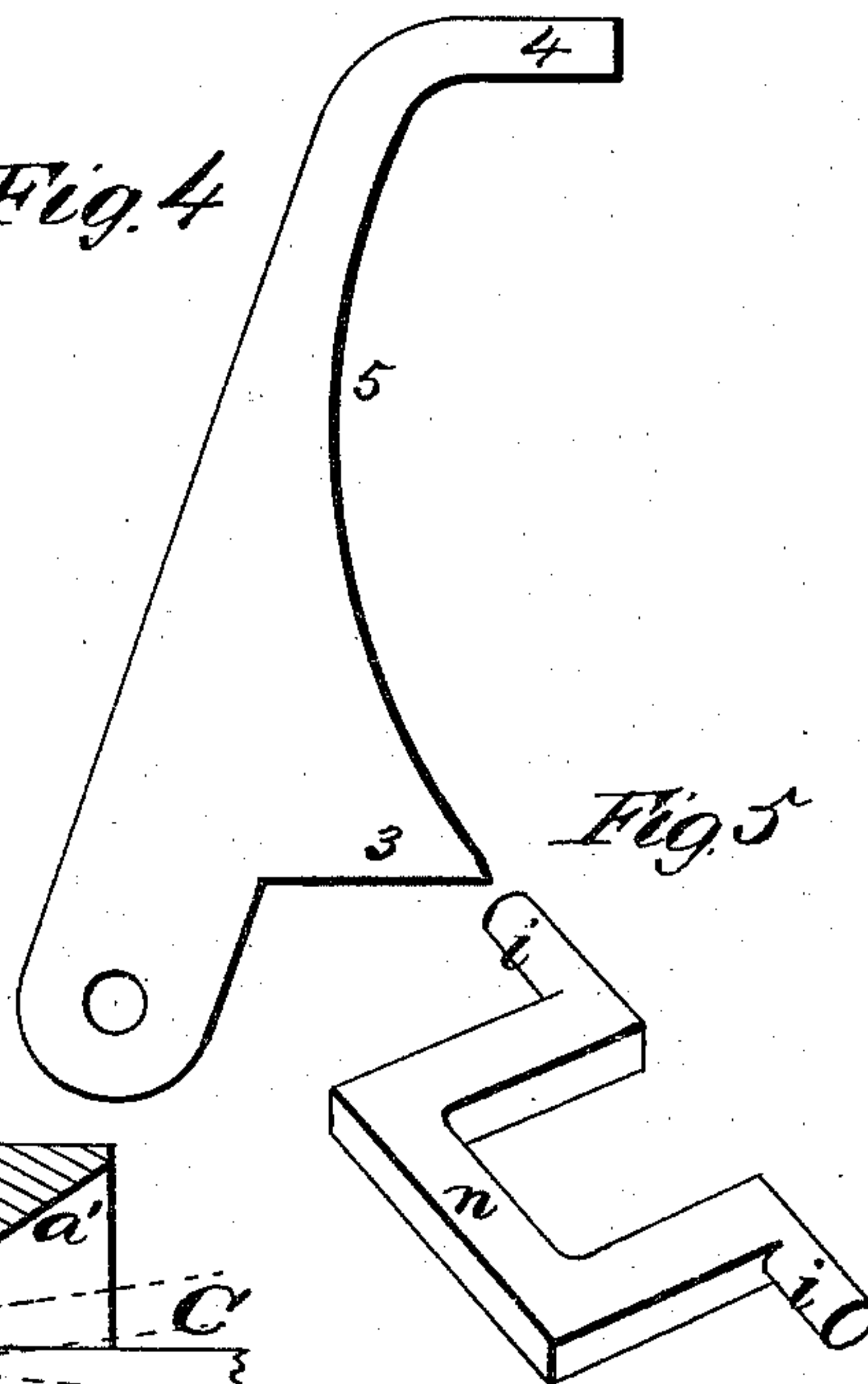
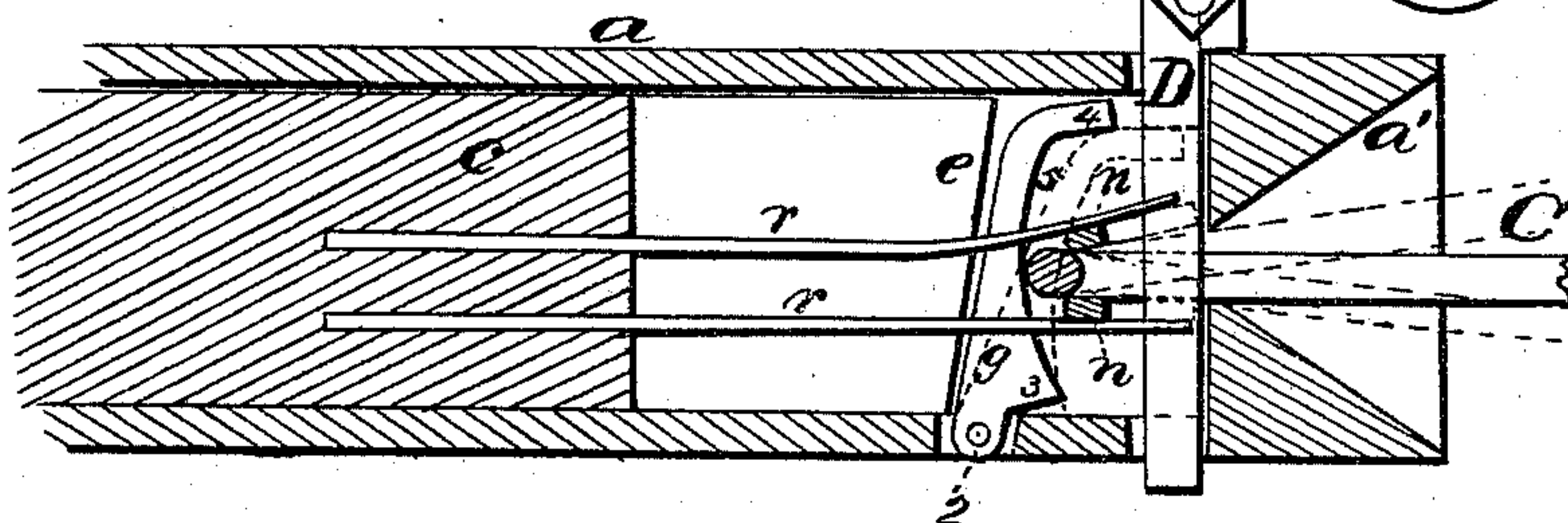
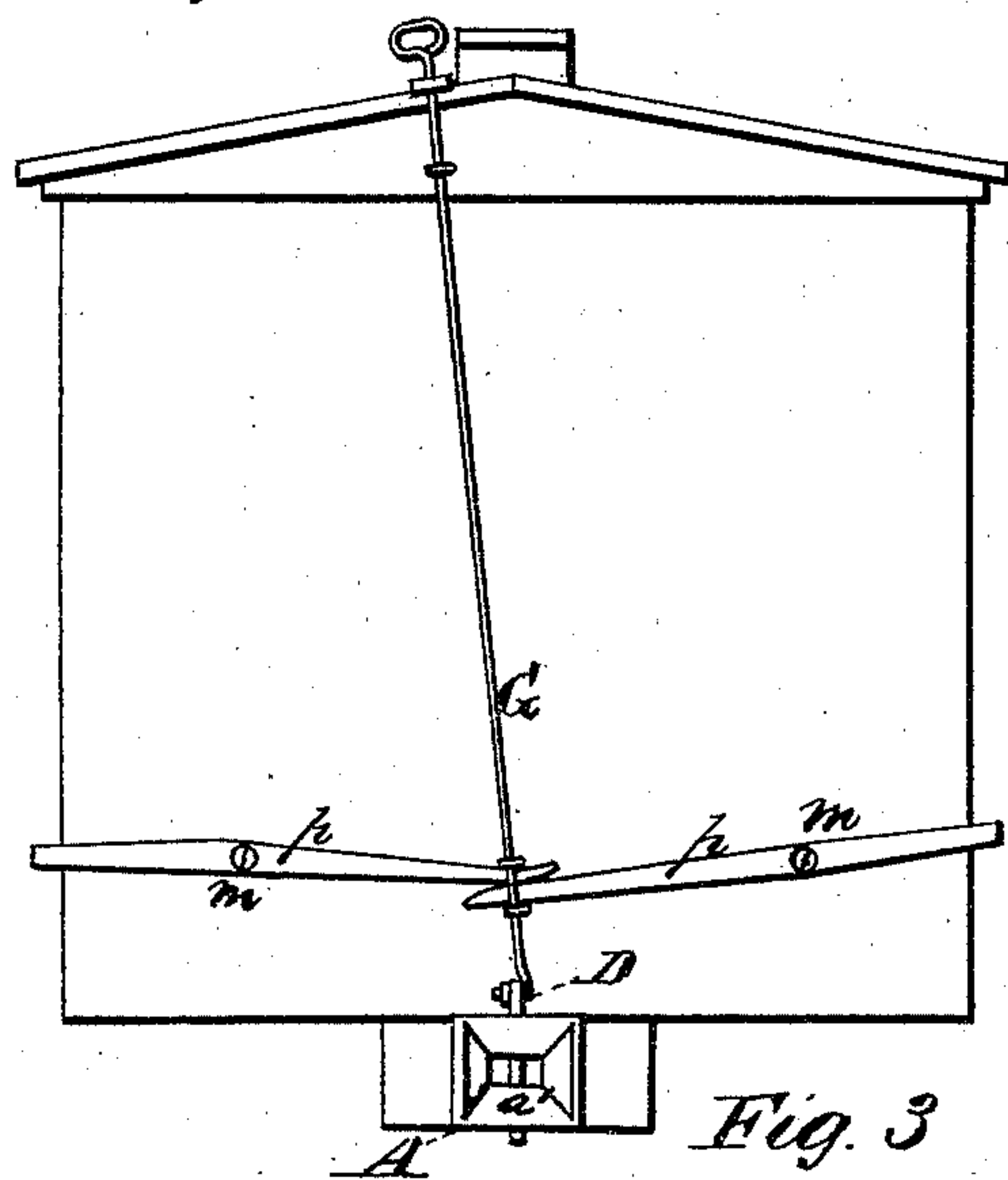
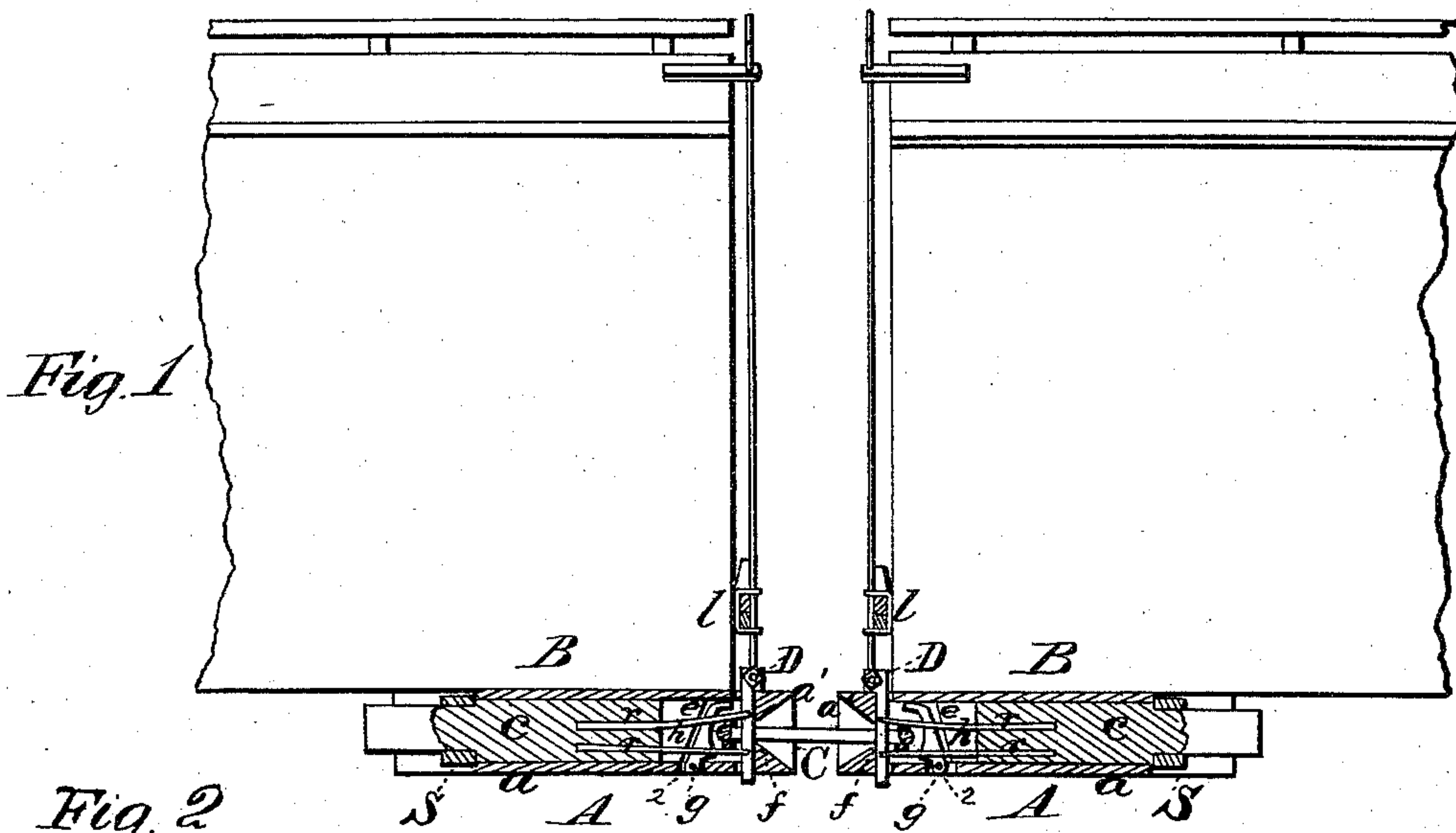


B. B. MORGAN.
Car-Couplings.

No. 157,411.

Patented Dec. 1, 1874.



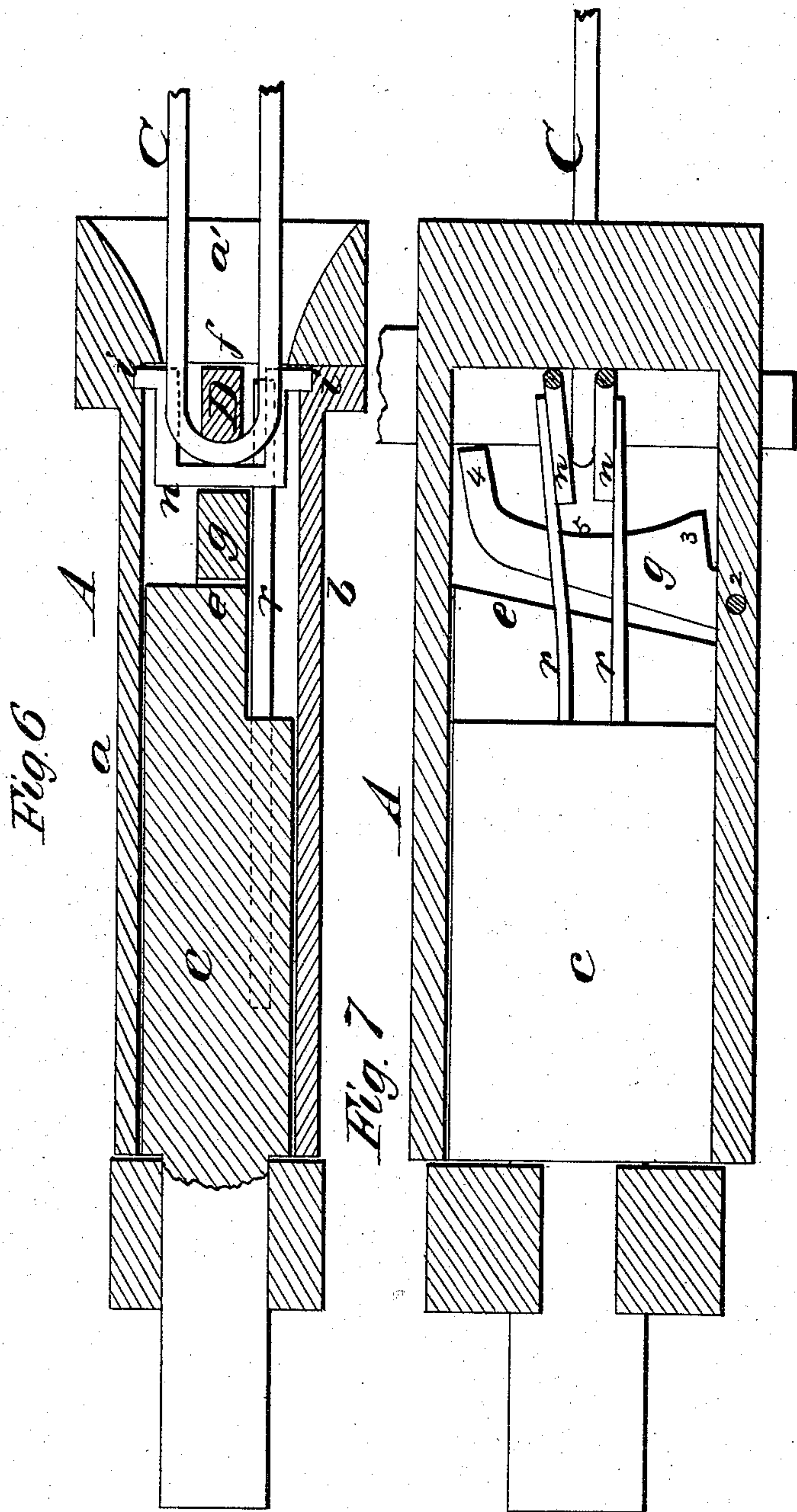
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BENJAMIN B. MORGAN, OF HOWELL, MICHIGAN.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 157,411, dated December 1, 1874; application filed November 10, 1874.

To all whom it may concern:

Be it known that I, BENJAMIN B. MORGAN, of Howell, in the county of Livingston and State of Michigan, have invented a new and valuable Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a longitudinal vertical section of my car-coupling attached to a railroad-car. Fig. 2 is an end view of the same. Fig. 3 is a longitudinal vertical sectional view of one coupler. Figs. 4 and 5 are detail views. Fig. 6 is a horizontal sectional view, and Fig. 7 a longitudinal vertical sectional view, of the same.

This invention has relation to means for automatically effecting a coupling between railroad-coaches when they are brought together, and also to means for holding coupling-links in a horizontal position; at the same time allowing their outer ends to rise or descend and accommodate themselves to and freely enter the mouths of buffers on cars of different heights while effecting a coupling.

The nature of my invention and improvements consists, mainly, in the employment, in connection with a coupling-pin and an inclined abutment, of a pivoted dog, provided with a broad supporting-base, a supporting-end, and a curved front edge, the flaring mouth of the draw-head being provided with a contracted throat and pivoted jaws acted on by springs, as hereinafter more fully set forth.

In the annexed drawings, A A designate two draw-bars, which are applied to the car-beds B B in the usual well-known manner. Each draw-bar is constructed in the following manner: The shank *a* is hollow, and has three permanent sides, and one removable side, *b*. Inside of this draw-bar is a portion, *c*, which is rigidly secured in its place, and provided on its rear end with a suitable spring, S, for allowing longitudinal elasticity of the draw-bar and preventing undue shocks when cars are brought together or suddenly started. The front end *e* of the portion *c* is inclined or beveled, as shown in Fig. 3, and affords an abut-

ment and a support for a dog, *g*, when this dog is struck by a coupling-link in the act of making a coupling. Between the inclined end *e* of the portion *c* and a contracted throat, *f*, of the mouth *a'* of the draw-bar, is a chamber, *h*, in which the dog *g* is arranged; also, two staple-shaped jaws, *n n*, between which latter the coupling-link C is received when thrust into the draw-bar, as shown in Figs. 1 and 3. The dog *g*, shown detached in Fig. 5, is pivoted to the floor of the draw-bar at 2, and is constructed with a broad base, 3, a hooked supporting end, 4, and a front curved edge, 5, and this dog is pivoted in such relation to the abutment *e* that when a link is thrust into the draw-bar and against the dog the abutment *e* will resist the thrust. The inclination of the abutment *e* is such that the dog *g* will always fall forward when unrestrained, so that its upper end 4 will lie directly beneath the lower end of the vertical coupling-pin D, and thus hold up this pin, and when the dog is in this last-named position the base 3 rests upon the floor of the draw-bar. The front edge 5 of the dog is the arc of a circle of such a radius that a link of a given length will serve for cars varying considerably in height. The open or staple-shaped jaws *n n* have pivotal ends *i*, which are received into apertures made in the vertical sides of the draw-bar in close relation to the throat *f*, and the free ends of these jaws are held together, in a plane passing horizontally through the center of the draw-bar, by means of two spring-arms, *r r*, of equal strength. These two jaws *n n*, which allow the coupling-pin D to drop through them, receive between them the link C, and hold this link in a horizontal position for making a coupling automatically with another draw-bar; at the same time the jaws allow the link to vibrate vertically and couple with high or low cars. The coupling-pin D is made quite broad, for securing strength, and in cross-section the front edge and sides are flat, and the back edge, against which the link draws, is rounded. The upper end of the pin D is connected to a draw-rod, G, as shown in Fig. 2, which rod extends to the top of the car, and is suitably guided. It is by means of this rod that a person on top of a car can raise the pin D and uncouple. For platform-coaches a much

shorter draw-rod G will be used. A loop, *l*, is fixed to the rod G a short distance above the head of the pin D, through which loop the inner ends of two hand-levers, *p p*, pass freely, which levers have their fulcrums at *m m*, and their outer ends extend short distances beyond the sides of the car. It is by means of these levers that a person can uncouple from either side of a car without going between cars.

It will be seen from the above description that when the pin D is raised the dog *g* will drop beneath it and positively hold it up until a link is thrust into the draw-bar when the dog will be moved back, and the pin D allowed to drop.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the coupling-pin D and the inclined abutment *e*, the dog *g*, pivoted at 2, and constructed with a broad supporting-base, 3, a supporting-end, 4, and a curved front edge, 5, substantially as described and shown.

2. In combination with the contracted throat *f* of the flaring mouth, the open pivoted jaws *n n*, acted on by springs *r r* in the manner and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

BENJAMIN B. MORGAN.

Witnesses:

GEORGE E. UPHAM,
JOHN B. CORLISS.