

(No Model.)

C. C. PACKARD.
PHOTOGRAPHIC SHUTTER.

No. 316,564.

Patented Apr. 28, 1885.

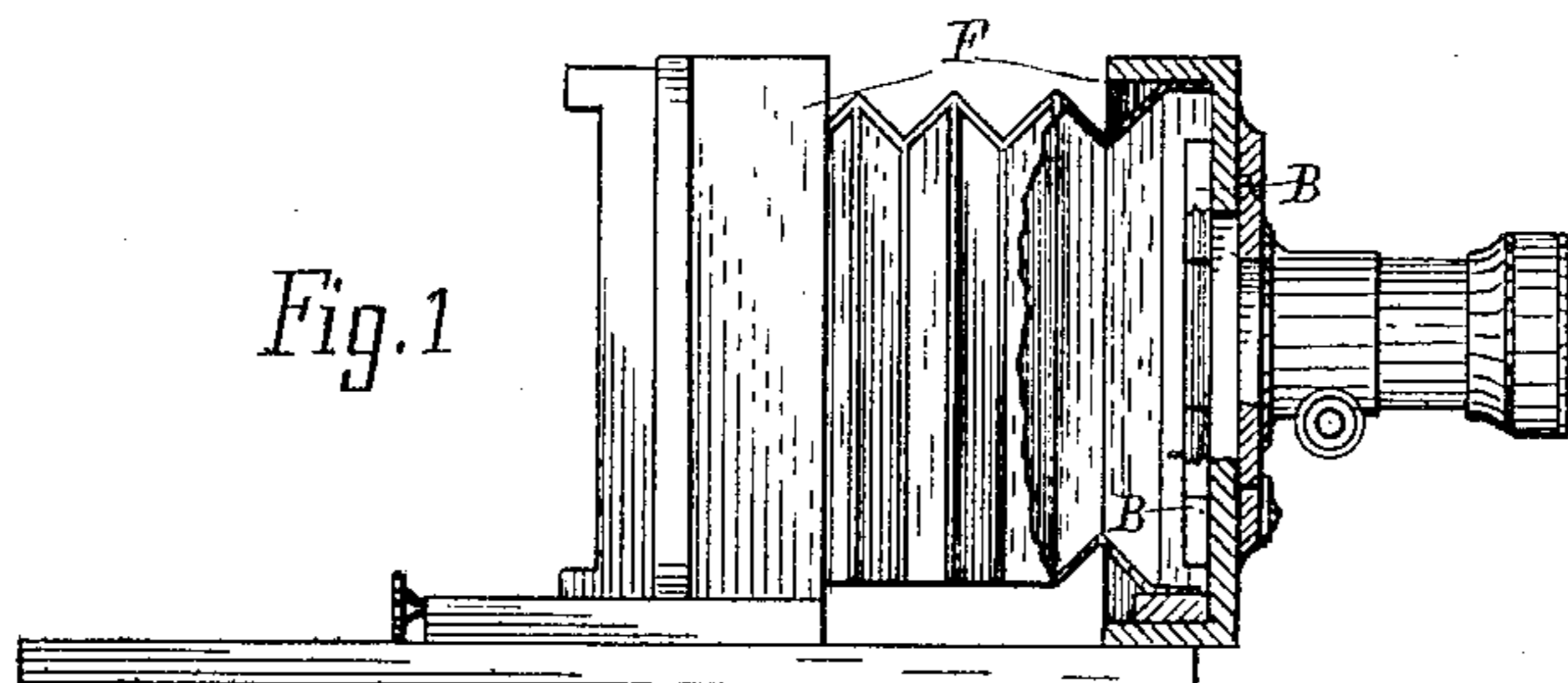


Fig. 1

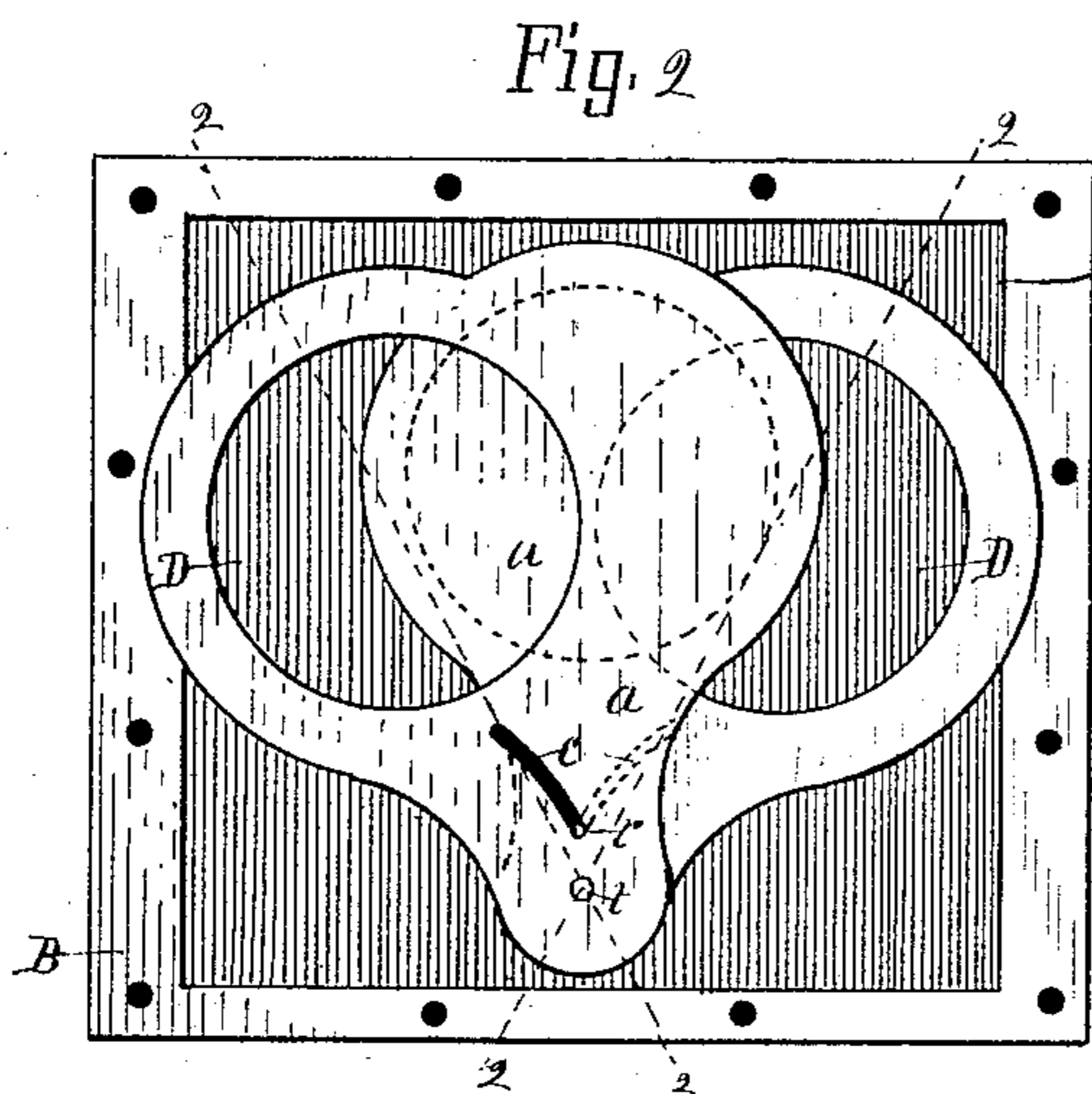


Fig. 2

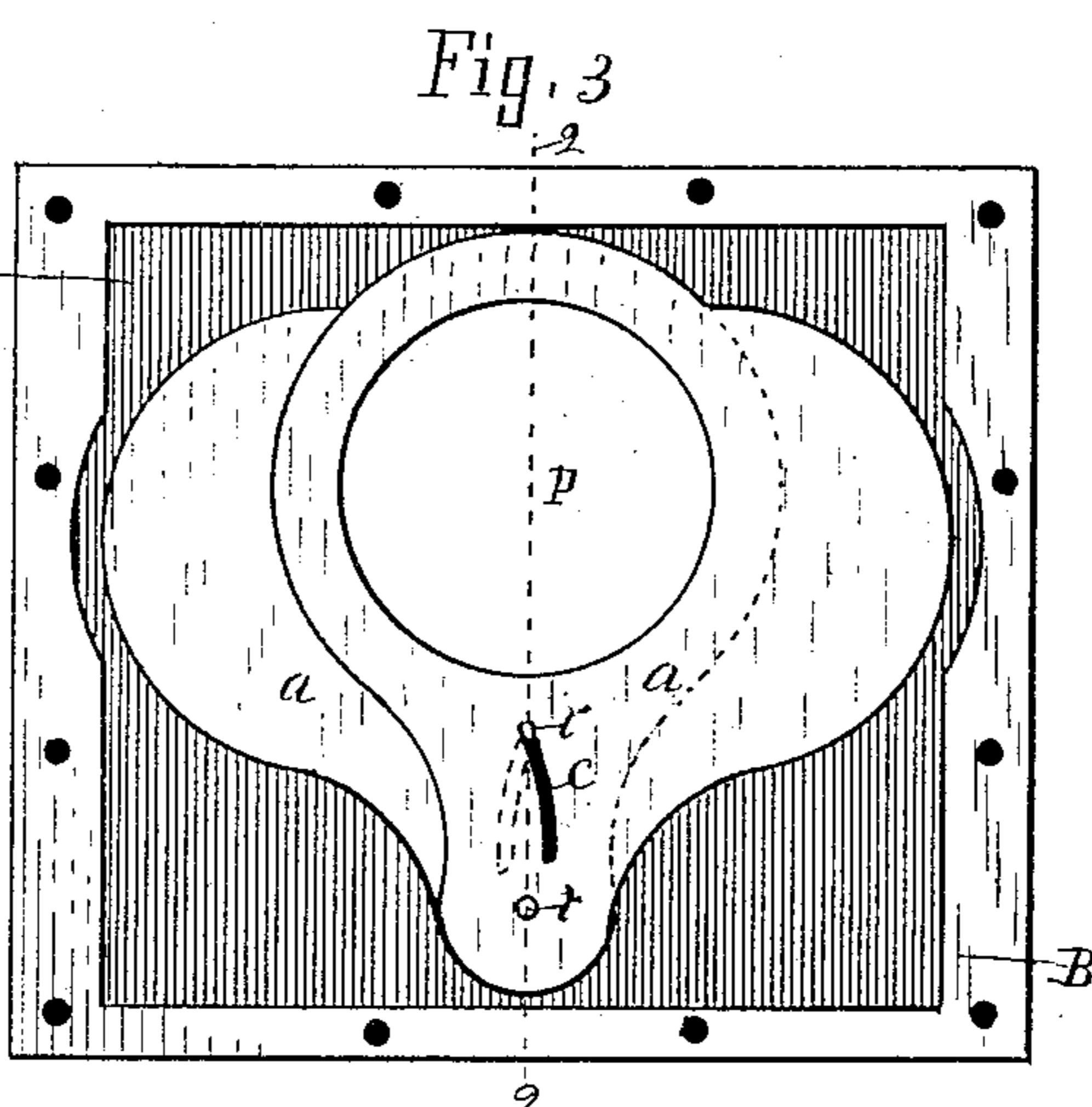


Fig. 3

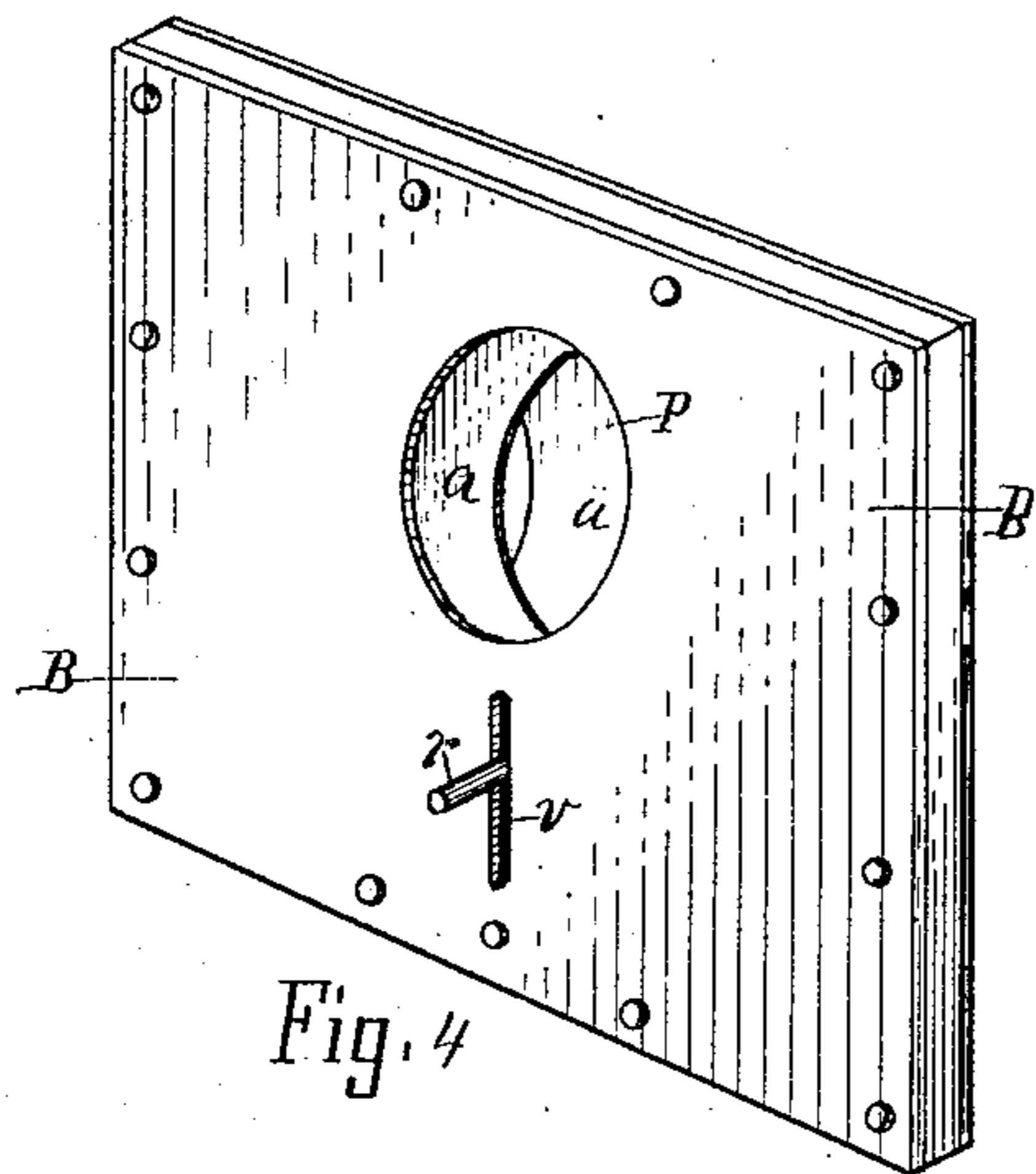


Fig. 4

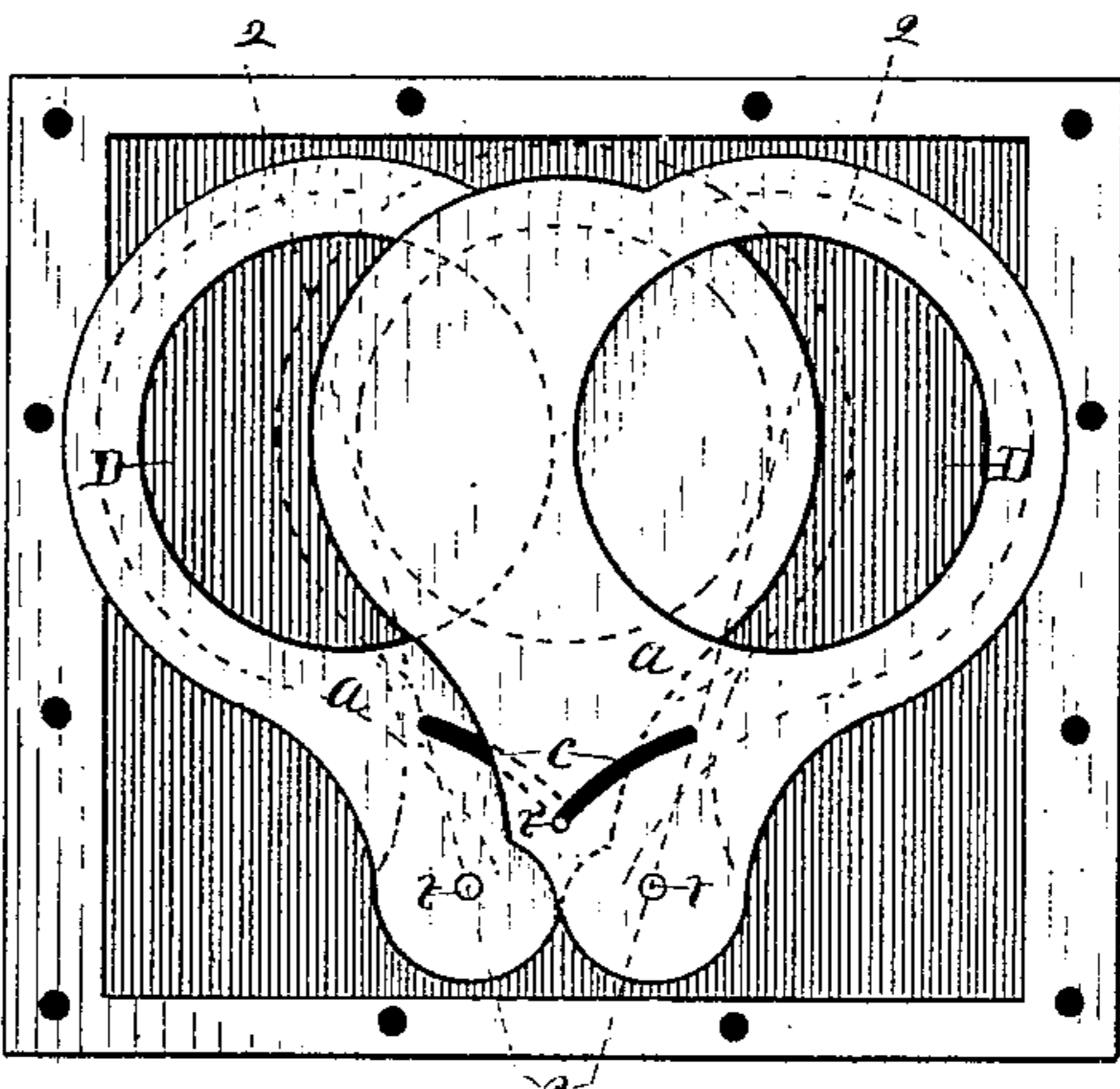


Fig. 5

Witnesses.
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UNITED STATES PATENT OFFICE.

CULLEN C. PACKARD, OF KALAMAZOO, MICHIGAN.

PHOTOGRAPHIC SHUTTER.

SPECIFICATION forming part of Letters Patent No. 316,564, dated April 28, 1885.

Application filed February 17, 1885. (No model.)

To all whom it may concern:

Be it known that I, CULLEN C. PACKARD, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Photographic Shutters, of which the following is a specification.

My invention relates to shutters used in photographic cameras. The objects of my invention are to provide a shutter which is nearly instantaneous in its action and easily operated by pneumatic or other means in common use. I attain these objects by the mechanism illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side view of a photographic camera with a portion broken away, showing the application of my improved shutter. Fig. 2 is an interior view of my device, showing the position of shutter-plates when the apertures in the sides of the shutter-case are closed. Fig. 3 is an interior view of my device, showing the position of shutter-plates when apertures are open. Fig. 4 is a perspective view of shutter-case containing the shutter-plates, and showing pin for operating the same. Fig. 5 is a modification of Figs. 2 and 3, showing the shutter-plates pivoted separately.

Similar letters refer to similar parts throughout the several views.

My device consists of a hollow case, B, provided with apertures P P in its opposite sides, and containing shutter-plates *a a*, constructed of thin hard rubber or other suitable material, having apertures D D, corresponding to those in the sides of shutter-case B, located near the edge of shutter-plates, and pivoted to the shutter-case at *t t*, as shown in Figs. 2, 3, and 5, so as to open or close apertures P in the sides of said case, thereby admitting or excluding the light to or from the sensitized plate in the camera. The said shutter-plates

a a are provided with slots *c c*, located near the point of pivoting and at a suitable angle to a line passing through the center of aperture of said shutter-plate and its point of pivoting, (shown by dotted lines 2 2, Figs. 2, 3, and 5,) for the purpose of operating said shutter-plates by means of pin *r*, passing through said slots and the vertical slot *v* in one side of the shutter-case, as shown in Fig. 4. It will be observed by referring to the several views that by moving the pin *r* in the direction of the length of the slot *v* the shutters *a a* will open or close the apertures in the shutter-case B, as described and shown.

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

1. In combination with a photographic camera-box, the shutter-case B, attached to the inside of said camera-box, back of the tube containing the lens, said shutter-case containing shutter-plates *a*, adapted to open or close apertures in the sides of the shutter-case B, the shutter-plates *a*, provided with slots *c*, adapted to be operated by means of pin *r*, passing through said slots, and a vertical slot, *v*, in the side of shutter-case, all in combination, as shown and described.

2. In combination with a photographic camera, the shutter-plates having apertures near their edge and pivotally connected to shutter-case, as shown, the slots in said plates being placed at an angle to a line passing through the center of apertures in said plates, and their points of pivoting the pin passing through said slots and the slot in one side of the shutter-case, as shown and described, and for the purpose set forth.

CULLEN C. PACKARD.

Witnesses:

JOHN C. PERKINS,
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