

No. 81,218.

PATENTED AUG. 18, 1868.

A. P. SEYMOUR, JR. & W. R. GOODRICH.  
SASH PULLEY.

Fig. 1

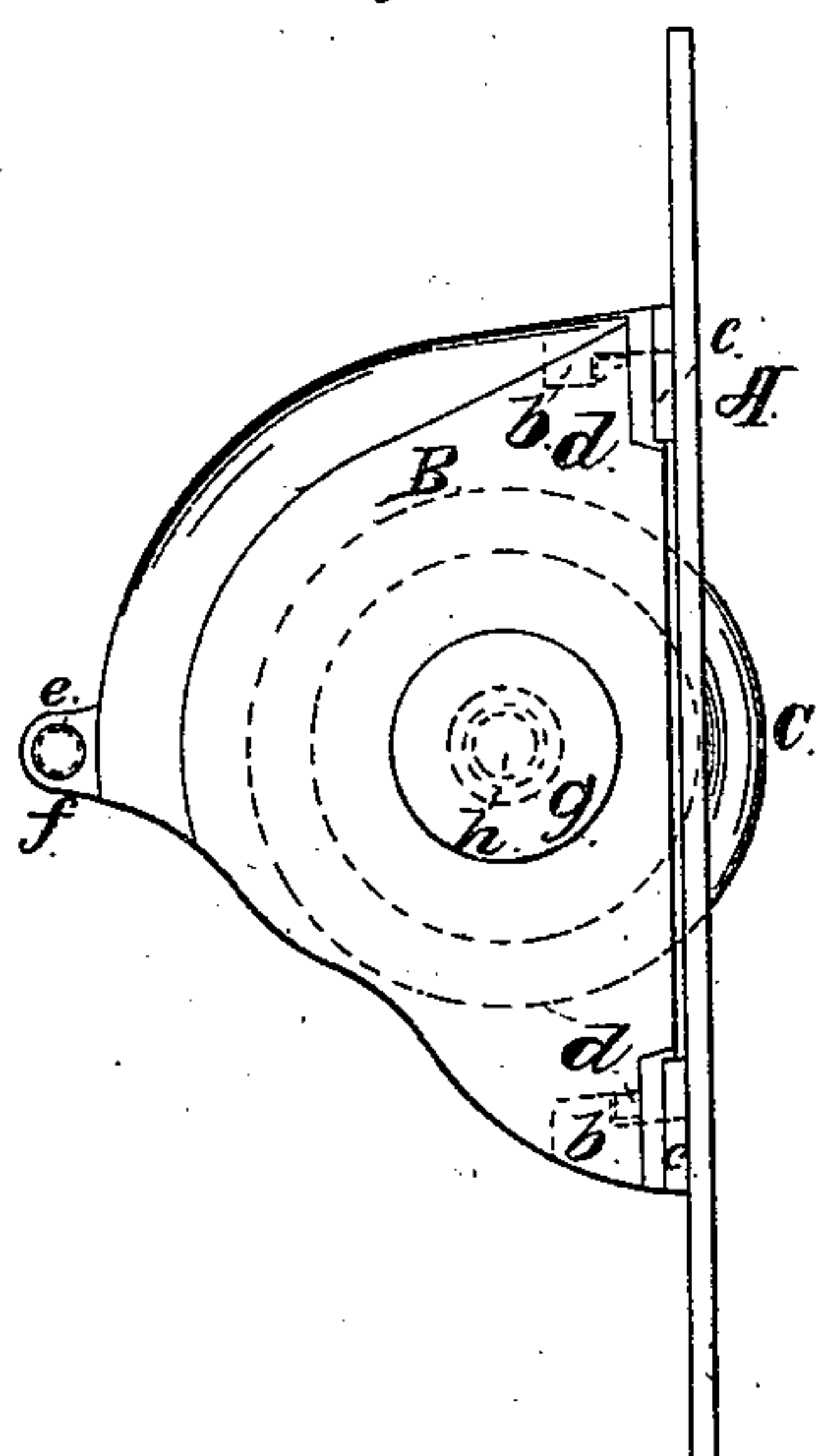


Fig. 4

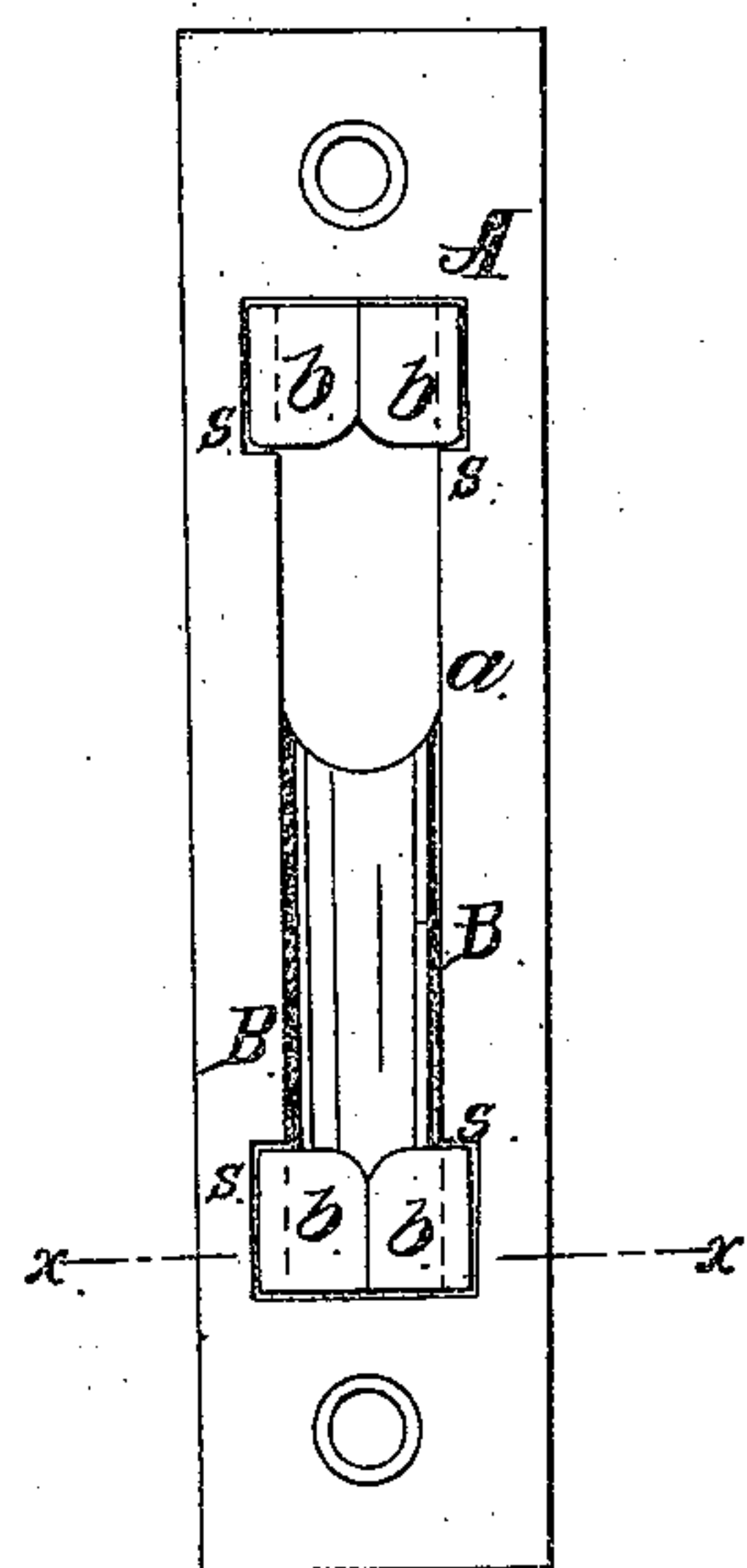


Fig. 2

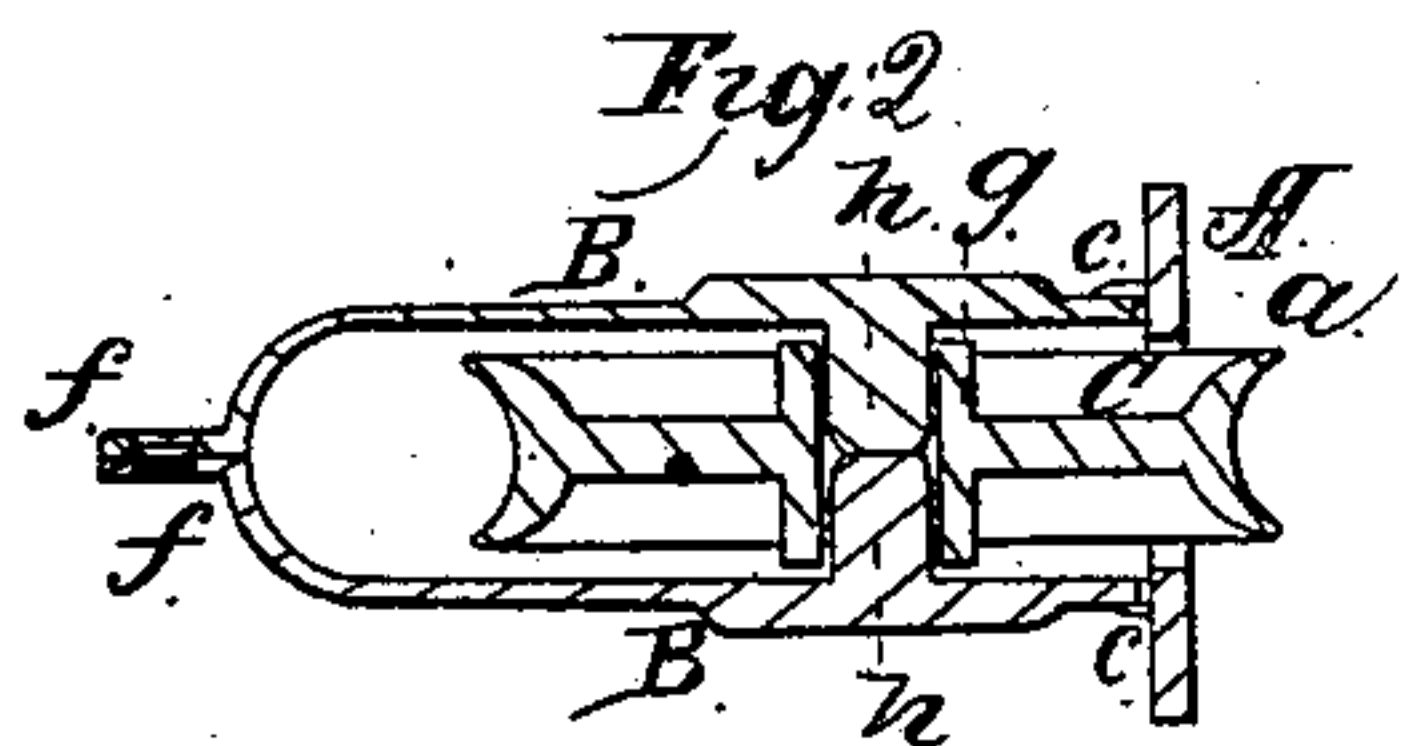


Fig. 5

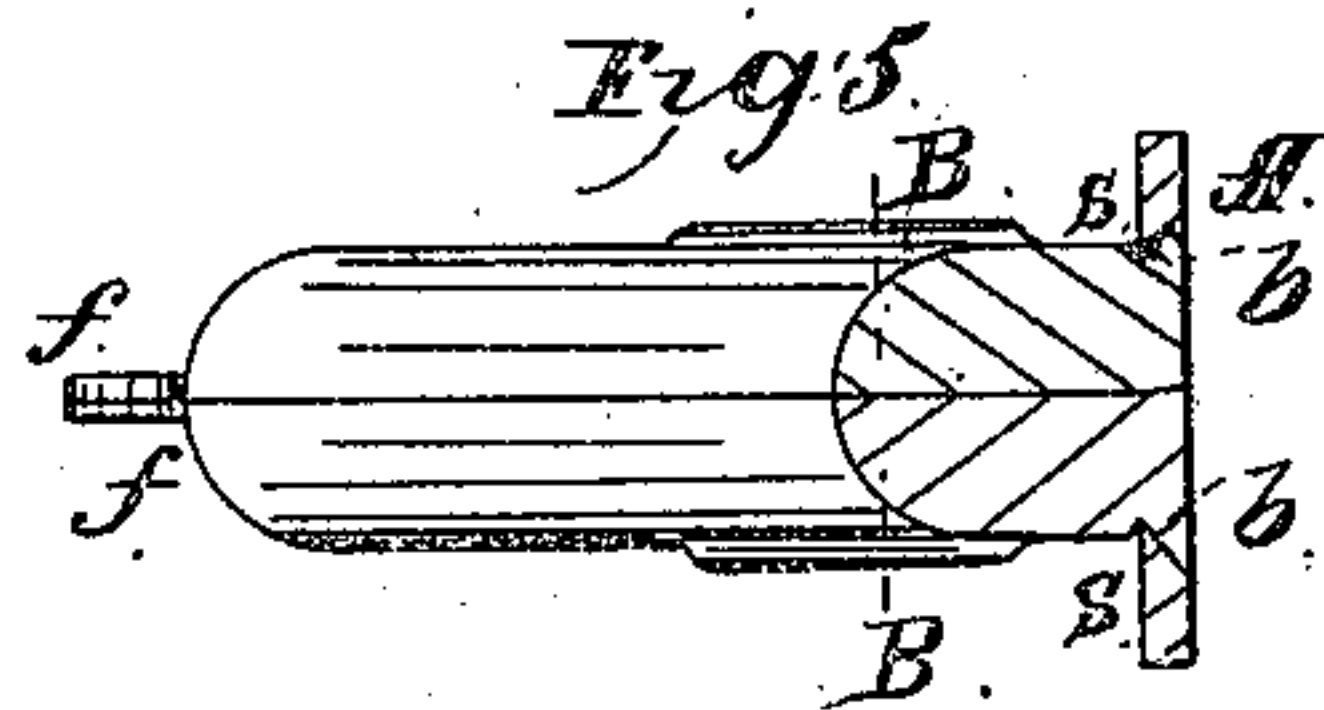
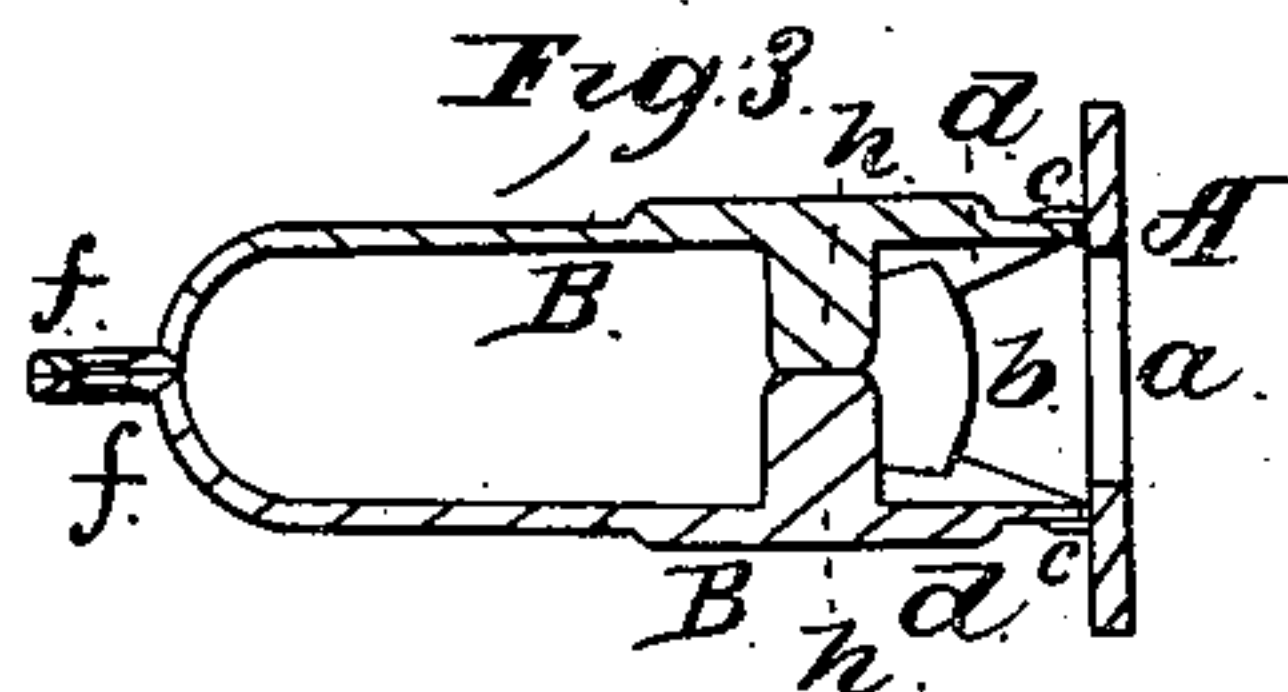


Fig. 3



Witnesses:  
McComby  
Adellure

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Attys

# United States Patent Office.

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WHITESTOWN NEW YORK, ASSIGNORS TO HECLA WORKS COMPANY.

*Letters Patent No. 81,218, dated August 18, 1868.*

## IMPROVEMENT IN SASH-PULLEYS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, ALBERT P. SEYMOUR, Jr., of Hecla Works, in the county of Oneida, and State of New York, and W. RILEY GOODRICH, of Whitestown, in the same county of Oneida, and State of New York, have invented a new and useful Improvement in Axle-Pulleys for Window-Sashes, and other purposes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a side view of an axle-pulley frame, shell, or box, with pulley arranged therein.

Figure 2 a transverse section of the same, and

Figure 3 a similar section, but showing the pulley removed.

Figure 4 shows a face view, with pulley removed, illustrating a modification of the same construction, and

Figure 5 a transverse section, taken as indicated by the line  $x x$  in fig. 4.

Similar letters of reference indicate corresponding parts.

Axle-pulleys, as ordinarily constructed, that is, such as are used for window-sashes, have the cheeks of their frame, shell, or box, united together and to the face-plate of the frame by rivets, passed through the outer ends of the cheeks, and through snugs or projections, cast on the back of the face-plate. This is both a troublesome and expensive mode of fastening, involving, as it does, the difficult process of drilling small holes through parts of castings, generally or necessarily hard, and also involving troublesome or expensive riveting.

Our invention consists in so constructing the pulleys that the face-plate may be locked to the cheek-plates without the use of rivets, as above described, a single intermediately-arranged rivet being used at the back of the cheek-plates, which will be found a much more economical and firmer construction of axle-pulleys.

The cheek-plates and face-plates may be locked together, as above referred to, in various ways, two of which we have shown in the accompanying drawings, and hereinafter described.

Our invention, as above referred to, may be applied to the ordinary mode of constructing the bearings or pivots of the pulley, the pivots being cast on the pulley, and allowed to turn in the holes made through the cheeks of the frame. In order, however, to secure a cheaper plan of construction, our invention consists, further, in casting the pulley proper with a hollow bush or bearing, and the cheek or cheeks of the frame with the pivot or pivots for the pulley to turn on, which cheaper plan may be used, if desired, in place of the ordinary method above mentioned or described.

Referring, in the first instance, to figs. 1, 2, and 3, of the accompanying drawing, A represents the face-plate of the frame, and  $a$  the opening in or through it for projection of the pulley C. Said face-plate has cast on its back, at either end of the opening  $a$ , a hook-shaped projection,  $b$ , and side tips or flanges,  $c$ , between which latter and the sides of the hooked projections  $b$ , the outer ends of the cheeks B B are slid or entered, and made to gear with the projections  $b$  by snugs or ears  $d$ , arranged to bite or lap under the hooked ends of the projections  $b$ , after which (the pulley being in its place) a single intermediate rivet,  $e$ , passing through flange-projections,  $f$ , at the back, will serve, in conjunction with the locking-arrangement at the outer end of the cheeks, as described, to make a firm, close, and expeditious mode of holding the cheeks and face-plate together. In figs. 4 and 5, virtually the same arrangement of construction for the frame is shown, but, in this modification, the lock or gear of the cheeks B B with the face-plate A is established by forming the hook or dovetail-shaped projections  $b$  on the outer ends of the cheeks, and projecting them through the opening  $a$  in the face-plate, so as to lock with the latter over the edges  $s$  of the opening  $a$ .

The pulley C, shown in figs. 1 and 2 of the drawing, is formed with a bush or socket-bearing,  $g$ , through it, and the cheeks, either one or both of them, have cast to them, on their inner face, the pivot or pivots  $h$ , thus strengthening the cheeks, and giving a close construction to the frame.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The construction of the cheeks B B with projections, locking in a dove-tailed or hooked manner, within

or through the face-plate A, and secured by a rivet, *e*, holding the said cheeks together by the lugs or ears *f*, at their outer edge, substantially as shown and described.

2. Forming the pivot or pivots, on which the pulley C turns, by a projection or projections, *h*, cast on or to the inside of the cheek or cheeks B of the frame, substantially as described.

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Witnesses:

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