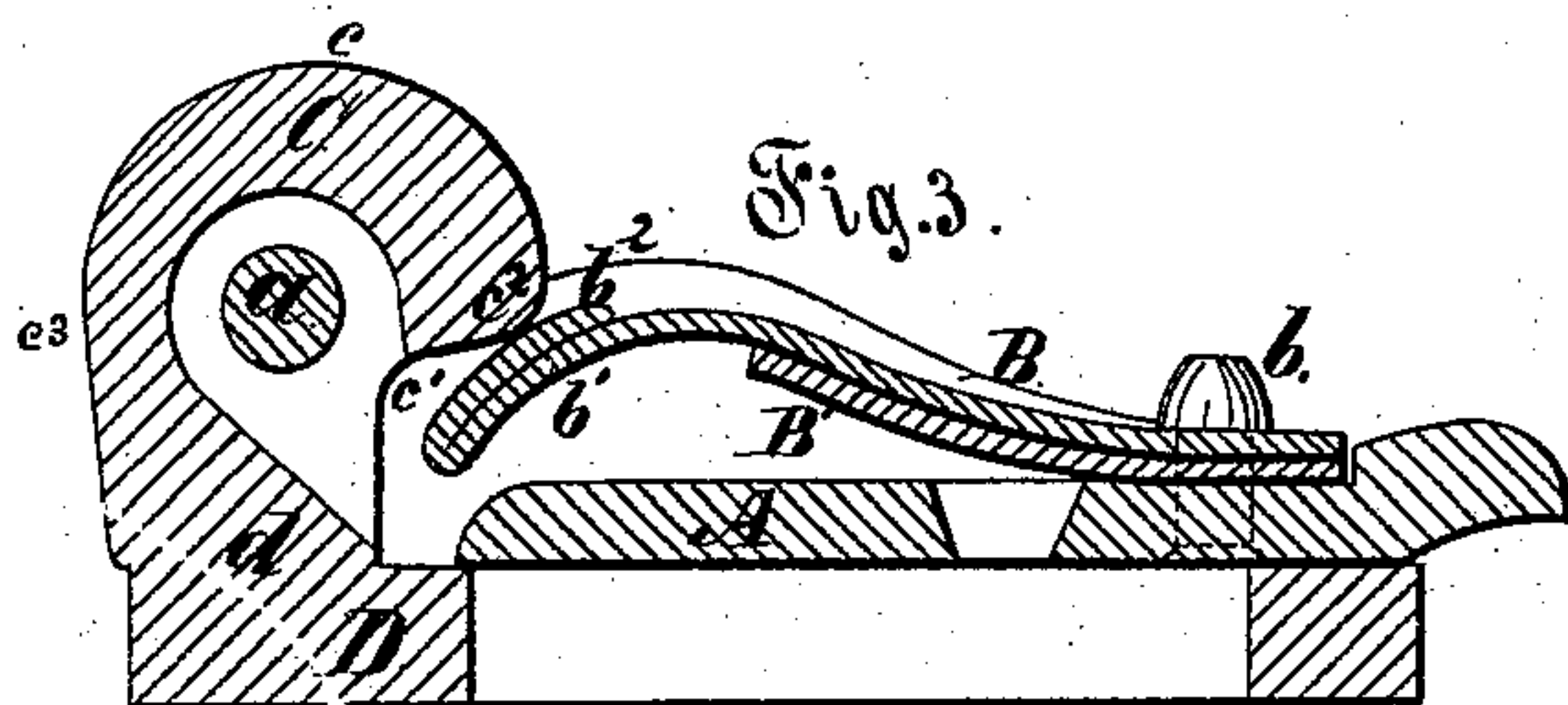
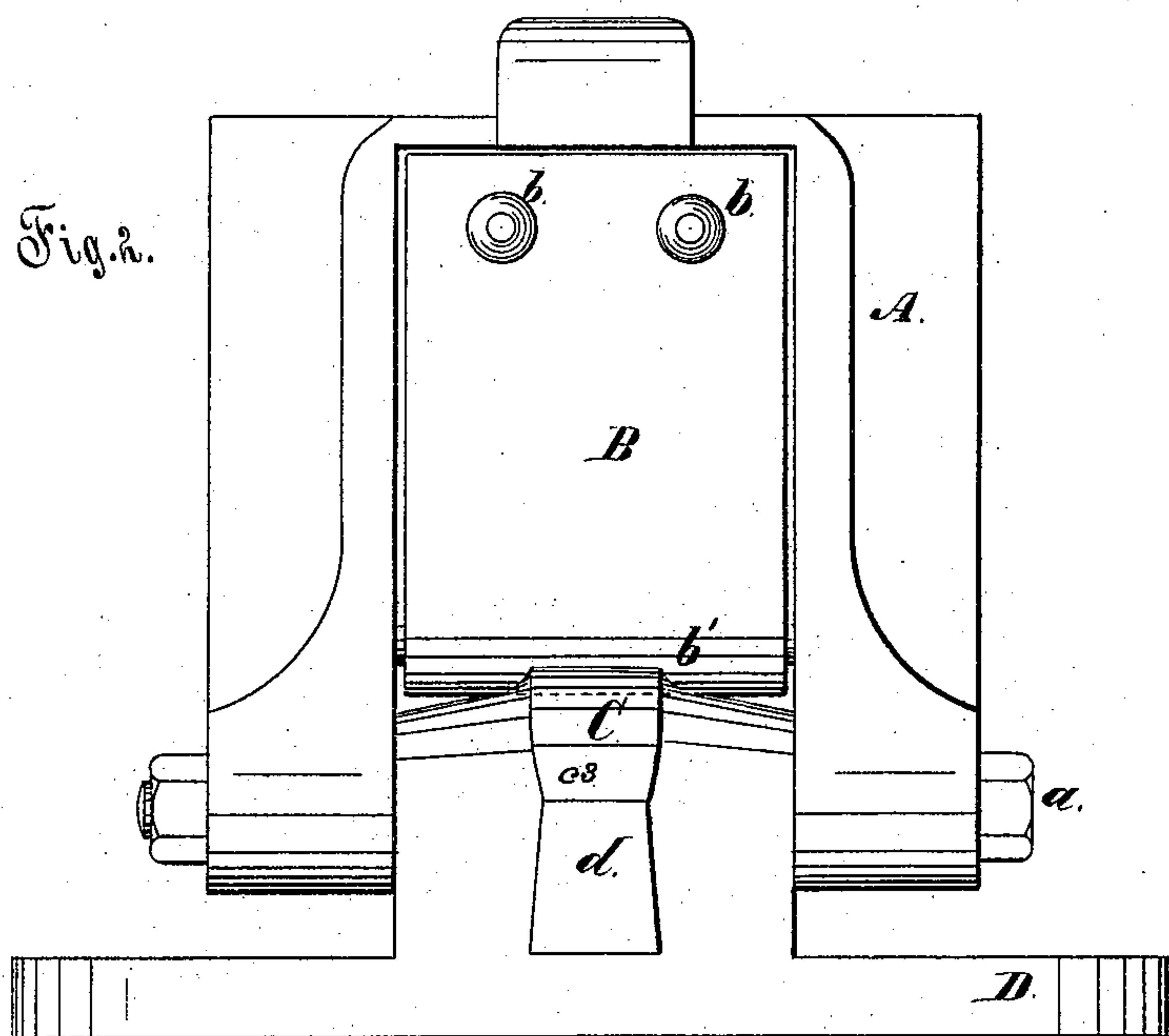
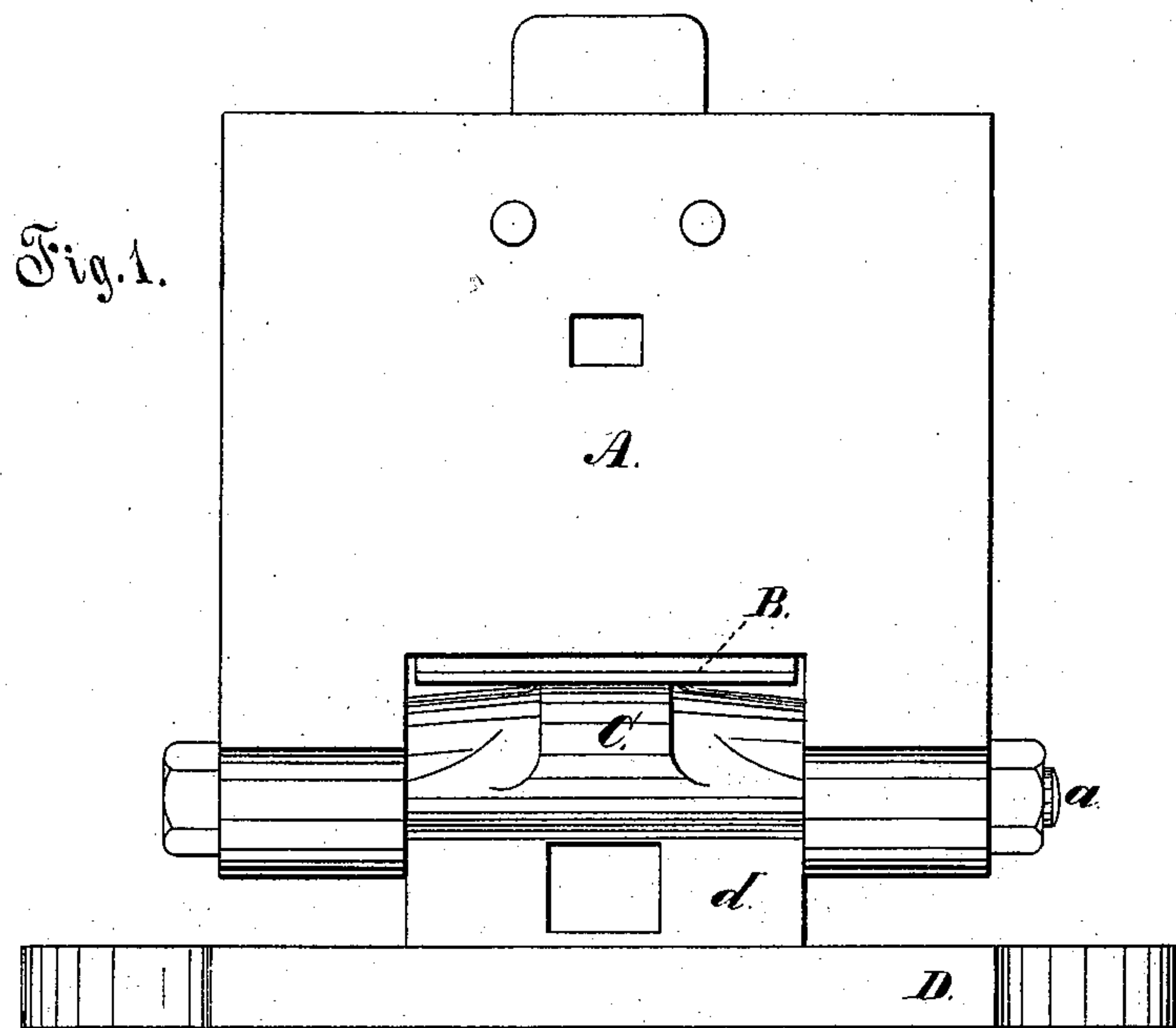


R. WELLS.
Car-Axle Box-Lid.

No. 209,150.

Patented Oct. 22, 1878.



Witnesses:
M. F. Clifton
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Inventor:
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his Atty.

UNITED STATES PATENT OFFICE.

REUBEN WELLS, OF JEFFERSONVILLE, INDIANA, ASSIGNOR TO HIMSELF
AND JOSEPH W. SPRAGUE, OF SAME PLACE.

IMPROVEMENT IN CAR-AXLE-BOX LIDS.

Specification forming part of Letters Patent No. **209,150**, dated October 22, 1878; application filed August 31, 1878.

To all whom it may concern:

Be it known that I, REUBEN WELLS, of Jeffersonville, Clark county, State of Indiana, am the inventor of an Improved Cover for Journal-Boxes of Car-Axles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is an under-side view of my improved cover and its attached devices, the cover being shown swung up or open. Fig. 2 is a top view of the same, the cover being shown in the same position as in Fig. 1. Fig. 3 is a central cross-section of the same, showing the cover closed down upon the box.

My invention relates to a lid or cover for the axle-box which incloses the journal-box of a car, and in which the waste saturated with oil to accomplish the lubrication of the journal is placed; and my invention consists in a cover for an axle-box, having a leaf-spring arranged as hereinafter described, working on a cam of the peculiar arrangement and form hereinafter set forth, and as more at length recited in the claims.

A is the cover, which is hinged to the box in the usual manner, as shown at *a*.

When it is desired to place my improved cover upon boxes already in use the cover may be hinged to a frame, D, as shown, the said frame being constructed and arranged to be bolted or otherwise secured upon the top of the box.

B is the leaf-spring, one end of which is secured to the cover on the upper side thereof, as seen at *b*. The spring is preferably re-enforced by a leaf, B', which is placed underneath it, as shown, and which conforms in outline and curvature to the spring B. The free end of this spring B bears and works upon the cam C, and the said end *b*¹ is formed or curved so that its bearing or wearing surface is convex to the face of the cam, as shown. This end *b*¹ is also preferably turned over or lapped upon itself, as shown at *b*²; whereby the wearing end is made more durable.

The cam C, on which the said spring bears and works, is mounted on a lug, *d*, which is on the top of the box or the frame D, as the case may be. The cam C may, if desired, be cast

in one piece with the lug and the box or frame D, or the parts may be fabricated separately and attached and rigidly secured to each other. The cam thus constitutes part of the hinge of the cover, as is shown. The upper face, *c*, of the cam is given a convex curve, which is preferably concentric to the axis of the hinge of the cover, and in its front or under face is the recess *c*¹, which receives the end *b*¹ of the spring when the cover is closed, as seen in Fig. 3.

The face of the cam upon which the spring bears is coincident in width with the width of the spring on the front of said cam at the point where the face of the cam recedes into the recess *c*¹. The edge *c*² is thus constituted, against which the spring bears when the cover is closed.

The bearing-face of the cam on its upper side at *c* is preferably narrower than the face of the edge *c*², as shown at *c*³ in Fig. 2. By this means, when the cover is closed, the spring B bears throughout its entire width on the face of the edge *c*², while, when the cover is opened and swung upward, the spring has a reduced bearing-surface.

It is evident that when the cover is opened the tension of the spring B, having its end *b*¹ bearing on the face *c* of the cam, will hold the cover open in any desired position, while, when the cover is closed, the end *b*¹ of the spring will pass over the edge *c*² and into the recess *c*¹, while the spring will bear on its entire width on the face *c*² and hold the cover securely closed.

It is also evident that while the spring bearing on the cam, when the cover is closed, will operate to hold the cover snugly against the top of the box, it will also press or push the cover away from the axis *a* of the hinge, and thus prevent all rattling and consequent wear at that point.

The construction and arrangement of the parts described afford the opportunity of employing a leaf-spring of great breadth and bearing-surface, thus obviating liability to breakage and rapid wearing.

I am aware that car-axle-box covers provided with a spring, one end of which is held in a recess or socket in the cover, the opposite end being made to act against a square or angular bearing connected with the frame, with an intermediate bearing for the spring on the cen-

ter of the cover, whereby the cover is pressed upon its seat by the pressure of the spring upon its center when closed, and held open in one single position when raised into that position, is not new.

I am also aware that a car-box cover has been provided with a sliding bolt placed in a recess in the cover, one end of which is pressed by a spiral spring against a curved cam on the frame, whereby the cover is forced down upon its seat when closed and held open when thrown up. I therefore limit my claim to the special devices having the special construction, form, and arrangement described.

What I do claim, and desire to secure by Letters Patent, is—

1. The combination, with the frame D, provided with the curved cam C, formed with the surfaces c c^1 and recess c^2 , as described, of the cover A, provided with the leaf-spring B, one end of which is riveted or bolted to the cover, as at b , the opposite end being made to press

against the said cam and take into the recess c^2 , whereby the cover is pressed against its seat when closed and held in any desired position when raised, all substantially as specified.

2. A car-axle-box cover composed of the lid A, the leaf-spring B, having the free end b^1 , and the cam C, with its face c^2 , coincident in width with the width of the spring, its face c , narrowed at c^3 , and the recess c^1 , as and for the purpose specified.

3. A car-axle-box cover composed of the lid A, cam C, having upper bearing-face, c , recess c^1 , and intervening face c^2 , together with leaf-spring B, with its convex bearing end b^1 turned or doubled over upon itself, as at b^2 , as and for the purpose specified.

REUBEN WELLS.

Witnesses:

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