(No Model.)

W. SCHUMACHER.

SASH PULLEY.

No. 540,600. Patented June 4, 1895.

Fig. 1.

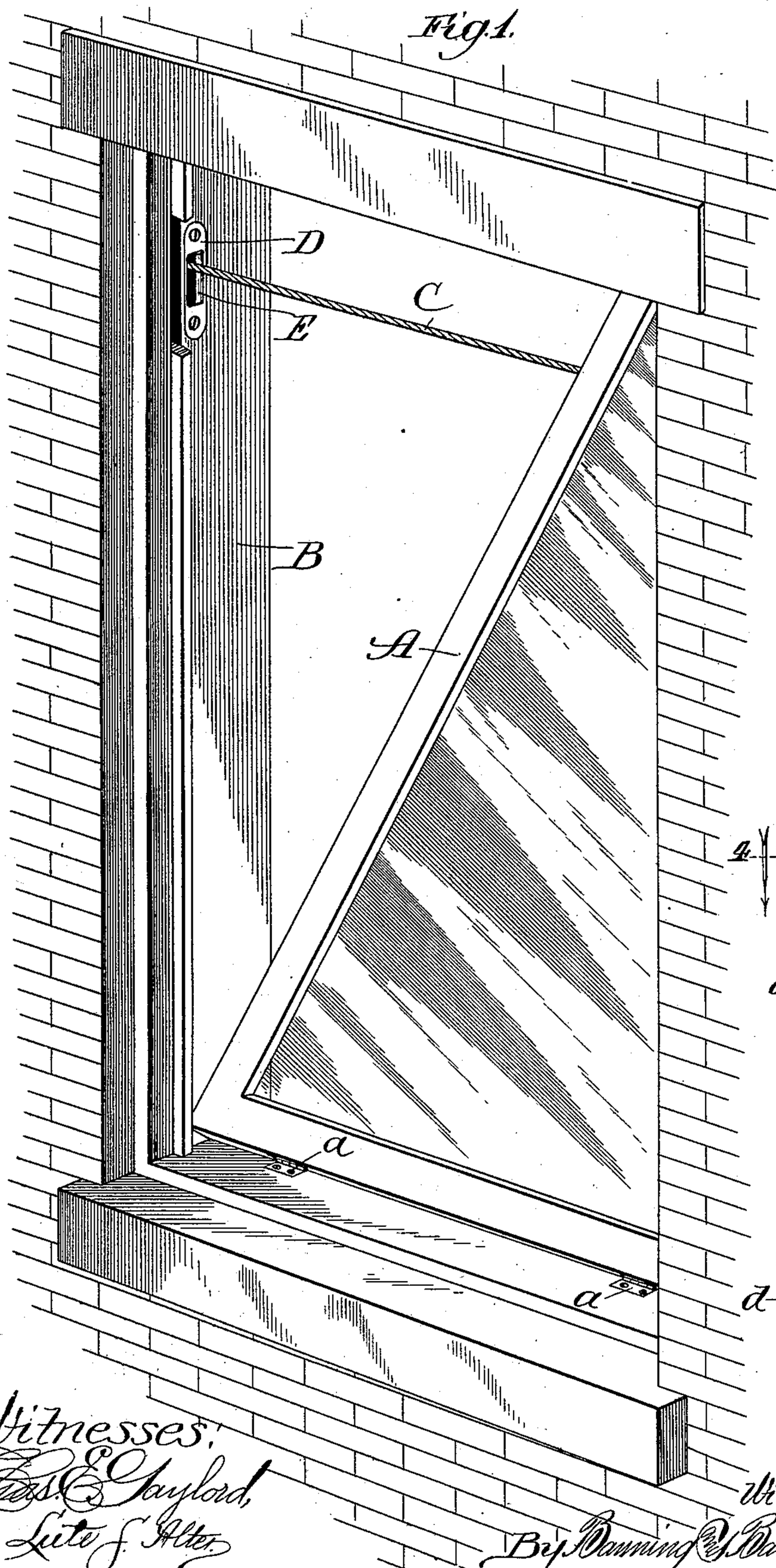


Fig. 2.

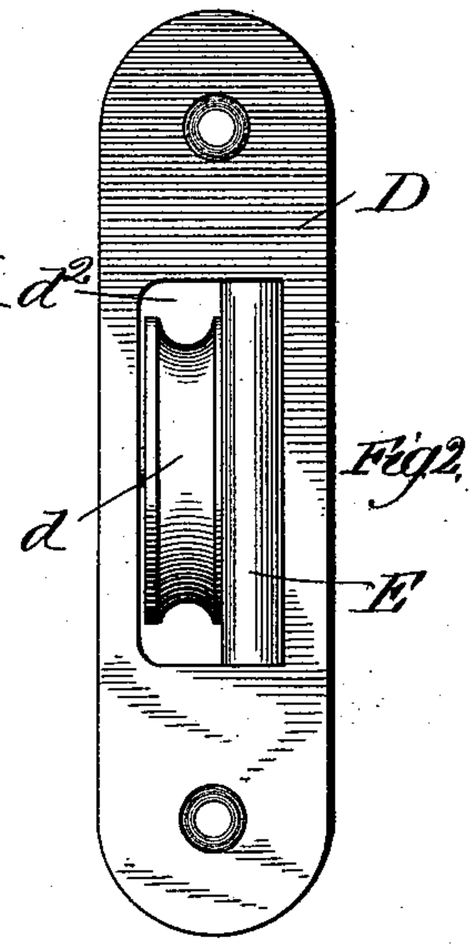


Fig. 3.

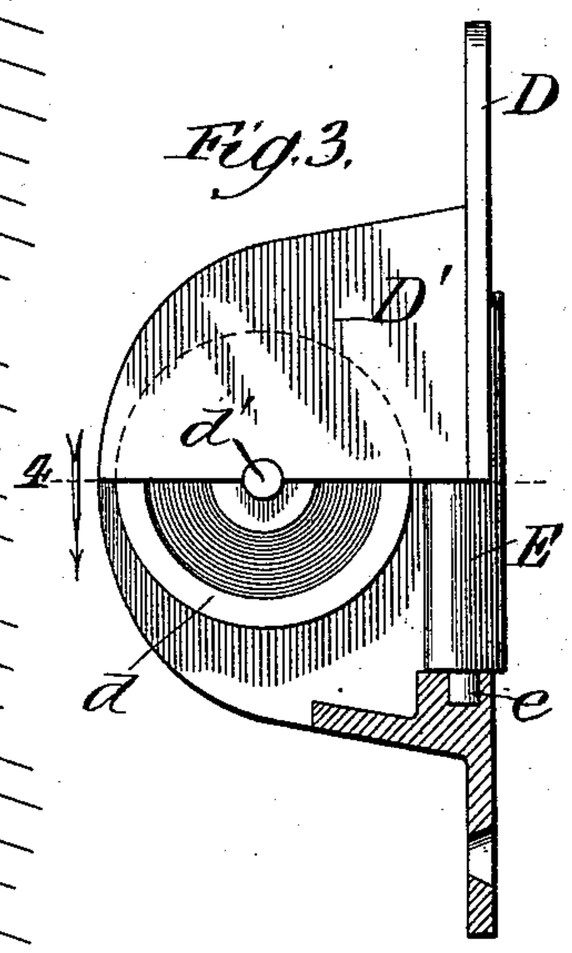
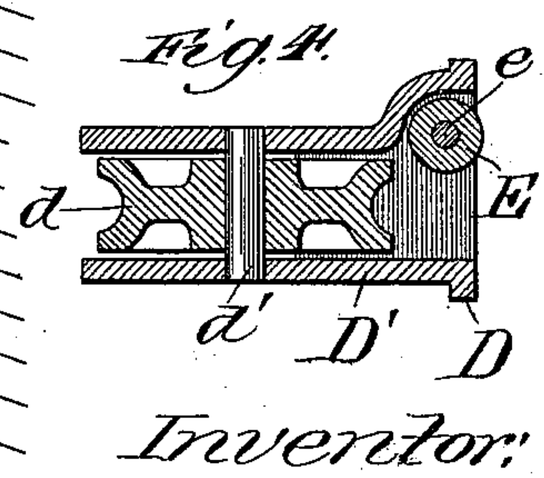


Fig. 4.



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UNITED STATES PATENT OFFICE.

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SASH-PULLEY.

SPECIFICATION forming part of Letters Patent No. 540,600, dated June 4, 1895.

Application filed January 23, 1895. Serial No. 535,943. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SCHUMACHER, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Sash-Pulleys, of which the following is a specification.

The object of my invention is to provide a simple, economical and efficient sash pulley for use in connection with swinging windows, doors and similar structures; and the invention consists in the features and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a window and frame with my improvement attached; Fig. 2, an enlarged front elevation of my improvement detached from a window; Fig. 3, a side elevation of Fig. 2, partly in section; and Fig. 4, a transverse section taken on line 4 of Fig. 3, looking in the direction of the arrow.

In modern architecture—especially in the construction of large office buildings—it is the custom, in order to obtain sufficient light, harmonious and ornate designs, to use large windows, which consist of a single plate of glass, abandoning to a large extent the ordinary double window which may be raised up or pulled down as the case may be. In using these single glass windows, it is impracticable to move them up and down, &c., and they are pivoted or hinged at or near the bottom, so that they may be swung inwardly for the purpose of cleaning or for ventilation. In such instances, the usual sash pulley cannot be used, in that the cord rubs against the side of the case or frame, quickly wearing away such cord, which becomes weak, liable to break, and allows the window to swing open and down to the destruction of the parts. To overcome these objections and provide a simple, economical and efficient sash pulley, capable of being applied to swinging windows, doors, &c., is the principal object of my invention.

In the drawings, A represents a swinging window hinged near its lower portion, at *a*, to a window frame, B. The window is adapted to be swung inwardly, as shown in Fig. 1, for the purpose of cleaning its exterior and to allow proper ventilation of the room. In order to sustain it in such position, I provide counterbalances or weights,—not shown—which are inserted in suitable recesses in the window casing. Connected with such balance weights, and a suitable portion of the window sash, are sash cords, C, which pass through the sash pulley, D. In order to minimize the friction of this sash cord as it passes through the window frame and connects with the balance weight, I make the sash pulley, D, of a case, D′, of any desired size and shape, and provide it with an interior sheave pulley, *d*, which rotates preferably on a horizontal axis, *d′*. Pivoted in suitable bearings, *e*, in the pulley case, is a cylindrical roll, E, that has its axis at right angles to that of the pulley, and preferably rotates in a plane to one side of the sheave pulley and near one corner of its chamber, d^2, so that the sash cord in passing from the weight to the window sash in its motions will run over this sheave pulley and substantially at right angles to the same, contacting the cylindrical roll, E, and be prevented from rubbing against any rigid portion of the pulley case.

In using the term "sash pulley," I mean the entire structure, which includes the pulley and the antifriction roll, and not the individual grooved pulley.

In using my improvement in connection with a window, the sash pulley may be applied in the usual way, the cord from the weight passed through and over the groove pulley, and attached to the window sash in any desired position. The window may be drawn down, as shown in the drawings, and in its opening or closing motions the sash cord will always rub against the anti-friction roll, thereby preventing the abrasion of the cord and insuring a longer life therefor, as well as an easier and safer operation of the window parts.

While I have described my invention with more or less minuteness as to details, I do not desire to be limited thereto unduly, any more than is pointed out in the claim. On the contrary, I contemplate all proper changes in form, construction and arrangement, the omission of parts and substitution of equiva-

lents, as circumstances may suggest or render expedient.

I claim—

In a sash pulley, the combination of a casing provided with a pulley chamber and a cord slot, a grooved pulley in such chamber, and an anti-friction roll extending substantially the length of the cord slot and pivotally secured to such casing substantially at right angles and in a plane to one side of the grooved pulley, substantially as described.

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