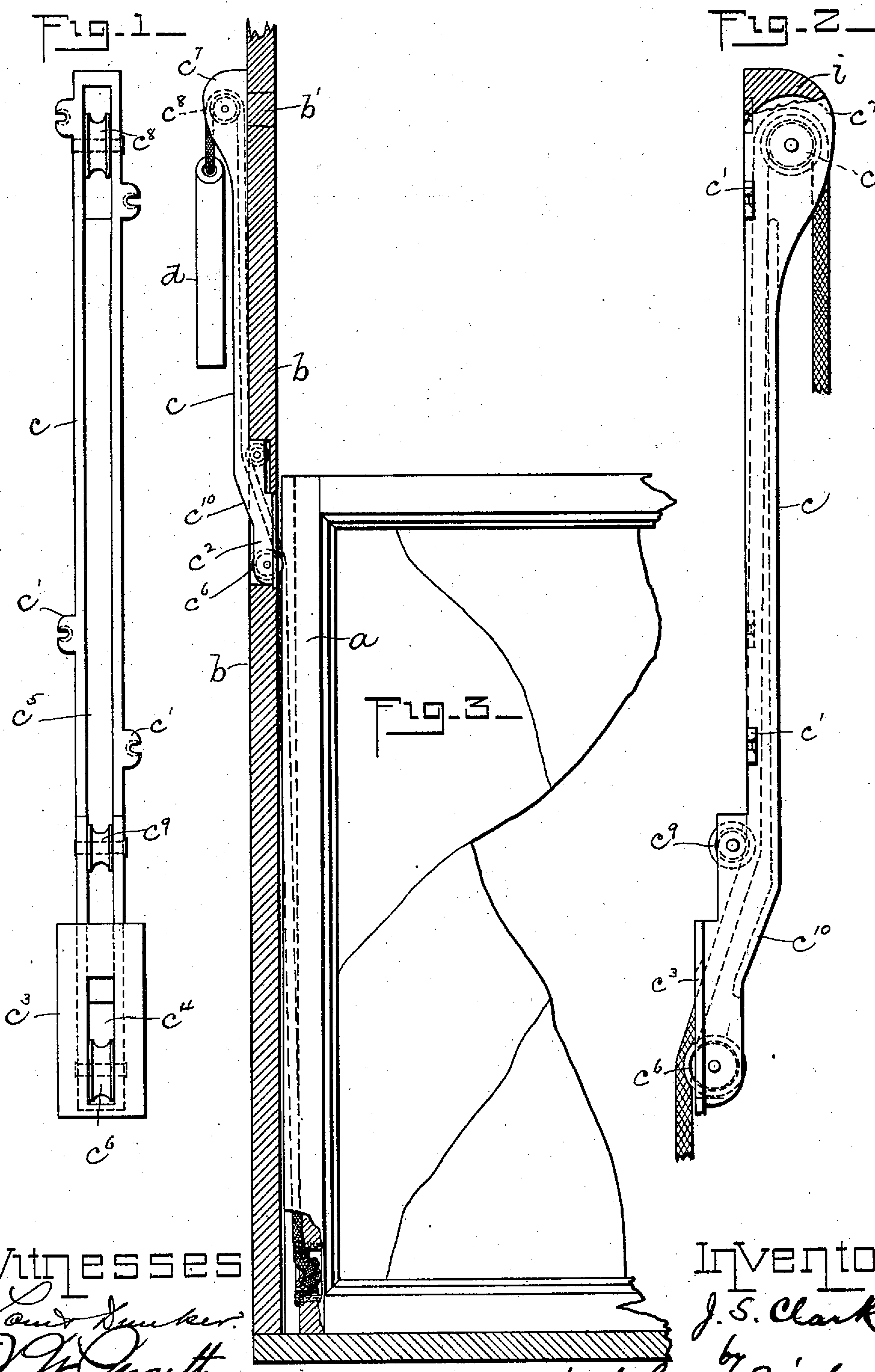
No. 654,874. Patented July 31, 1900.

J. S. CLARK.

SASH CORD GUIDE.

(Application filed Dec. 13, 1899.)

(No Model.)



Witnesses

Inventor

J. S. Clark

by Hughes Brown & Quimby Attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JULIUS S. CLARK, OF MELROSE, MASSACHUSETTS.

SASH-CORD GUIDE.

SPECIFICATION forming part of Letters Patent No. 654,874, dated July 31, 1900.

Application filed December 13, 1899. Serial No. 740,150. (No model.)

To all whom it may concern:

Be it known that I, JULIUS S. CLARK, of Melrose, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Sash-Balances, of which the following is a specification.

This invention has for its object to enable the cord which connects a window-sash with the sash-balancing weight to be concealed behind the stile of the window-casing and to be readily inserted through the stile and connected with the weight in the interior of the casing without the necessity of removing the stile in the event of breakage of the cord.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a front elevation of the improved sash-cord guide which constitutes the chief part of my invention. Fig. 2 represents an edge view of the same, showing a sash-cord in place in the guide. Fig. 3 represents a vertical section showing the stile of a window-casing having my improved guide and a portion of the lower sash, together with the weight and cord.

The same reference characters indicate the same parts in all the figures.

In the drawings, *a* represents a window-sash, and *b* represents one of the stiles of the window-casing, against which one edge of the sash runs.

My improved cord-guide comprises a longitudinally-grooved or channeled body portion *c*, which is formed with a flat inner face adapted to bear on the inner surface of the stile *b* and provided with ears c' c' to receive attaching-screws which secure the guide to the stile. The lower end c^2 of the guide is offset and projects into a mortise or slot cut for its reception in the stile, said offset end having a plate c^3, which is preferably flush with the outer surface of the stile. A slot c^4 is formed in said plate, which communicates with the groove or channel c^5 in the guide.

c^6 represents a grooved pulley journaled in the lower portion of the offset end c^2, a portion of said pulley projecting into the slot c^4.

c^7 c^7 represent ears formed above the body portion *c* and projecting rearwardly therefrom.

c^8 represents a grooved pulley journaled in the ears c^7 and so located that the cord passing through the body portion *c* will pass in line with said body portion onto one side of the pulley c^8 and in passing over said pulley will hang with the weight *d* at one side of the body portion *c*, as shown in Figs. 2 and 3, so that the weight does not interfere with the body portion of the guide.

c^9 represents an intermediate grooved pulley journaled in the upper portion of the offset end c^2 and so arranged relatively to the body portion *c* and the lower pulley c^6 that the cord in passing from the pulley c^6 to the pulley c^9 will assume an oblique direction and will be guided by the pulley c^9 into the groove of the body portion *c*. The offset end c^2 includes an inclined back c^{10}, which is arranged to guide the end of a cord inserted in the slot c^4 upwardly between the rear wall of the guide and the pulley c^9. The cord thus inserted can be pushed upwardly through the body portion *c* of the guide into engagement with the pulley c^8 and may be guided over said pulley by any suitable instrument inserted through an orifice in the stile opposite the pulley c^8, said orifice being shown in Fig. 3 as closed by a plug b', forming a removable part of the stile *b*.

It will be observed that the offset lower end of the guide projects through the stile at a point below the upper end of the sash supported by the cord passing through said guide, so that the cord is entirely concealed from view. It will also be observed that in the event of breakage of the cord a new cord can be applied to the sash and engaged with the guiding-pulleys by threading it through the guide in the manner above described and without the necessity of removing the stile bodily. The stile may be provided with the usual removable section at its lower portion to permit access to the weight when the latter is at the lower end of the space which contains it, so that the cord after being threaded through the guide from the outer side of the stile can be secured to the weight by removing the removable section of the stile.

In Fig. 2 I show by dotted lines a curved wall *i*, formed at the upper end of the device between the ears c^7, said wall being formed to guide the end of the cord outwardly over

the pulley c^8 when the cord after being inserted in the slot c^4 is being pushed upwardly through the cord-guide, the wall *i* causing the end of the cord to pass over the pulley and downwardly behind it and rendering an opening in the stile opposite the pulley c^8 unnecessary.

I claim—

1. The combination of a window-casing and its stile, a cord-guide affixed to the back of the stile and consisting of a body portion grooved on its front face to form a channel between the body portion and the back of the stile, and cord-pulleys journaled on said body portion at its upper and lower ends.

2. The combination of a sash, a window-casing and its stile, a lower cord-pulley, an upper cord-pulley, a cord attached to the sash and passing upward over the lower pulley, around the upper pulley, and from thence down to the weight, the weight suspended on said cord, and a body-piece journaling both of said pulleys and detachably secured to the stile, said body-piece having an offset portion at its lower end flush with the outer face of the stile, and an upper portion extended up on the back side of the stile.

3. A sash-cord guide comprising an elongated body-piece formed for attachment to the stile of a window-casing, a pulley journaled at the lower end of said body-piece, a second pulley journaled at the upper end of said piece, and an intermediate pulley journaled on said piece between the said two pulleys.

4. A sash-cord guide comprising an elongated body-piece formed for attachment to the stile of a window-casing and grooved on one side to form a cord-channel, two pulleys journaled on said piece at the upper and lower ends of said groove, respectively, and a third pulley journaled on said piece below the lower one of said two pulleys.

5. A sash-cord guide comprising an integral body-piece having cord-pulleys at its upper and lower ends, a cord-guiding groove extending between said pulleys, and an integral curved wall over the upper pulley, adapted to direct the end of the cord over and behind said pulley.

6. A sash-cord guide comprising a grooved or channeled body portion having a flat face formed to bear on the inner surface of the stile of a window-casing, ears at the upper end of the guide projecting rearwardly from said face, an offset lower end projecting forwardly from the said face and adapted to enter a slot in said stile, cord-pulleys journaled in the said rearwardly-projecting ears and adapted to support a sash-weight at the rear of said body portion, a cord-pulley journaled in the offset end, and an intermediate pulley journaled in the upper portion of the offset end.

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

JULIUS S. CLARK.

Witnesses:
C. F. BROWN,
A. D. HARRISON.