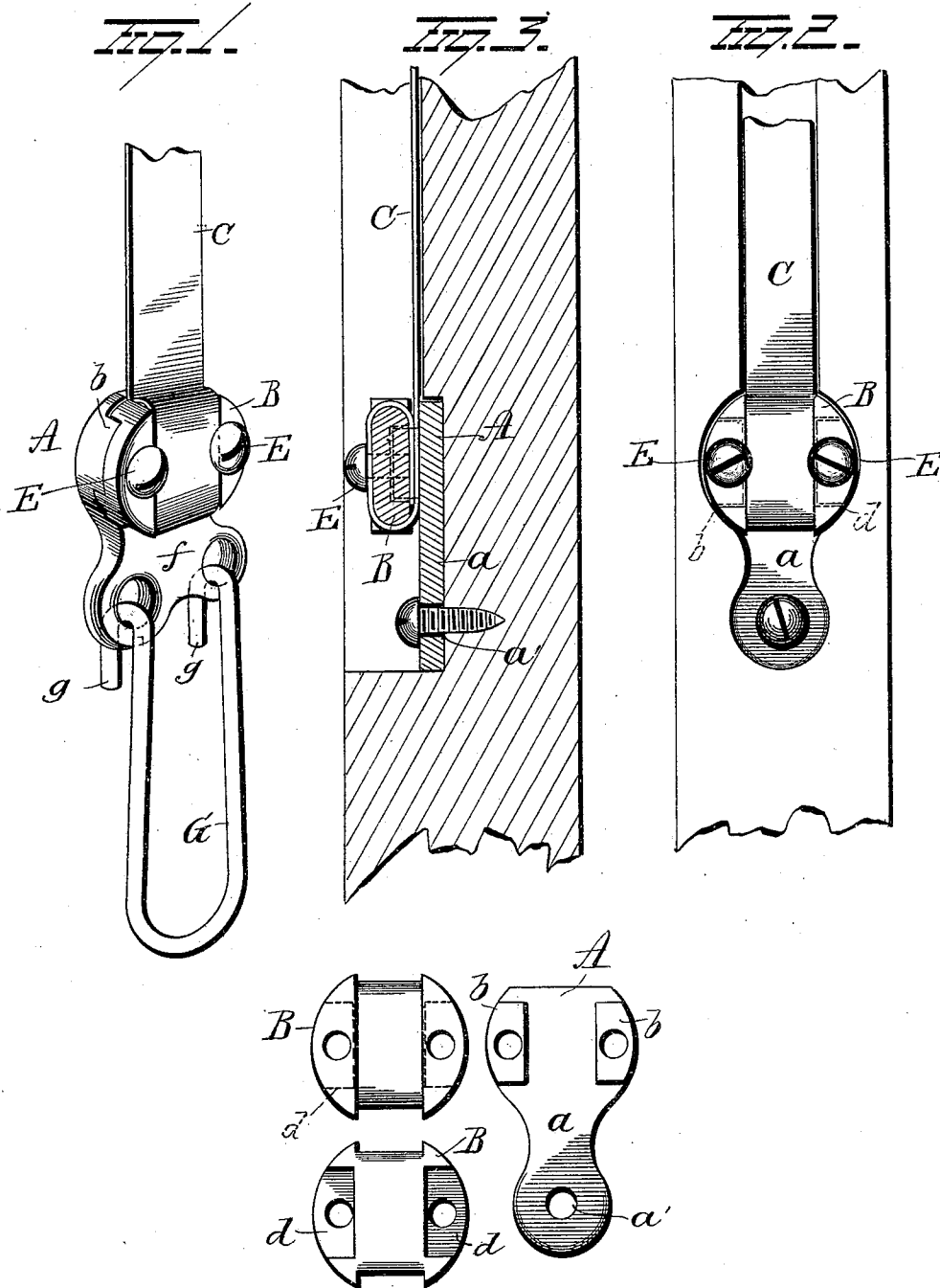


(No Model.)

F. S. CLARKSON.
SASH CORD FASTENER.

No. 467,156.

Patented Jan. 19, 1892.



Witnesses
E. Nottingham
G. F. Downing

FIG. 4.

Inventor
F. S. Clarkson.
By *H. S. Symon.*
Attorney

UNITED STATES PATENT OFFICE.

FRANK S. CLARKSON, OF BALTIMORE, MARYLAND, ASSIGNOR OF THREE-FOURTHS TO FRANK B. SLOAN, OF SAME PLACE.

SASH-CORD FASTENER.

SPECIFICATION forming part of Letters Patent No. 467,156, dated January 19, 1892.

Application filed October 28, 1891. Serial No. 410,051. (No model.)

To all whom it may concern:

Be it known that I, FRANK S. CLARKSON, of Baltimore, in the State of Maryland, 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 appertains to make and use the same.

My invention relates to that class of sash-balances in which the sash and balancing-weights are supported by flexible metal ribbon passing over pulleys in the window-frame and secured at their opposite ends to the sash and weights.

The object of the invention is to provide simple and effective means for securing the ribbon to the weight and sash; and it consists in certain details in construction and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improved fastening device applied to the weight end of the ribbon. Fig. 2 is a view in elevation of the fastening device applied to the sash. Fig. 3 is a view in transverse section of the fastening device applied to the sash; and Fig. 4 is a view of the same, showing the parts separated.

The fastening device for the weight end of the ribbon and the fastening device for the sash end of the ribbon are, so far as the attachment of the ribbon is concerned, constructed alike, and hence a description of one will suffice for both.

The fastening device for the sash end of the ribbon consists, essentially, of a body A, preferably circular in form and provided at one side with an extension *a*, having a perforation *a'* therein for the passage of a fastening-screw by which the body is secured within the recess in the sash. This perforated extension, while it is desirable, is not absolutely necessary, as the body could be set within a recess, and, fitting tightly therein, would be held by friction alone. This fastening device or body is located below the upper edge of the sash and the latter is grooved above said body for the reception of the ribbon. The body proper is provided on its outer face at diametrically-oppo-

site points with raised seats *b*, each having screw-threaded holes therein adapted to register with holes formed in the side edges of the holding-block B. The space between the raised seats *b* is sufficiently wide for the reception between them of the ribbon C and also for the body of the holding-blocks B. Each holding-block is approximately circular in form, and is grooved on its outer face and upper and lower edges for the reception of the ribbon C, and is provided on its inner face with recesses *d*, corresponding in position and shape to the raised seats *b* on the body A. The ribbon is preferably wrapped once around the block, and is secured to the fastener and held against the possibility of displacement by the screws E, which latter are passed through the block and, engaging the threads in the body A, hold the block against displacement.

From the foregoing it will be seen that the body of the fastener can be secured to the sash and the block with the ribbon thereon attached thereto without disturbing the body, and by providing the body with raised seats, which enter corresponding recesses in the block, the strain is borne entirely by the body and block, the screws merely serving to prevent separation of the parts.

The fastening device for the weight end of the ribbon is composed of a body and block, as above described, the latter being identical in construction with the block for the sash, and hence interchangeable therewith. The body A is provided with a curved extension *f*, having two openings or holes therein for the reception of the hook ends *g* of the wire yoke G, which latter carries the weight.

By constructing the fastening devices as above described all possibility of the ribbon slipping is avoided, and if the ribbons are applied properly at the start kinks or bends therein are prevented and liability of breaking the ribbon, except by the weight of the sash or weight, is absolutely avoided.

While I have shown and described the body A provided with seats or projections and the block with recesses, it is evident that the position of these parts can be changed, and while the seat and corresponding recesses are desirable, nevertheless they might be dis-

pensed with altogether. Hence I would have it understood that I do not confine myself to the exact construction of parts shown and described, but consider myself at liberty to
5 make such changes and alterations therein as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters
10 Patent, is—

1. A fastener for metal ribbons, consisting, essentially, of a body having holes therein, a block around which the ribbon is adapted to be wound, provided with holes corresponding
15 in position to the holes in the body, and screws passing through the block and body and engaging screw-threads in one of said parts, substantially as set forth.

2. A fastener for metal ribbons, consisting,
20 essentially, of a body having raised seats thereon, a block around which the ribbon is adapted to be wound, the said block having recesses corresponding in position to the seats on the body, and screws passing through the

block and engaging the body, substantially
25 as set forth.

3. A fastener for metal ribbons, consisting, essentially, of a body having raised seats, screw-threaded openings in said seats, a block having recesses corresponding in position to
30 the seats on the body, and screws passing through the block and body for securing them together and for clamping the metal ribbon between them, substantially as set forth.

4. A fastener for metal ribbons, consisting,
35 essentially, of a body having raised seats, a block grooved on its outer face and provided with recesses corresponding in position to the seats on the body, and screws passing through
40 the block and engaging the body, substantially as set forth.

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

FRANK S. CLARKSON.

Witnesses:

C. S. DRURY,
A. W. BRIGHT.