(No Model.)

# F. V. PHILLIPS.

## SASH PULLEY.

No. 472,074. Patented Apr. 5, 1892.

Fig. 1.

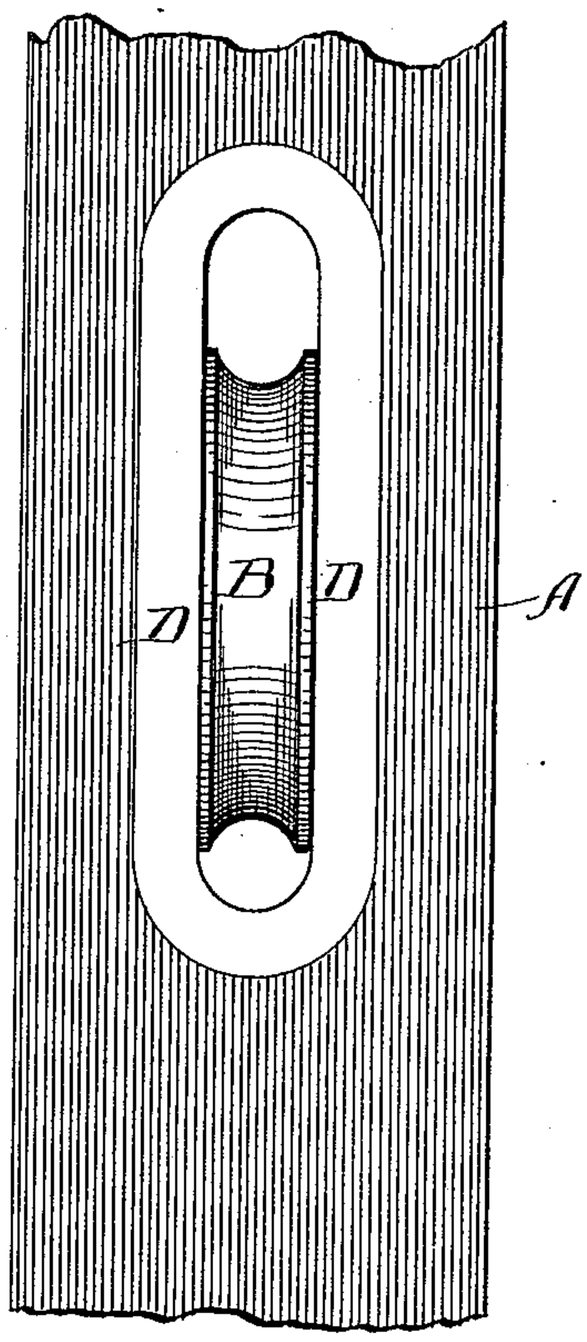



Fig. 2.

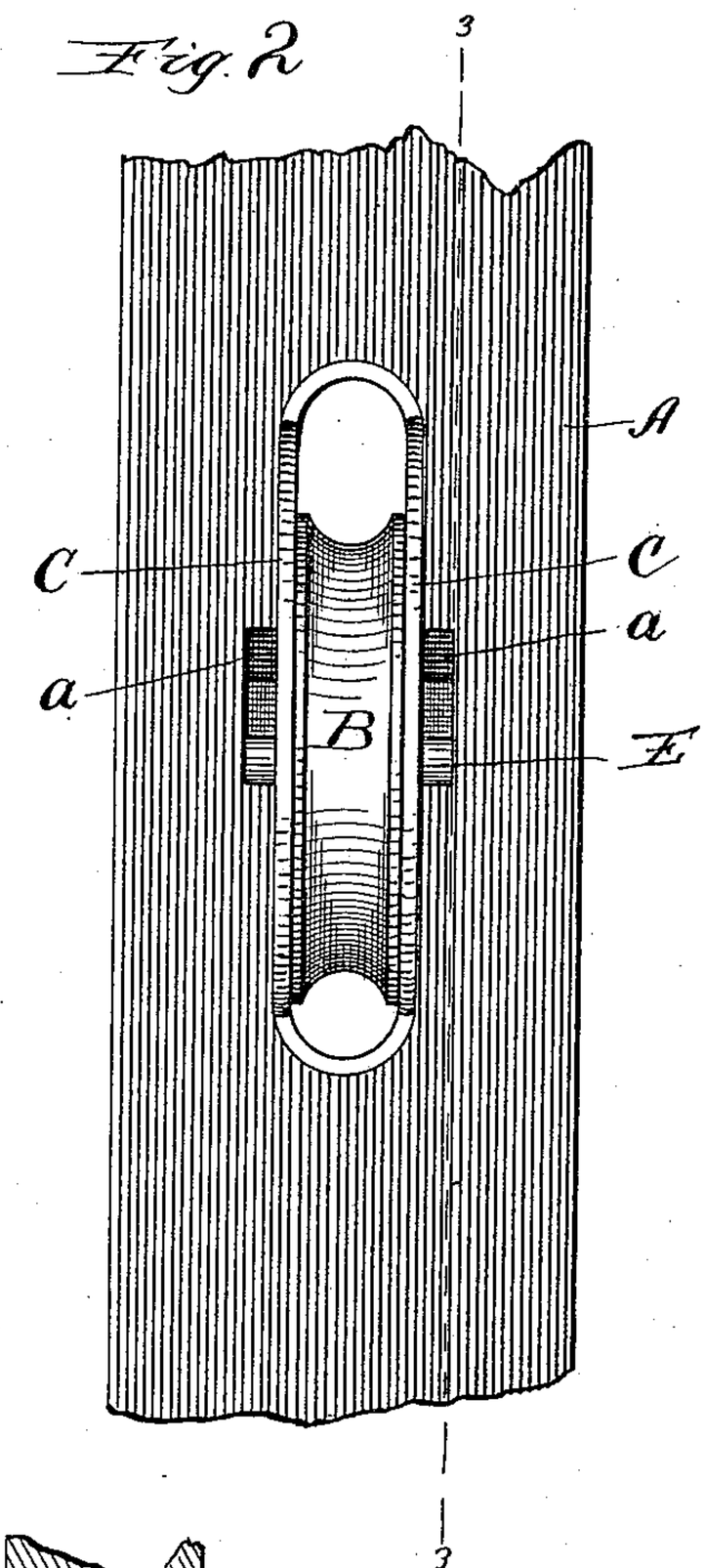
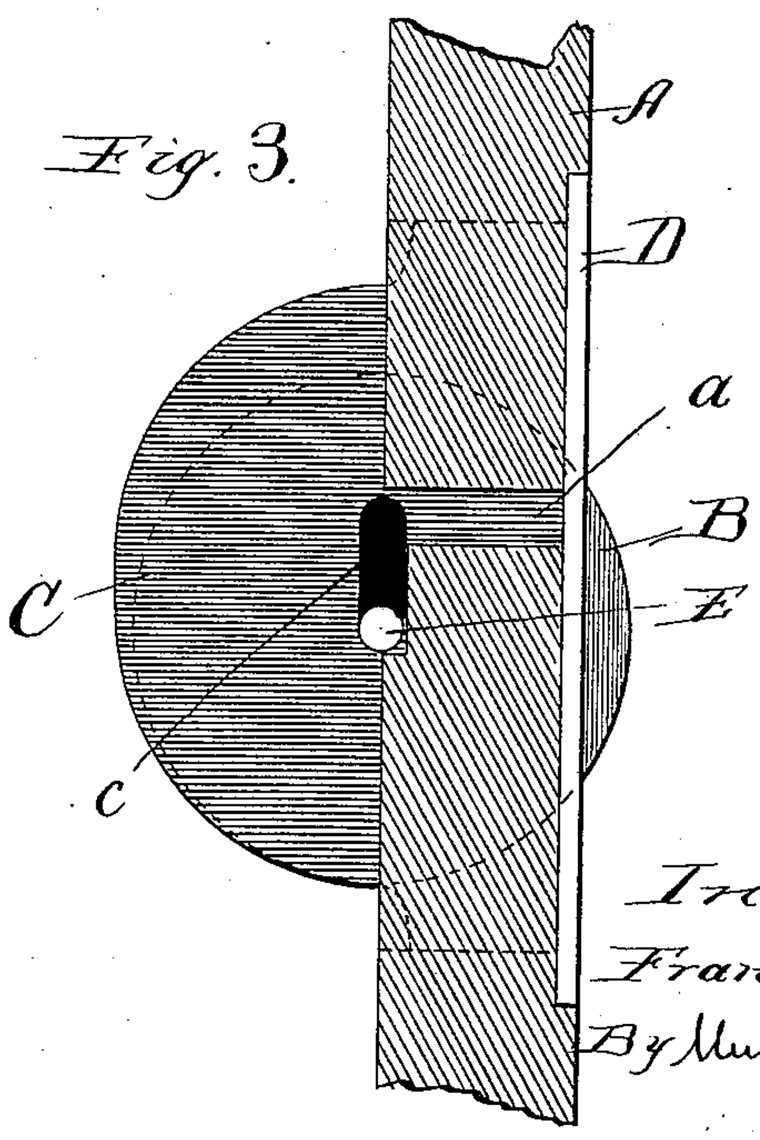



Fig. 3.

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# UNITED STATES PATENT OFFICE.

FRANCIS V. PHILLIPS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CHICAGO SASH PULLEY COMPANY, OF SAME PLACE.

## SASH-PULLEY.

SPECIFICATION forming part of Letters Patent No. 472,074, dated April 5, 1892.

Application filed December 23, 1889. Serial No. 334,653. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS V. PHILLIPS, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sash-Pulleys, of which the following is a specification.

In this invention my object has been to produce a form of sash-pulley and its inclosing shell which can be secured in place in the pulley-stile without the use of screws or other fastening devices, such as have heretofore been required. I employ in my improvement a pulley and shell having laterally-projecting stops which are passed through recesses in the sides of the opening cut in the stile to receive the shell and which, after the shell is in place, may be dropped below said recesses and engage with the inner face of the stile and act as retainers to confine the shell in the opening. For the sake of cheapness in construction and also for another important object, hereinafter to be explained, I form these lateral stops by extending the pivot of the pulley so that they will project a sufficient distance at either side of the shell to serve this purpose, and in order that they may be lowered into engagement with the uncut-away portion of the stile after the shell has been inserted in the stile I provide the shell with vertical slots, which will permit this change of position by the pivot.

In the accompanying drawings I have shown at Figures 1 and 2 front and rear elevations, respectively, of a pulley-stile provided with my invention, and at Fig. 3 a vertical section upon the line 3 3 of Fig. 2.

In said drawings, A represents the stile; B, the pulley; C, the pulley-shell; D, the front surrounding flange of the shell, and E the pivot of the pulley, the latter made sufficiently long so that its ends will project laterally beyond the shell, as shown. The stile is provided with an opening corresponding in dimension and shape with the dimension and shape of the shell, the front flange being also let into the front of the stile, as indicated. At the sides of the main opening in the stile are recesses *a*, which serve as passages for the projecting ends of the pivot when the shell is inserted in the stile. After the shell has been inserted the pulley is allowed to fall by the vertical slots *c*, formed in the sides of the shell, as shown at Fig. 3. This brings the ends of the pivot against the rear faces of the stile below the passages *a*, so that such ends will act as stops to retain the pulley and shell in place in the stile, the front flange D serving to prevent the shell from moving inwardly. It will thus be seen that by means of the side stops formed by the pivot ends and said front flange the shell will be very securely held; also, that it can be readily removed should that be necessary.

In its lower position the pulley preferably lies within the outlines of the shell, as indicated by the broken lines at Fig. 3. My purpose in this is to prevent any lifting of the pulley should the sash-weight rise sufficiently high to come in contact with the shell, because if allowed to strike the pulley it might have a tendency to dislodge the shell from the stile by first lifting the pulley and bringing its pivot in position opposite the passages *a;* but by extending the sides of the shell, so that the weight will come in contact with such sides instead of the pulley, I prevent any such action as that described.

My invention dispenses with any necessity for fastening the shell by screws and renders its insertion a matter of ease and but little time.

Of course I do not wish to be limited in all my claims to the combination, with a shell, of retaining-stops formed upon the ends of the pulley-pivot, as it is obvious that that feature is not absolutely essential, although I deem it the preferable construction.

To secure the pulley and shell in place, it will be seen that the projections from the side of the case, and which, it has been seen, may consist of the extension of the pivot itself, shall have an inward and downward movement. If the pulley-case be slotted, this inward and downward movement may be given to the projections without moving the shell downward. If, however, the slotted casing be not used, then the downward movement of the projections must be accompanied by a bodily movement of the entire shell, and this will of course necessitate the use of a somewhat larger aperture in the stile for the inser-

tion of the shell and pulley; but this enlargement in vertical length of the aperture may be covered by the face of the pulley-shell.

I claim—

1. The combination of the window-stile, the pulley, the shell, the front flange upon the shell, and a stop extending laterally beyond the side of the shell and adapted to be moved with respect to the shell after the latter has been inserted in the stile, said stile being suitably cut away for the admission of said projection, substantially as set forth.

2. The combination, with the window-stile having aperture *a*, of a sash-pulley, a shell therefor, and a stop extending beyond the side of the shell and adapted to be moved with respect to the shell after the latter has been inserted in the stile, substantially as set forth.

3. The combination of the pulley and shell, the former having an axis projecting beyond the shell and the latter having vertical slots to allow the pulley to change position after insertion in the stile, substantially as set forth.

4. The combination, with a sash-cord guide, of a stop extending laterally beyond the side of the shell and movable with respect to the same, substantially as set forth.

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Witnesses:
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