

(No Model.)

J. R. WALSH.
SASH CORD GUIDE.

No. 445,578.

Patented Feb. 3, 1891.

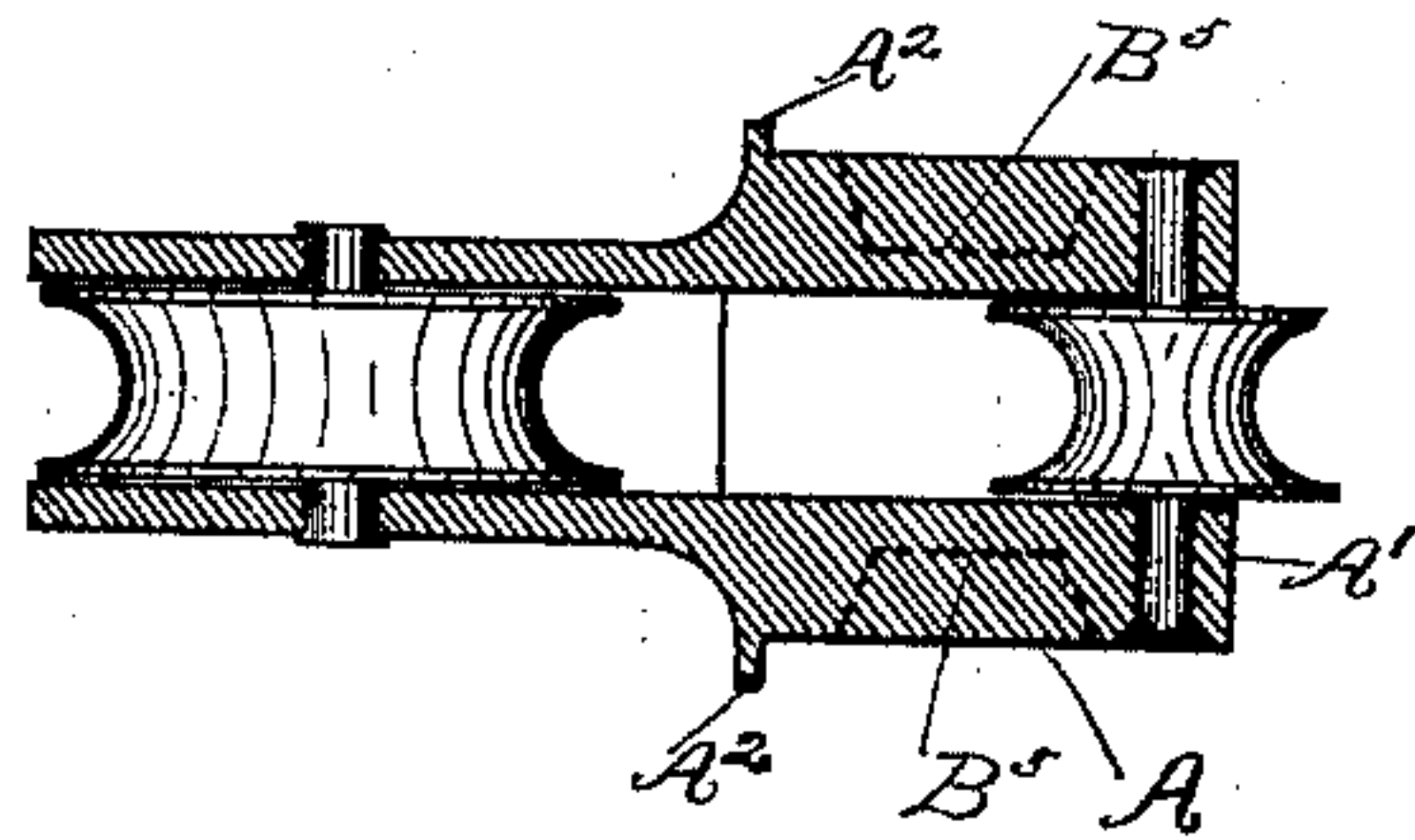


Fig. 2.

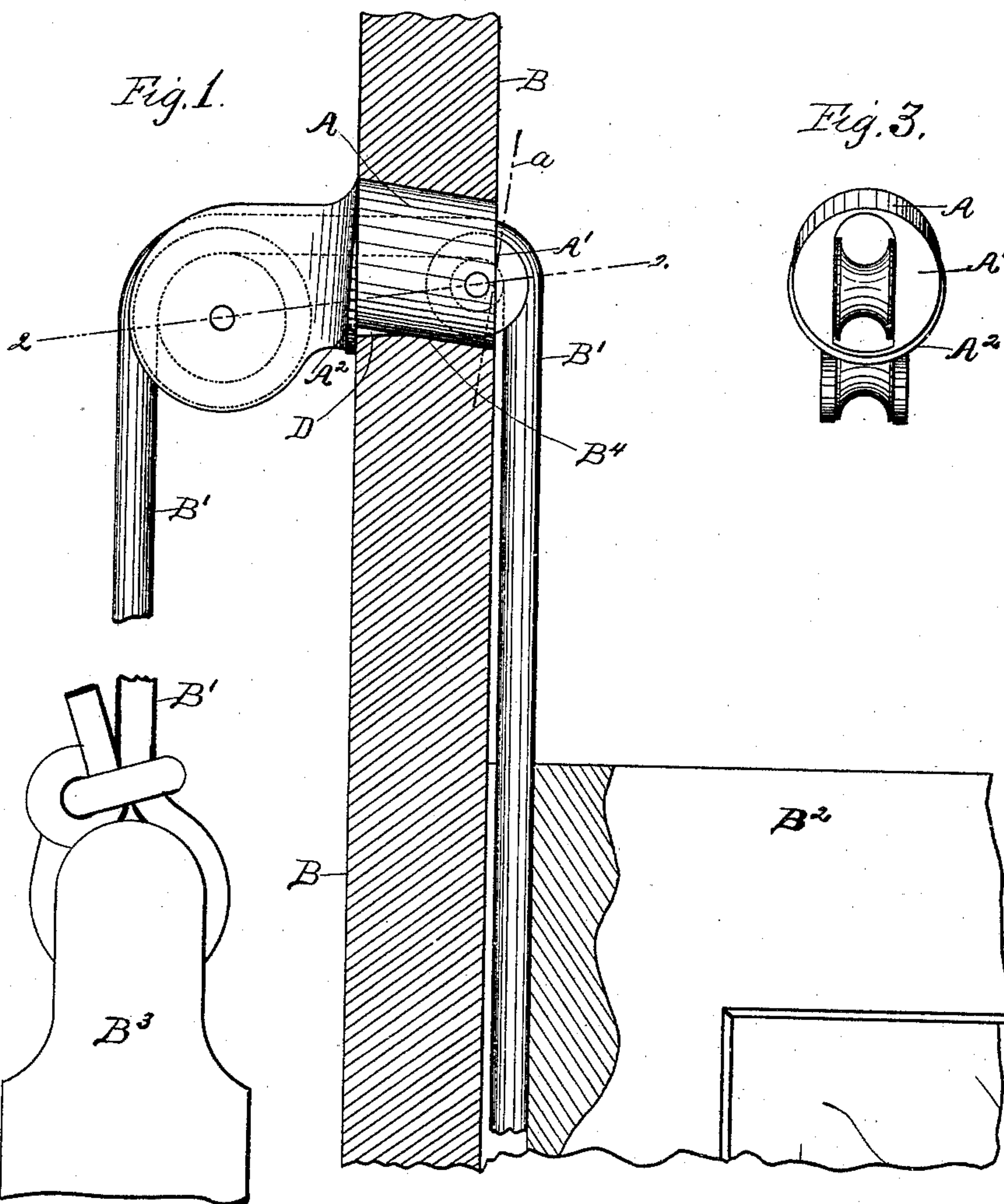


Fig. 1.

Fig. 3.

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UNITED STATES PATENT OFFICE.

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SASH-CORD GUIDE.

SPECIFICATION forming part of Letters Patent No. 445,578, dated February 3, 1891.

Application filed February 26, 1890. Serial No. 341,824. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. WALSH, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Sash-Cord Guides, of which the following is a specification.

My invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings and the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

Figure 1 is a vertical section of a portion of a window-frame stile, showing in side elevation my improved sash-cord guide inserted therein and portions of a window-sash and counter-weight supported by a cord passed through the guide. Fig. 2 is a longitudinal section of my improved device, taken through both pulley-axes, on the line 2 2 in Fig. 1. Fig. 3 is a front end elevation of the device detached.

A is the hollow shell, made preferably of an integral casting and cylindric form at the front end to enter an auger-hole made in the stile B. A small grooved pulley C is mounted in the front or cylindric portion of the shell, so as to project beyond the face of the front end. Another grooved pulley C' is mounted near the other and flattened end of the shell, which projects back from the stile, as seen in Fig. 1. The sash-cord B' passes through the shell over the pulleys and supports the sash B² at one end and the counter-weight B³ at the other end.

Similar guides inserted in a single auger-hole have been in use heretofore; but they were all so constructed that considerable time and labor were required to insert them, or they were liable to work loose and drop out of the auger-hole. I bevel the outer end of the shell of my improved device, so that the plane formed by its face A' will intersect a plane *ab* projected right angularly to the axial line of the cylindric part of the shell across

its outer end, whereby the lower part of the shell projects beyond such right-angular plane and the upper part does not extend to it, and provide at or near the inner end of the cylindric part a stop A². I am thus able to insert the shell in an inclined auger-hole in the stile, so that the face-plane of the beveled end will coincide with the face of the stile and form a smooth and ornamental slideway for the window-sash.

By inclining the axial line of the auger-hole relatively to a horizontal line an inclined slideway B⁴ is formed for the shell, which declines toward the face or front side of the stile. The vibratory movements imparted to the shell by the cord when in use tend to force the shell down the incline toward the front side of the stile and keep the stop A² in contact with the back side of the stile, thereby maintaining the guide in the desired position, as shown in Fig. 1. It is not necessary therefore that the shell should fit the auger-hole closely, nor that it should be secured therein by means of screws, nails, or pins, or any other means than such as I have described. It is obvious therefore that the device can be easily and quickly inserted in the auger-hole by hand without the use of any tools whatever.

When desired, the weight of the device can be reduced by cutting away a portion of the sides of the shell, as indicated by the dotted lines B⁵ in Fig. 2, leaving the face circular, as seen in Fig. 3, to approximately fill the auger-hole.

When desired, small spurs D may be projected from the periphery of the shell at some convenient point or points to engage with the wall surrounding the auger-hole and prevent any rotary movement of the shell. When located near the lower inner end, as shown in Fig. 1, which is the principal bearing-point, the spur can be so small as not to prevent the easy insertion of the shell in the auger-hole.

With the bearings of both the pulleys located below the axial center of the shell there is little or no danger of rotation with a peripherally smooth shell.

Should the thickness of the stile happen to exceed the length of the shell from the stop A² the inner end of the auger-hole can be en-

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larged by using a larger auger or bit to form a bearing-shoulder for the stop.

I am aware that a device for two-cord pulleys has been screwed into a window-stile and that stops and spurs in devices of this character are not of my invention. It is characteristic of my improvement that the part of the shell placed in the stile is downwardly inclined and fitted to a downwardly-inclined opening in the stile, whereby pressure on the outer pulley is less liable to move the shell. Further, this cylinder is provided on its lower half with a stop, and beyond this stop the shell is contracted laterally and extends downwardly, so as to provide for using a larger guide-pulley than could be well used in the cylindrical part or in the ordinary extension thereof that was not inclined, so as to permit the axis of the pulley to be placed lower than heretofore practiced. The construction further provides a fulcrum or bearing on the inclined bottom of the opening in the stile near the line passing through the center of gravity. This construction also provides that the lateral thrust of the weighted cord is received more directly by the stile than would otherwise be the case.

It is an especially important feature of the above-described improvement that the guide can be inserted from the rear without disturbing the stile by means similar to those customarily employed to introduce sash-weight cords, and that when so inserted it will be securely seated in the stile. In practice it is found that sash-cord guides are liable to be broken, and my improvement has reference to remedying the inconvenience of removing the stile for the purpose of substituting new guides for broken ones in that class which is introduced from the rear of the stile.

What I claim as new, and desire to secure by Letters Patent, is—

In a sash-cord guide, the shell consisting of the cylindriform part and the extensions, these parts being inclined to each other and the cylindriform part being adapted to be drawn into a similarly-inclined opening in the stile from the rear, substantially as set forth.

In testimony whereof I have hereunto set my hand this 22d day of February, 1890.

JAMES R. WALSH.

Witnesses:

GEO. A. MOSHER,

W. H. HOLLISTER, Jr.