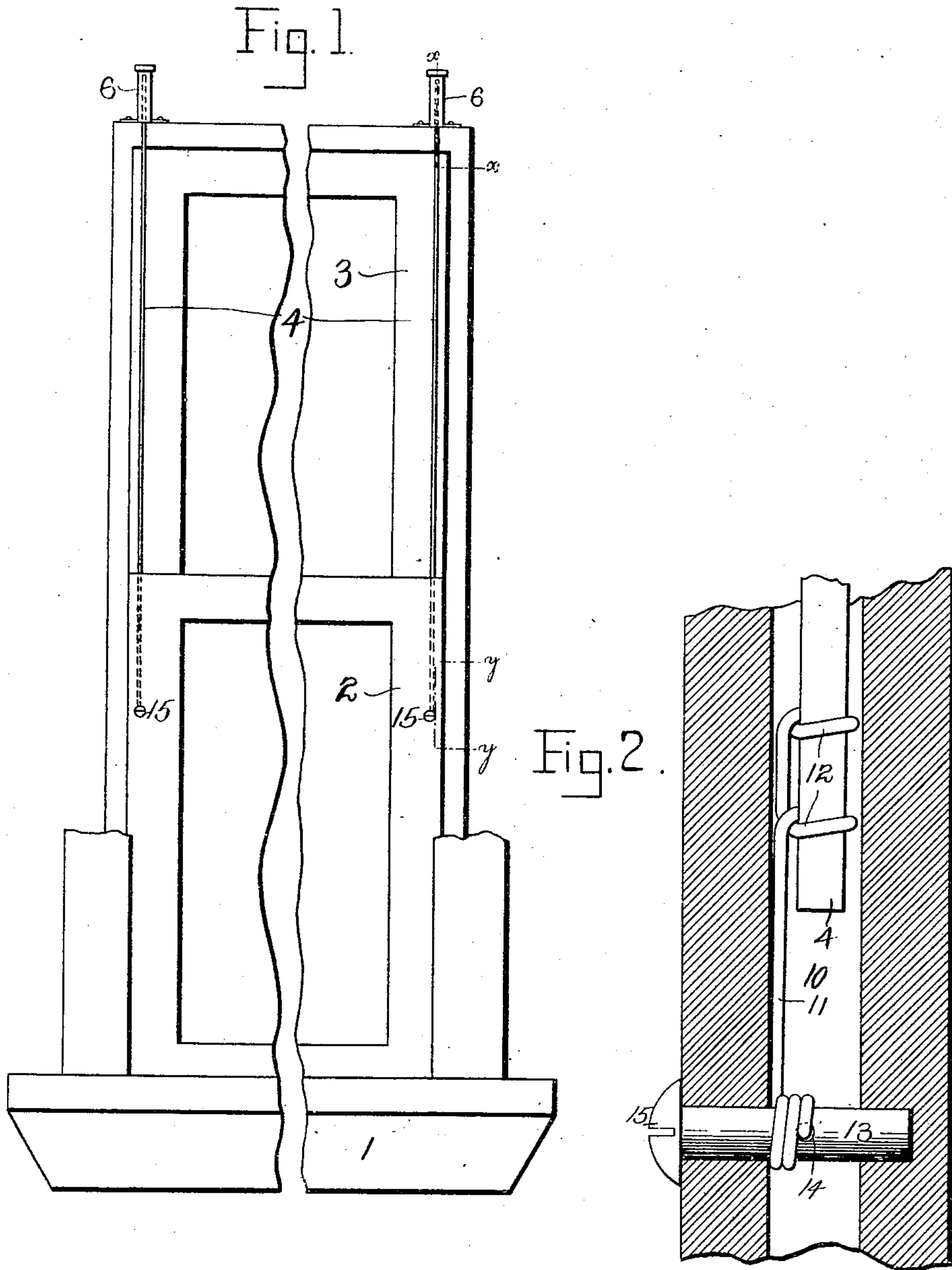


F. C. W. KUEHN.  
SASH CORD FASTENER.  
APPLICATION FILED APR. 18, 1910.

968,572.

Patented Aug. 30, 1910.



Witnesses:

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# UNITED STATES PATENT OFFICE.

FRANK C. W. KUEHN, OF HURON, SOUTH DAKOTA.

SASH-CORD FASTENER.

968,572.

Specification of Letters Patent.

Patented Aug. 30, 1910.

Original application filed September 22, 1909, Serial No. 519,049. Divided and this application filed April 18, 1910. Serial No. 556,005.

*To all whom it may concern:*

Be it known that I, FRANK C. W. KUEHN, a citizen of the United States, residing at Huron, in the county of Beadle and State of South Dakota, have invented certain new and useful Improvements in Sash-Cord Fasteners; 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.

This application is a division of my pending application, Serial No. 519,049, filed September 22, 1909, for sash cord guide.

The object of the present invention is to provide an improved means for adjustably fastening the sash cord to the sash.

The patentable features of the pulley casing are covered in my prior application referred to above.

The invention consists in the features of construction and combinations of parts hereinafter described and specified in the claims.

The accompanying drawing: Figure 1 is a front view of a window frame provided with my sash balance, the top and parts of the sides of the frame being broken away to disclose the pulley casings and sash cords, and Fig. 2 is an enlarged broken section on the line  $y-y$  of Fig. 1.

Referring more particularly to the drawing, 1 designates the window frame and 2 and 3 the lower and upper sashes, respectively. As is usual in this class of sash balances, each of the sash cords 4 is secured at one end to the upper sash and at the other end to the lower sash, said cords passing over pulleys arranged in casings 6 on the top of the window frame.

The upper portion of each lateral edge of the lower sash is grooved, as at 10, Fig. 3, to house one end of each of the sash cords. A fine cord 11, preferably of wire, is fastened around the end of the sash cord by giving it one or more half hitches, as at 12, or in any other suitable manner. This wire cord or flexible connection is fastened at its other end to a plain bolt 13 by having its extremity passed through an opening 14 bored crosswise through said bolt. Said flexible connection is made about two inches longer

than is necessary to reach down to the bolt so that when tightened it lies in several coils around the bolt. In winding the wire cord on the bolt, the coils of the former are directed toward the outside of the sash whereby, after a few turns of the bolt, said coils will commence to bind against the wall of the groove 10. The greater weight placed upon the cord will then only cause it to bind more firmly.

The head 15 of the bolt is arranged on the outside of the sash where access may be readily had to it for adjusting the cord. In order not to come in contact with the frame, the bolt is arranged out of the way of the window stop. It will be understood that by turning the bolts one way or the other, the sash cords may be loosened or tightened, as required to cause the sashes to fit accurately in the frame.

I claim:

1. The combination, with the lower sash having a groove in its edge, and a sash cord extending into said groove, of a bolt extending across said groove, and means of connection between said bolt and sash cord whereby the latter may be adjusted with respect to the sash by rotating said bolt.

2. The combination, with the lower sash having a groove in its edge, and a sash cord extending into said groove, of a bolt extending across said groove with its head arranged on the front face of the sash, and means of connection between said bolt and sash cord whereby the latter may be adjusted with respect to the sash by rotating said bolt.

3. The combination, with the lower sash having a groove in its edge, and a sash cord extending into said groove, of a bolt extending across said groove and provided with a transverse opening therein, and a flexible connection fastened to one end of the sash cord and at the other end to said bolt, the latter attachment being made by passing the extremity of said flexible connection through the opening in the bolt and winding several coils around said bolt.

4. The combination, with the lower sash having a groove in its edge, and a sash cord extending into said groove, of a bolt extend-

ing across said groove and provided with a transverse opening therein, and a flexible connection fastened to one end of the sash cord and at the other end to said bolt, the  
5 latter attachment being made by passing the extremity of said flexible connection through the opening in the bolt and winding several coils around said bolt, said coils extending

into engagement with the wall of said groove for the purpose specified.

In testimony whereof, I affix my signature, in presence of two witnesses.

FRANK C. W. KUEHN.

Witnesses:

H. J. WARD,

C. C. BRAWNER.