

No. 711,570.

Patented Oct. 21, 1902.

A. H. HOVER.
CATCH PULLEY.

(Application filed May 15, 1902.)

(No Model.)

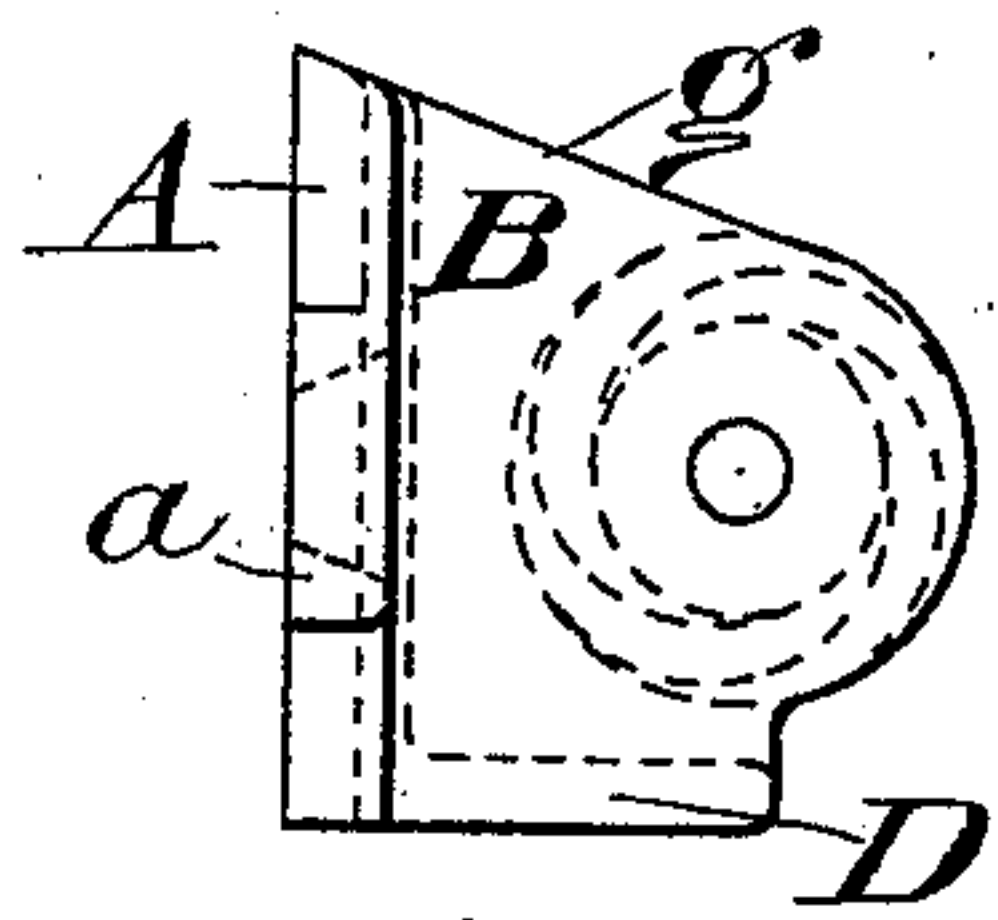


Fig. 1.

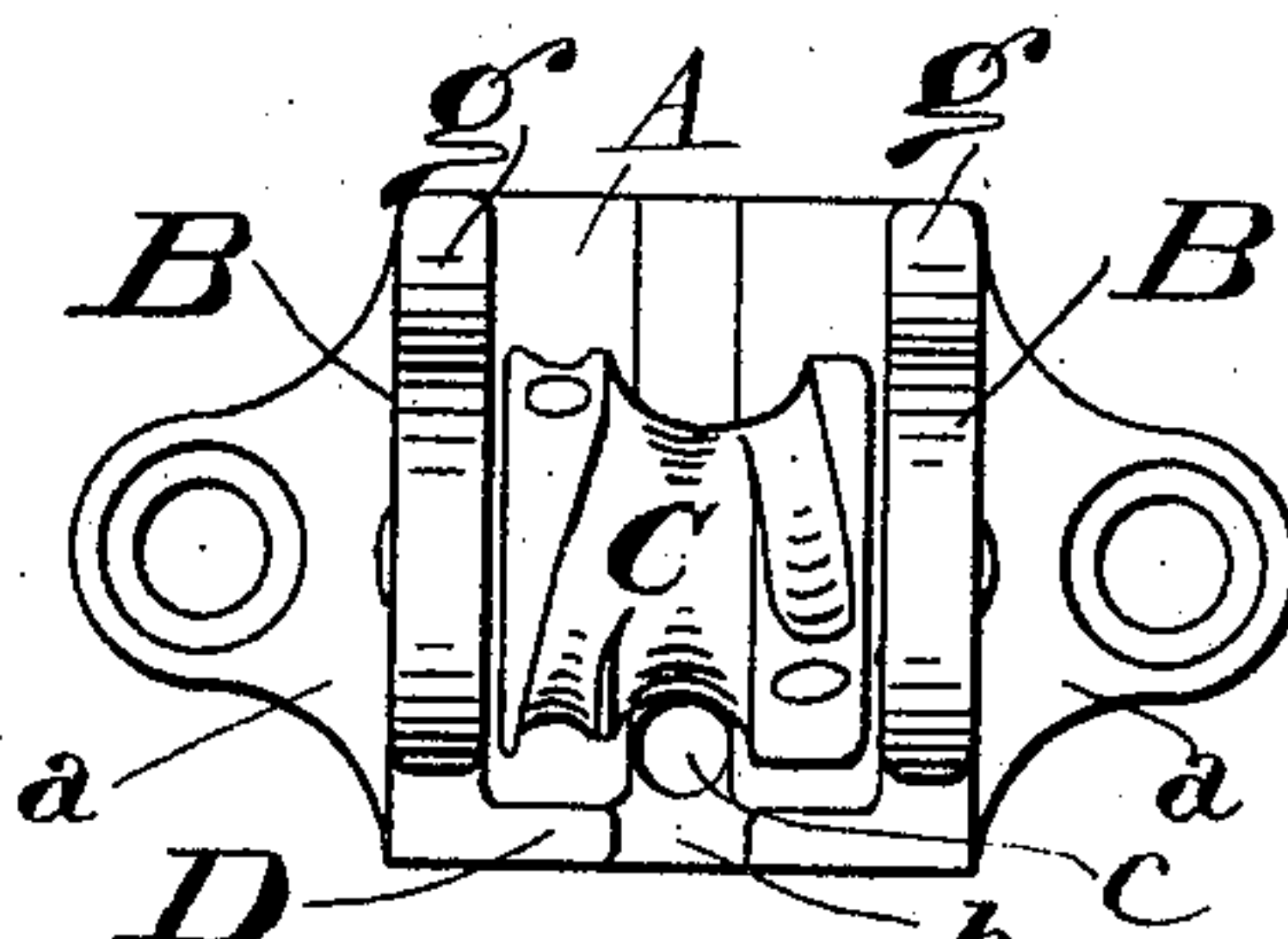


Fig. 2.

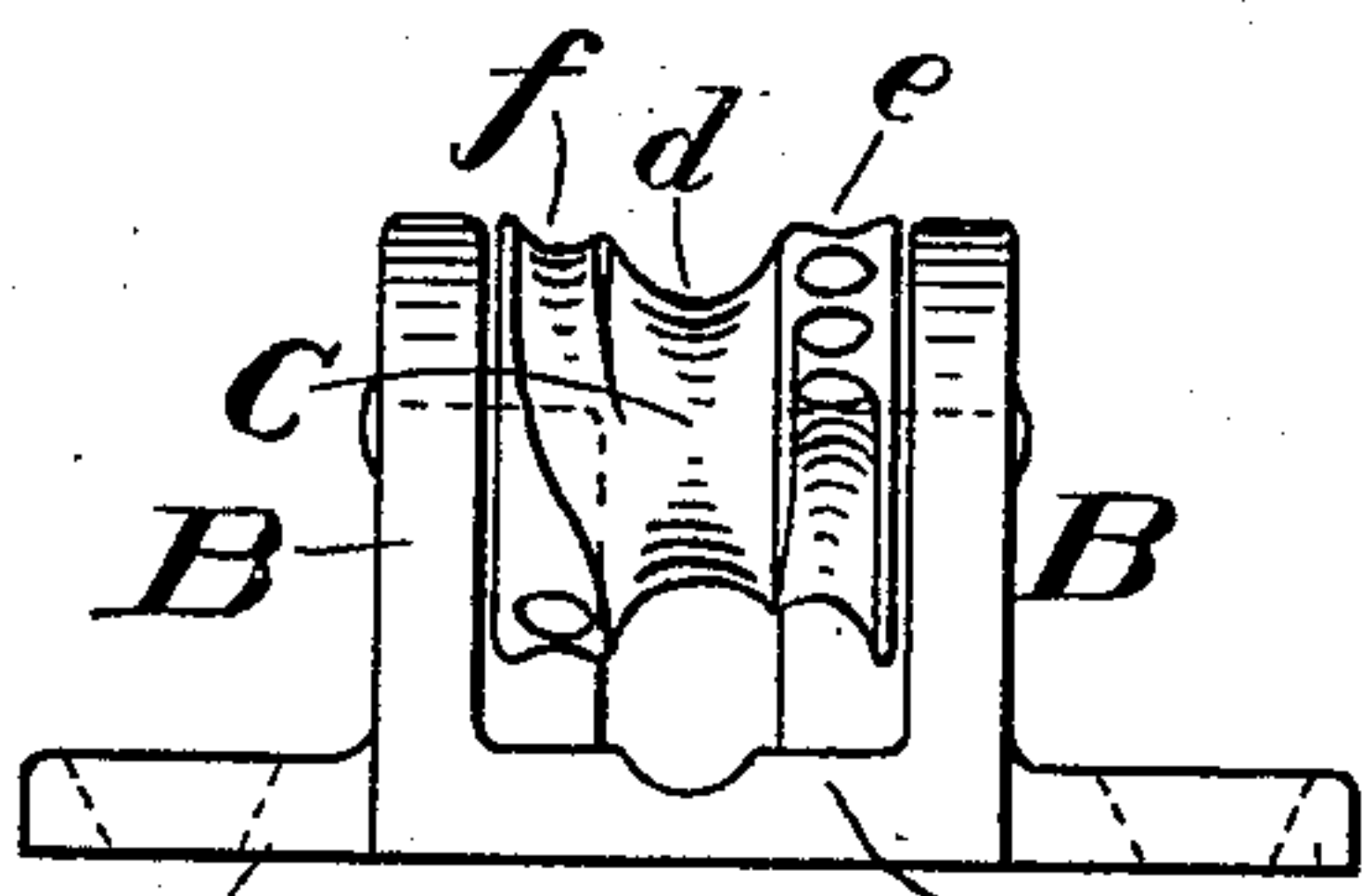


Fig. 3.

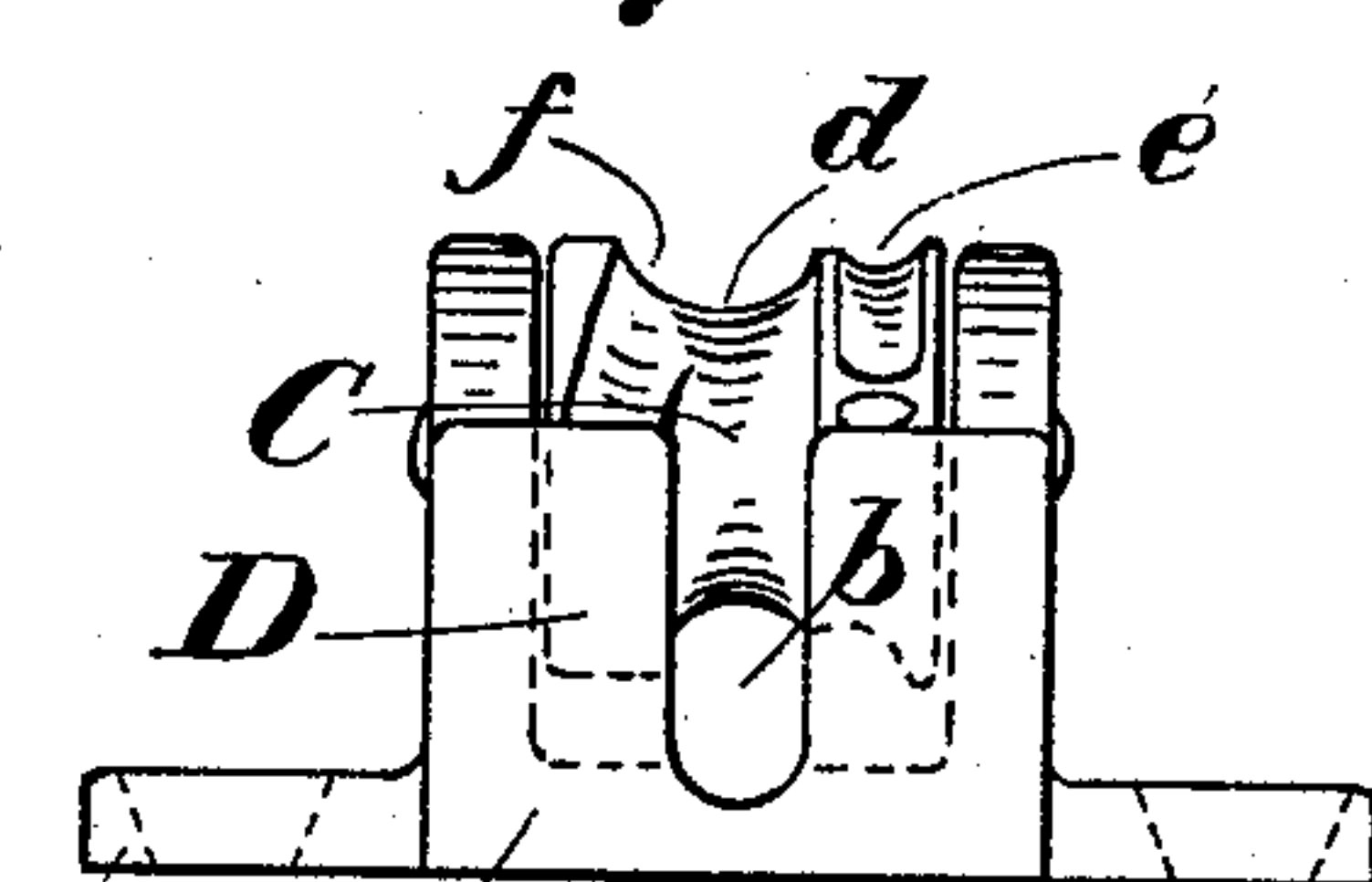


Fig. 4.

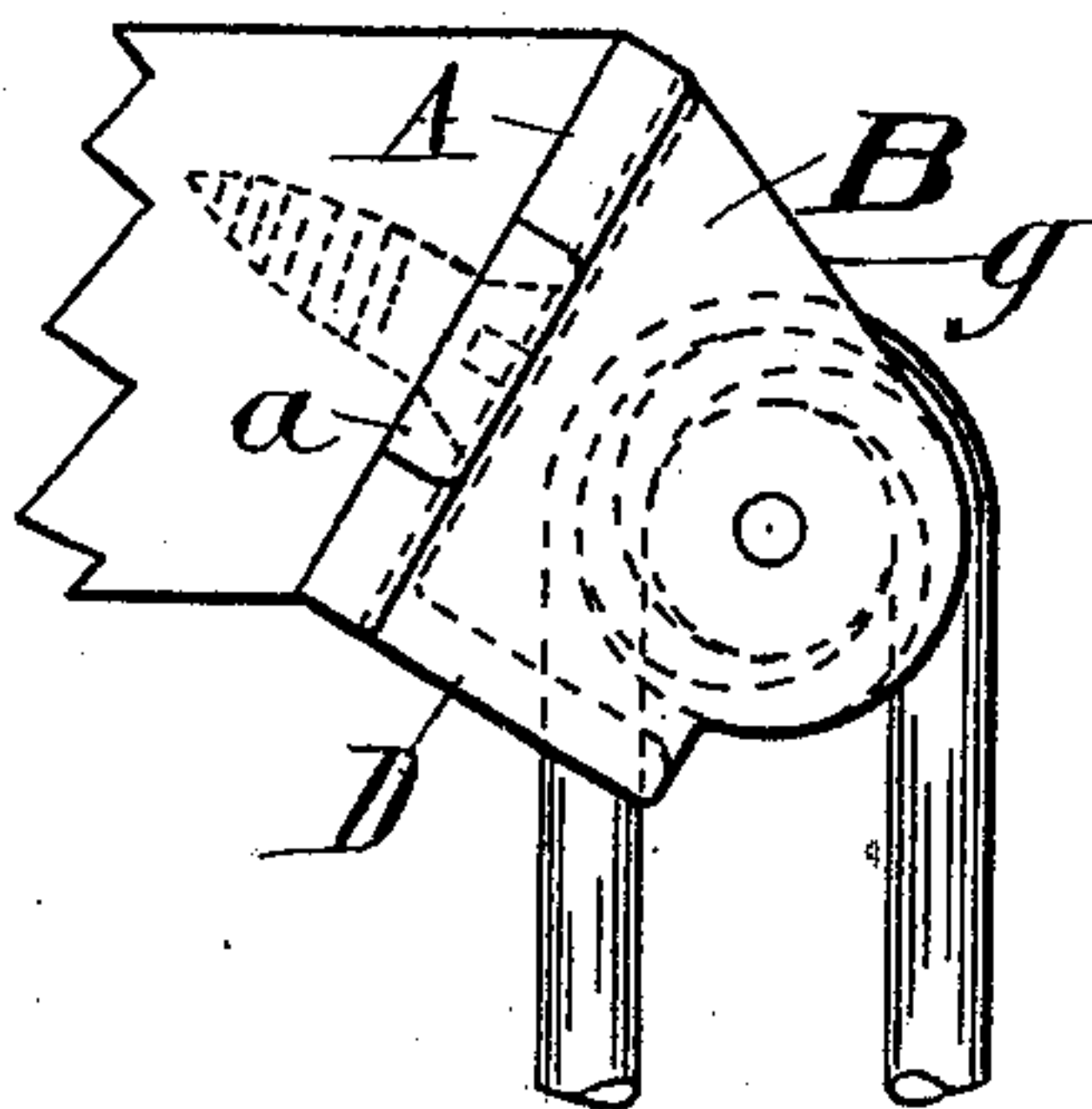


Fig. 5.

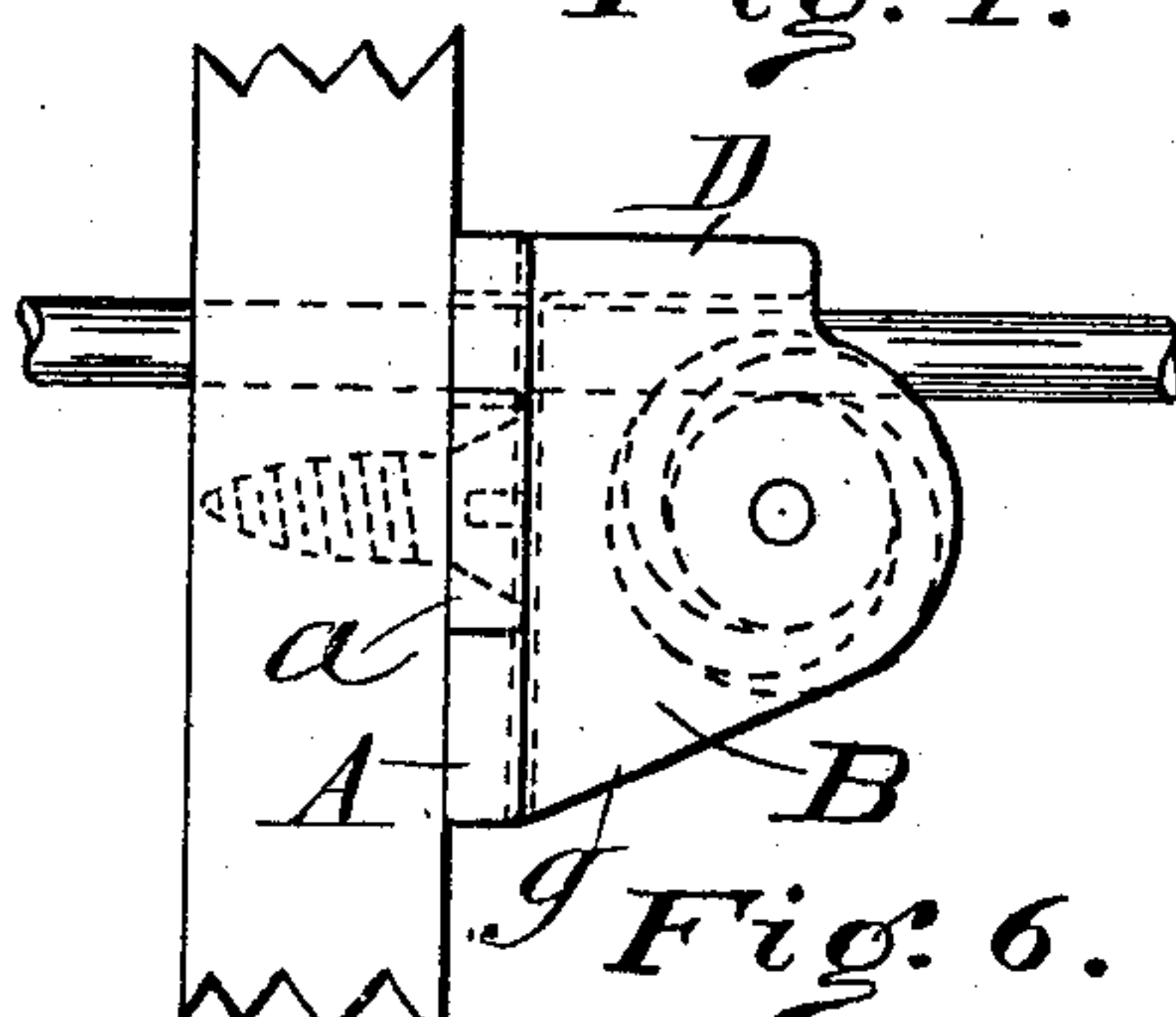


Fig. 6.

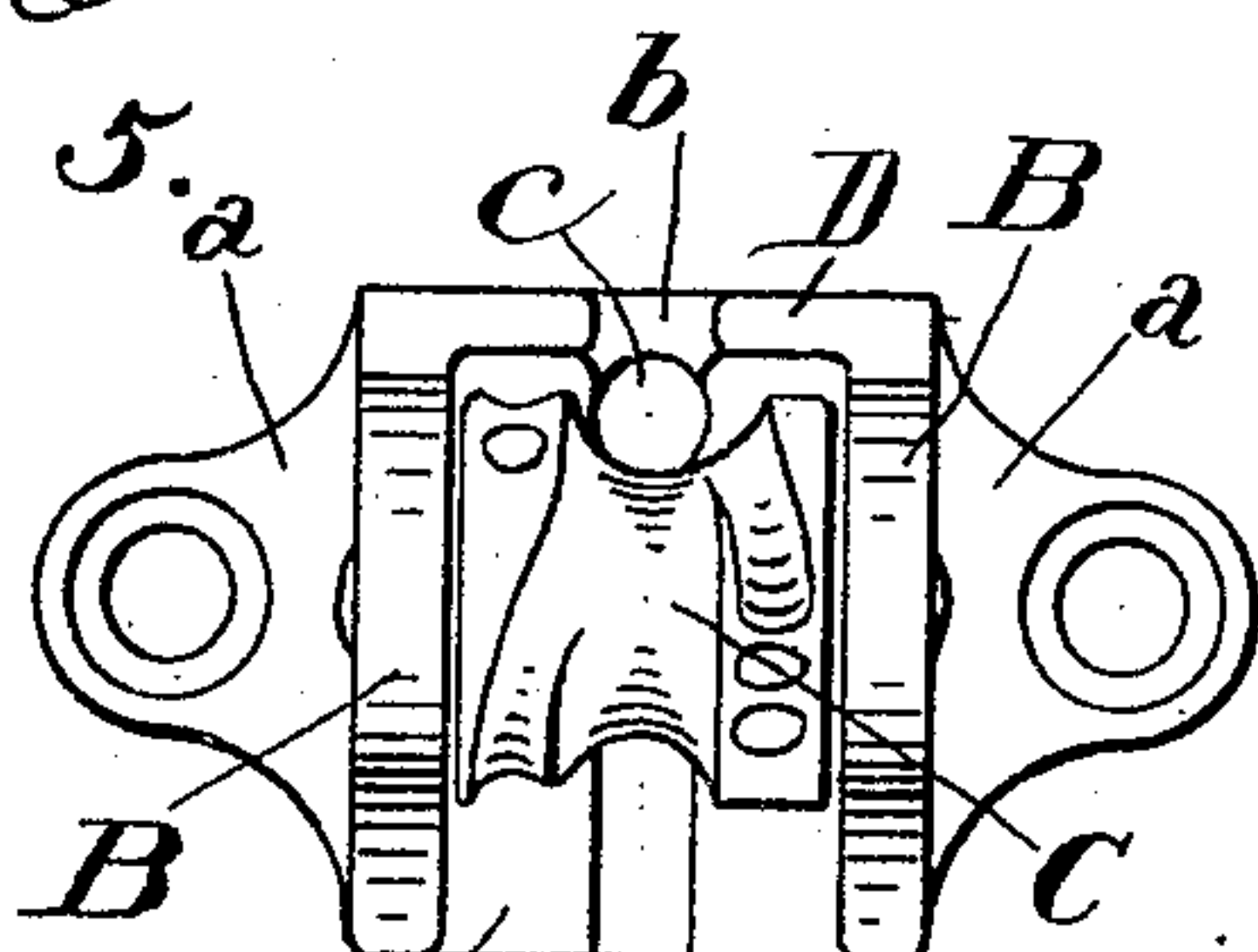


Fig. 7.

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CATCH-PULLEY.

SPECIFICATION forming part of Letters Patent No. 711,570, dated October 21, 1902.

Application filed May 15, 1902. Serial No. 107,538. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. HOVER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Catch-Pulleys, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to the certain novel construction of the casings for catch-pulleys whereby the pulley may be used in any position in which it is desired to adjust it without the necessity of selecting a pulley of the particular design required for any desired position.

Catch-pulleys have been for many years in use constructed with different-shaped casings for the position required, and the particular position in which it has been desired to mount the pulley has demanded the construction of various forms.

It is the particular purpose of my invention to so construct the casing of the pulley that the same may be used in any position desired; and it consists of the certain novel construction of the pulley-casing to be hereinafter more particularly pointed out and claimed.

In the drawings, Figure 1 is a side elevation of my improved catch-pulley. Fig. 2 is a front elevation of same. Fig. 3 is a top plan view, and Fig. 4 a bottom view, of the pulley. Fig. 5 is a side elevation showing the pulley attached at an angle. Fig. 6 is a side elevation showing the method of attachment when the cord is to be drawn horizontally. Fig. 7 is a front view of the pulley when mounted as shown in Fig. 6.

A is the back wall of the casing, provided with sides B B, in which the pulley-wheel C is mounted. The back is provided with the ears *a a*, with screw-openings for attaching the pulley in any position desired.

D is the base of the pulley-casing, in which a slot *b* is formed of the width of the pulley-cord, the base extending out under the pulley-wheel about to the center of the same.

c is a circular opening formed in the back A of the casing in line with the central groove of the pulley-wheel.

The pulley-wheel itself is formed with the central groove *d*, in which the cord runs when the weight is being raised or lowered, and with the lateral grooves *e f*, in which the cord runs when drawn to one side and by means of which the cord is bound between the pulley-wheel and the casing to catch or hold the weight in any desired position.

The top edges *g* of the sides B B are beveled downward from the back of the casing to the periphery of the pulley-wheel in order to prevent the cord from catching back of the pulley-wheel when the cord is drawn to one side to catch the weight at any desired position.

As heretofore constructed the top edges of the side walls of the casing have been constructed on a level with the top of the pulley-wheel, and as a result when the catch-pulley is located in a high position the cord is apt to catch over the edge of the side walls, and it is difficult to dislodge it from this position when it is sought to release the weight and work the pulley.

The slot *b* in the base D of the pulley-casing forms a guide for the cord and keeps the cord, with the weight attached, at the middle of the pulley in all positions. As heretofore constructed there has been no guide for the cord, and as a result when the cord is drawn to one side to catch it in the grooves *f* or *e* the weight is also frequently drawn to one side.

Heretofore when the location of the weight to be adjusted has been such that the cord could most conveniently be drawn horizontally such position for the cord could not be obtained with the ordinary catch-pulley; but an idler has had to be provided to change the direction of the cord to the vertical. With my construction, however, with the opening *c* through the back of the pulley the employment of an idler to change the direction of the cord is dispensed with, as the cord can be passed directly through the opening. When used in this position, however, it is necessary

to reverse the pulley-wheel, so that the grooves *e f* shall open into the central groove *d* in the opposite direction.

With my construction of pulley as above described the catch-pulley can be used in any desired position, always bearing in mind that the base D of the pulley shall be toward the weight end of the cord. There is no danger of the cord catching between the pulley-wheel and the casing, and the weight can always be released by drawing on the cord, no matter how high up or inaccessible the pulley may be from the user. In addition to this the cord is also guided centrally with reference to the pulley, and when a window-shade, for example, is attached thereto the shade can never tip or be drawn to one side, as is the case with the ordinary catch-pulley.

For different positions in which it is intended these catch-pulleys to be used it has been customary to provide two sets of ears for the screws, one set to the back and the other set to the base. With my construction only two screws are needed for attaching the pulley in any desired position. In addition to this my improved pulley, by reason of the slot in the base-plate and the hole in the back and the otherwise open mounting of the wheel, is readily accessible for the cord in any position, so no difficulty is experienced in threading the pulley when in place, while with the older constructions it is sometimes very difficult to pass the cord over the wheel after the pulley has been mounted.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a catch-pulley, the combination with the grooved pulley-wheel, of a casing composed of a back plate, a base-plate and side plates in which the wheel is mounted, the top edges of the sides being inclined from the back to the periphery of the wheel, and the base being slotted to form a guide for the pulley-cord to keep the weight in alinement, substantially as shown and described.

2. In a catch-pulley, the combination, with the grooved pulley-wheel, of a casing composed of a back plate, and side plates in which the wheel is mounted, said back plate being provided with an opening for the passage of the pulley-cord in horizontal alinement with the central groove in the pulley-wheel, substantially as described.

3. In a catch-pulley, the combination with the grooved pulley-wheel, of a casing composed of a back plate, a base-plate, and side plates in which the wheel is mounted, the top edges of the sides being inclined from the back to the periphery of the wheel, a slot in the base to guide the cord, and an opening in the back plate for the passage of the cord, substantially as described.

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