

(No Model.)

2 Sheets—Sheet 1.

J. D. RIPSON.

CAR COUPLING.

No. 336,530.

Patented Feb. 16, 1886.

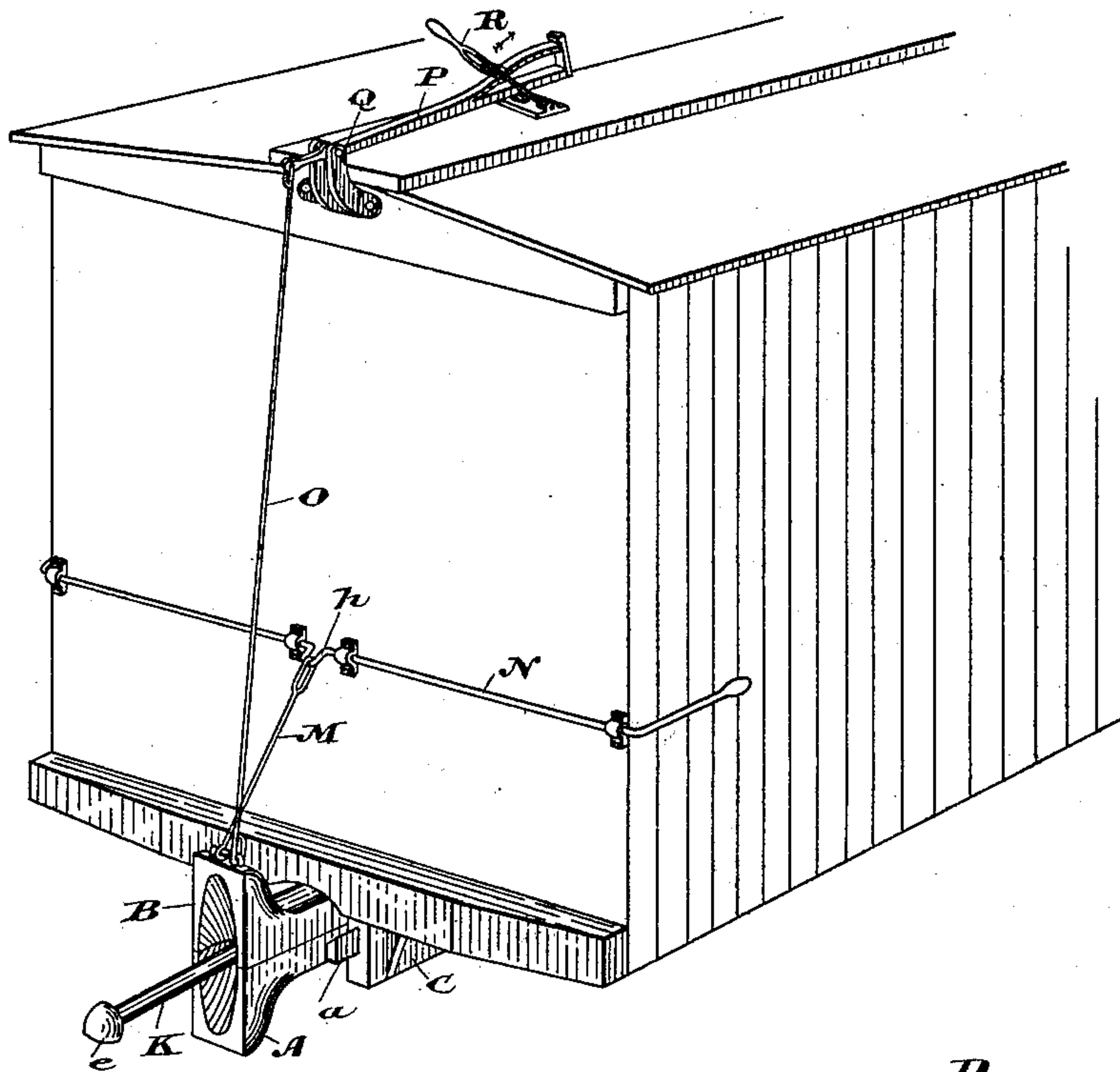


Fig. 1.

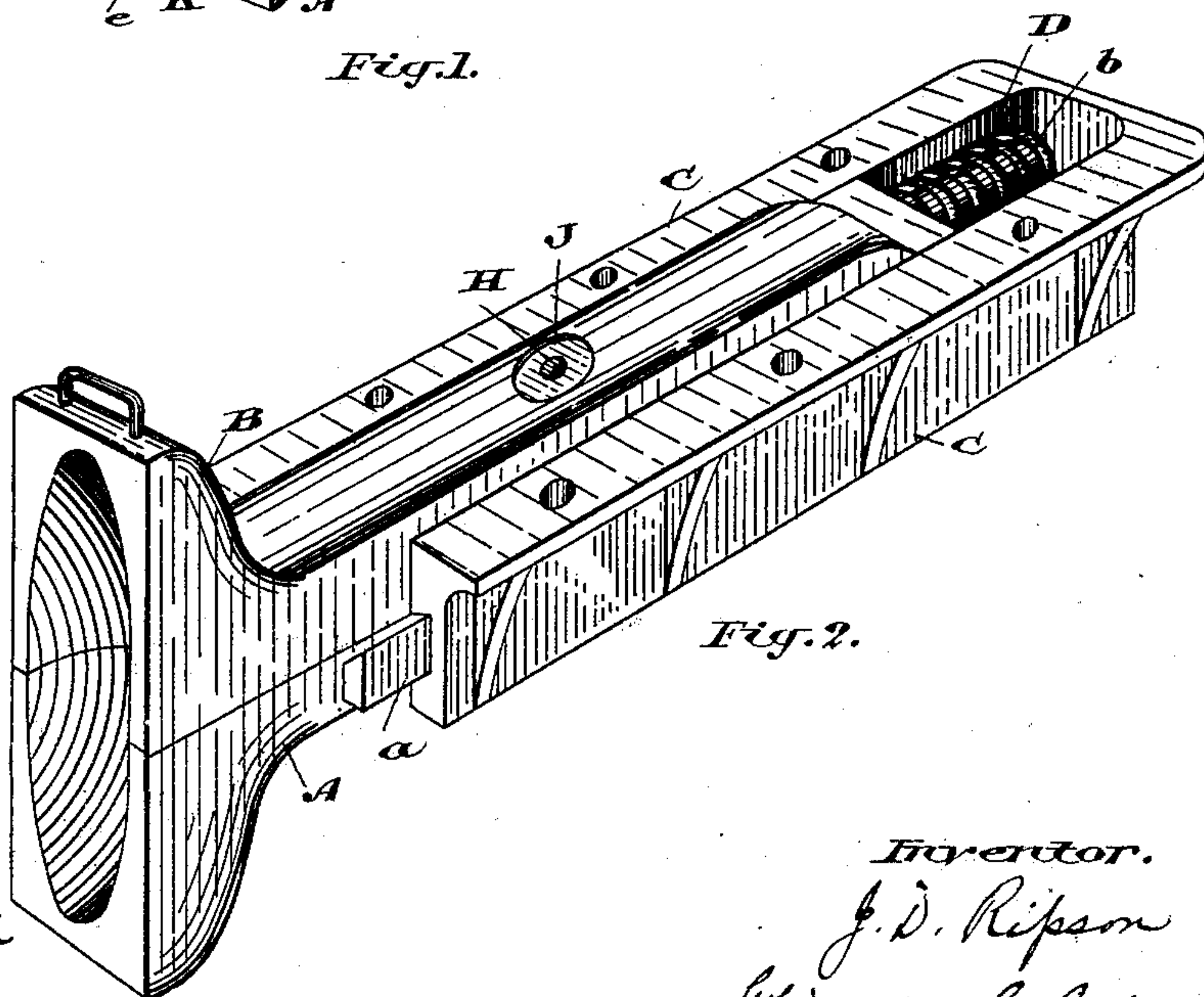


Fig. 2.

Witnesses.

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by Donald C. Ridout  
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(No Model.)

2 Sheets—Sheet 2.

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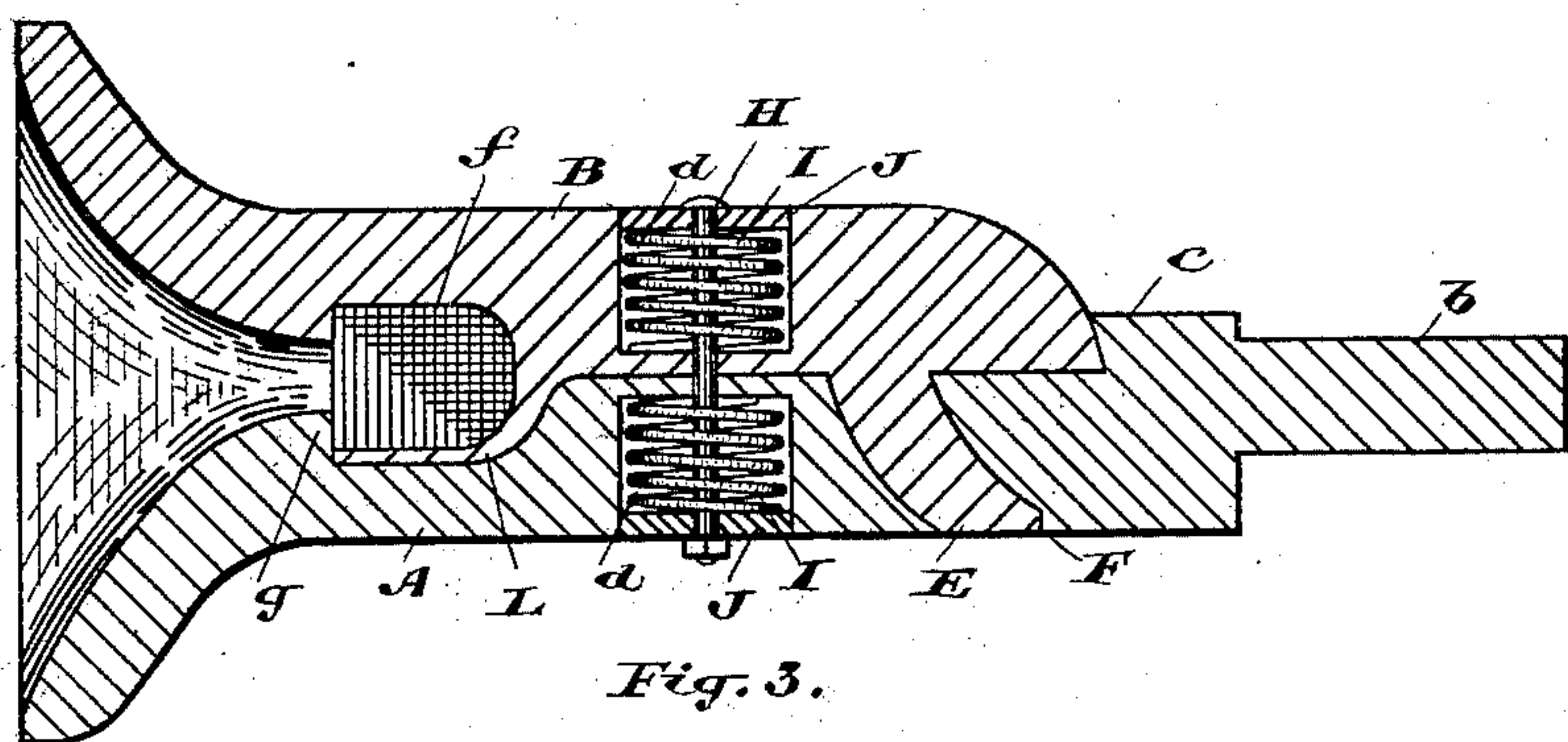


Fig. 3.

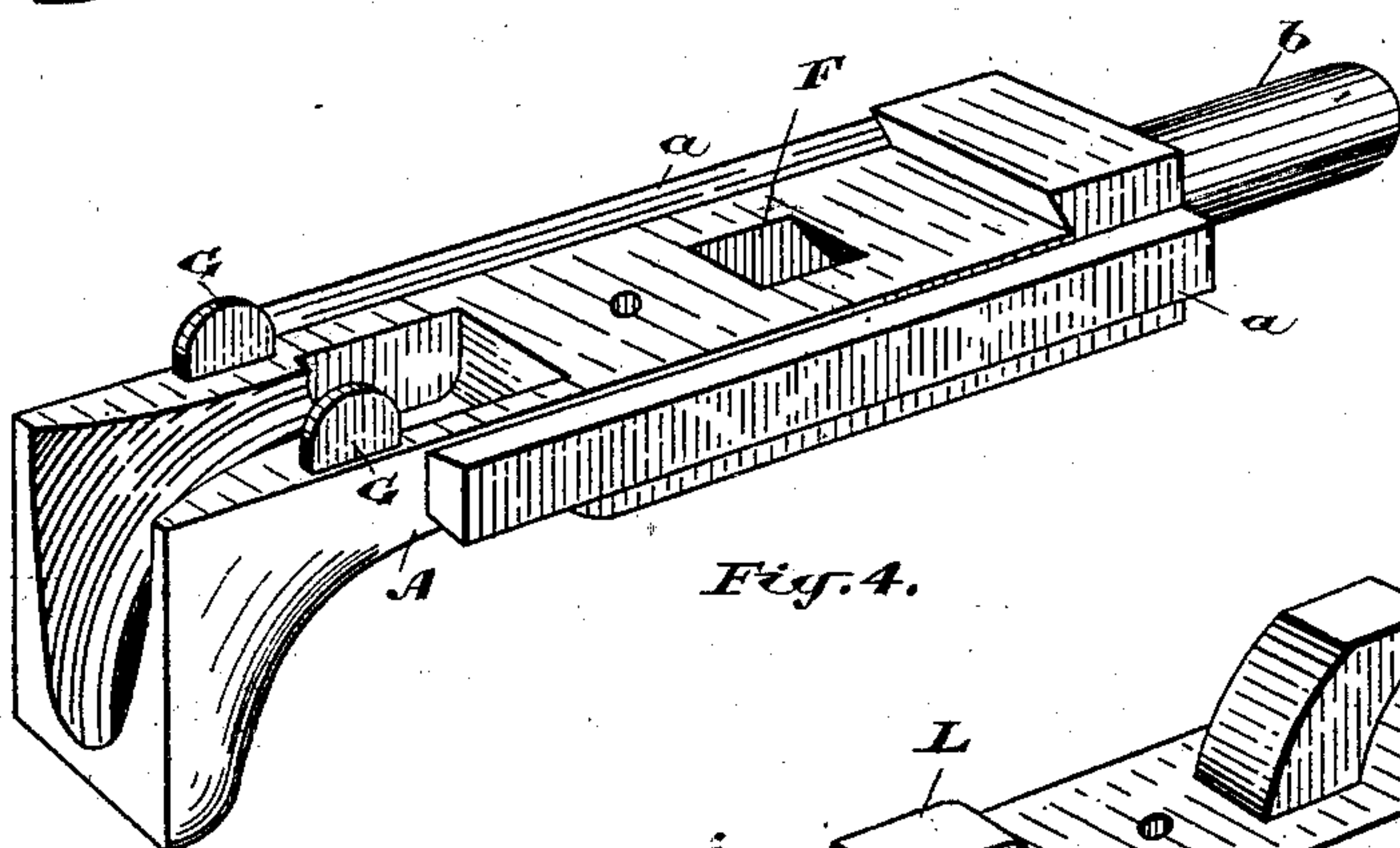


Fig. 4.

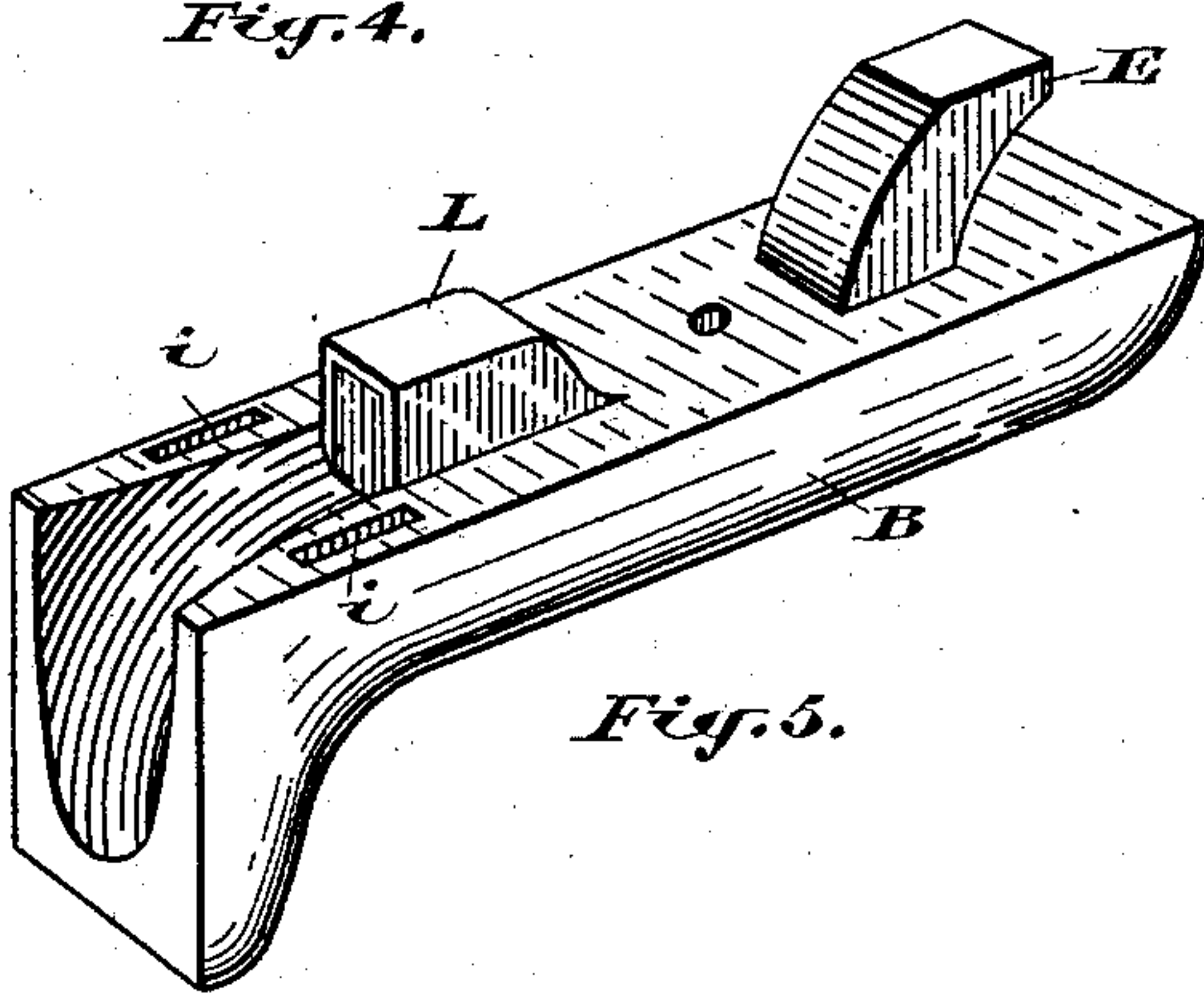


Fig. 5.

Witnesses.

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# UNITED STATES PATENT OFFICE.

JOHN D. RIPSON, OF TORONTO, ONTARIO, CANADA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 336,530, dated February 16, 1886.

Application filed November 30, 1885. Serial No. 184,358. (No model.) Patented in Canada November 26, 1885, No. 22,882.

*To all whom it may concern:*

Be it known that I, JOHN DANFORD RIPSON, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, mechanic, have invented an Improved Self-Acting Car-Coupler, of which the following is a specification.

The object of the invention is to devise a simple and effective self-acting car-coupler; and it consists, essentially, in the specific form and arrangement of parts hereinafter more particularly explained.

Figure 1 is a perspective view showing the end of a car provided with my improved self-acting car-coupler. Fig. 2 is a perspective detail of same removed from the car. Fig. 3 is a sectional elevation of the car-coupler. Fig. 4 is a perspective detail, showing the bottom half of the draw-head. Fig. 5 is a perspective detail of the top half of the draw-head.

In the drawings like letters of reference indicate corresponding parts in each figure.

Before describing the complete device as exhibited in Fig. 1 I shall explain in detail the exact construction of the draw-head and parts forming my self-acting car-coupler.

The draw-head is divided into two parts, A representing the lower half, and B the upper half. On each side of the lower half, A, I cast or otherwise form dovetailed projections *a*, designed to fit into dovetailed grooves in the double bracket C, which is bolted to the bottom of the car in the usual position. A shank, *b*, is formed on the lower half, A, of the draw-head, on which shank is placed the spring D, as indicated in Fig. 2, the end of the shank *b* projecting through a hole formed in the back end of the bracket C, the spring D butting against the said back, and against the shoulder formed on the lower half of the draw-head A. A curved lug, E, is formed on the upper half, B, of the draw-head, and is designed to fit into the hole or recess F, made in the lower half, A, of the draw-head, and the end of the half B butts against a shoulder, *c*, formed on the lower half, A, of the draw-head.

G are guides cast or otherwise formed on the lower half, A, and are designed to fit into recesses *i*, made in the upper half, B, as indicated.

When the two halves A and B are put to-

gether, as indicated in the drawings, the curved lug E, shoulder *c*, and guide G constitute a rigid connection between the two halves A and B, thereby insuring the solidity of the draw-head when placed in position. A spring, I, is placed in a recess, *d*, made in each half A and B, as shown. A spindle, H, passes through these two springs, and being provided with a disk or cap, J, placed on the outside end of each spring I, holds the two halves A and B together, but is sufficiently elastic to permit the mouth of the upper half, B, to be raised sufficiently to allow the head *e* of the coupling-pin K to pass, and will bring them together immediately afterward.

In order to prevent the end of the pin K coming in contact with the end of the recess *f* in the draw-head, care should be taken to avoid making the pin K any longer than is necessary, so that the draw-heads of the two cars being coupled will come together without the ends of the coupling-pin K striking the back of the recess *f*. A box, L, is attached to the top half, B, and is designed to fit into the recess *f*, so that the head *e*, when inserted into the said recess, also fits into the box L.

When it is desired to uncouple the car, the top half, B, is raised, the curved lug E acting as a sort of hinge. When thus raised, the bottom of the box L comes in contact with the bottom of the head *e*, thus raising the said head above the shoulder *g*, and permitting the pin to be pulled freely out of the draw-head.

A rod, M, connects the upper half, B, of the draw-head with a crank, *h*, formed on the rod N, which extends, as indicated in Fig. 1, to either side of the car, and is provided with suitable crank-handles, as shown. This rod N thereby provides means for raising the upper half, B, from whichever side of the car the brakeman may happen to be. A rod, O, is connected to the upper half, B, and extends to the top of the car, where it is connected to the lever P, which lever is pivoted, as indicated, to the bracket Q, and extends back, as shown, being shaped substantially as shown in Fig. 1.

So long as the two halves of the draw-head are held together by the springs I the long end of the lever P will be held up above the top of the car.

When it is desired to raise the upper half, B,



for the purpose of releasing the coupling-pin K, the brakeman seizes the hand-lever R, which is pivoted at the top of the car and has a pin projecting over the top of the lever P, so that upon the said lever being moved in the direction indicated by arrow the long end of the lever P is forced down, which of course imparts an upward movement to its other end, causing the rod O to perform its required service.

What I claim as my invention is—

1. A draw-head divided into two parts, A and B, the curved lug E, and guides G, designed to fit, respectively, into the hole or recess F and recesses *i*, in combination with the springs I and spindle H, arranged substantially as and for the purpose specified.

2. A draw-head divided into two parts, A and B, connected together by the spindle H, and springs I, in combination with dovetailed projections *a*, designed to fit into corresponding recesses formed in the bracket C, substantially as and for the purpose specified.

3. A draw-head divided into two parts, A and B, the lower part being provided with projections *a*, to fit into recesses made in the bracket C, in combination with the box L, attached to the upper half, B, and designed to fit a recess in the jaw A, below the head *e* of the coupling-pin K.

4. A self-acting car-coupler in which the draw-head is divided into two parts, A and B, and shaped to receive the head *e* of the coupling-pin K, a rod, O, connecting the upper half, B, of the draw-head to the end of the lever P, in combination with a pivoted hand-lever, R, having a pin or projection formed on it to act against the curved end of the lever P.

Toronto, November 9, 1885.

JOHN D. RIPSON.

In presence of—

CHARLES C. BALDWIN,  
F. BARNARD FETHERSTONHAUGH.