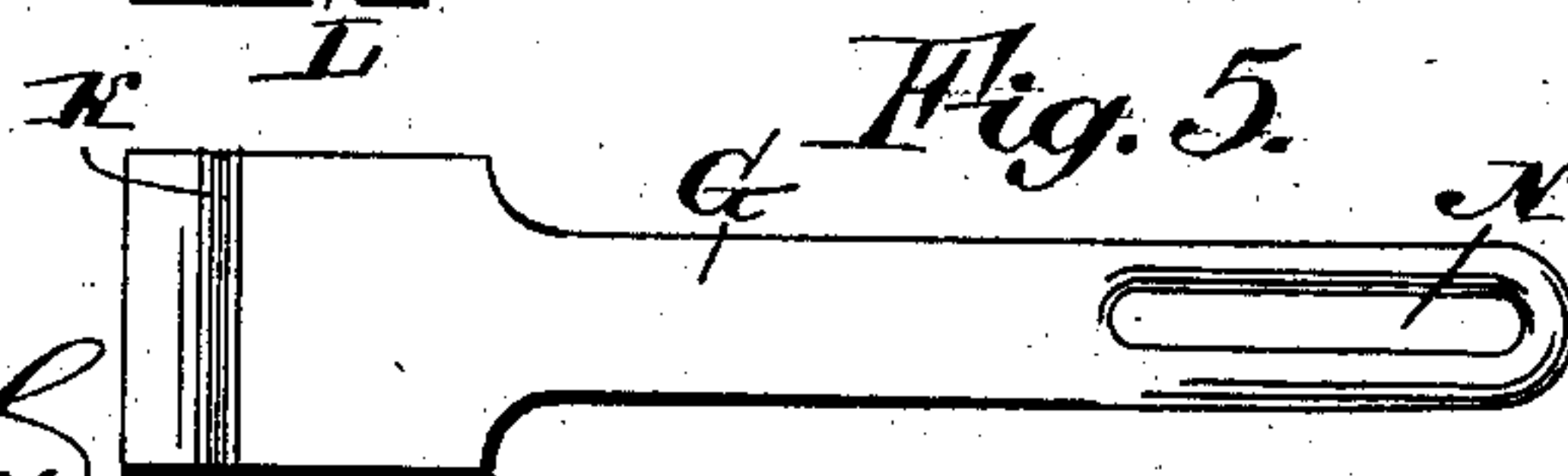
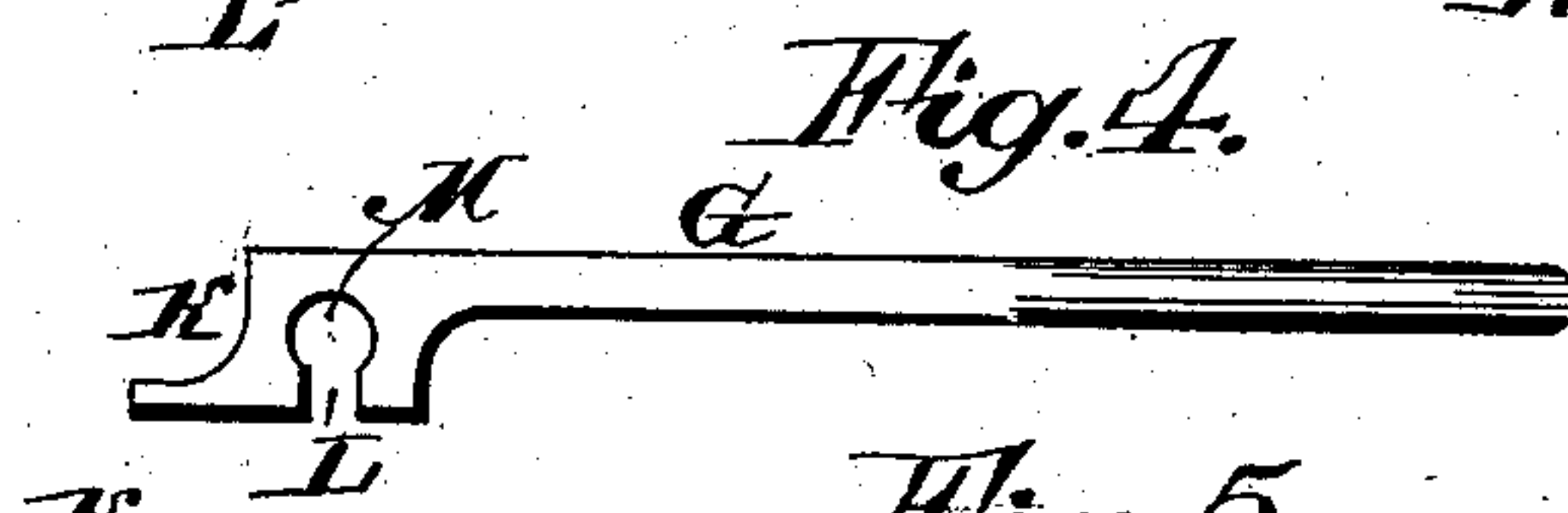
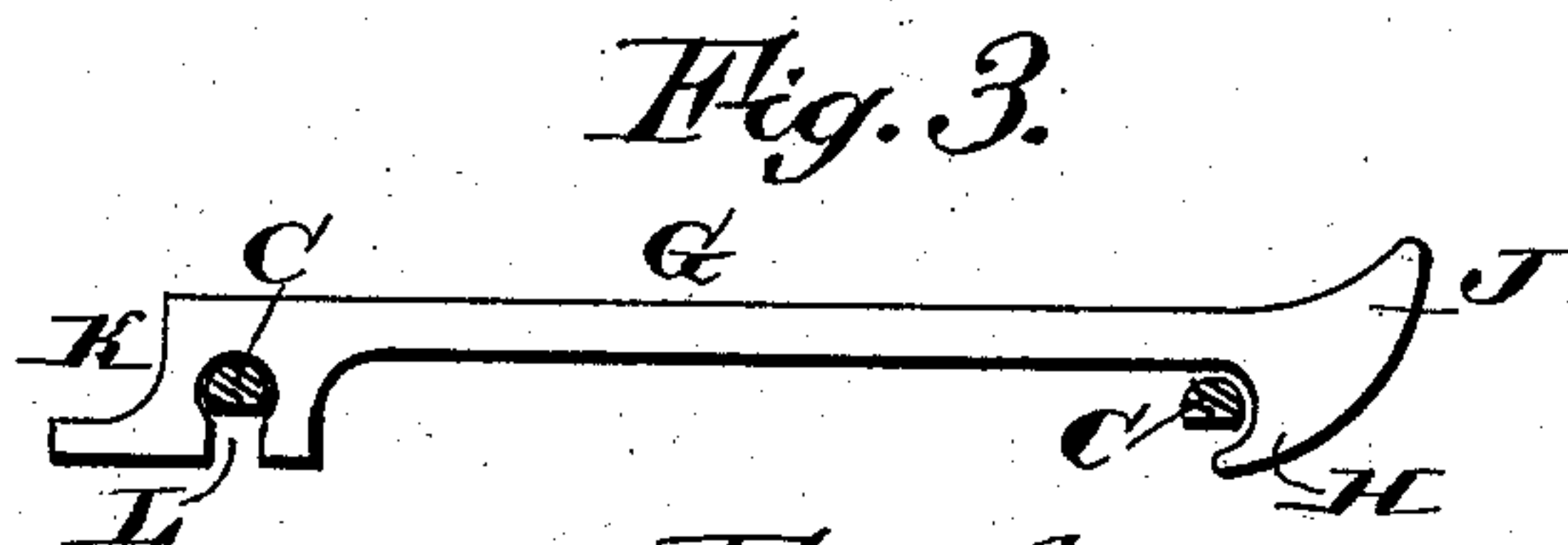
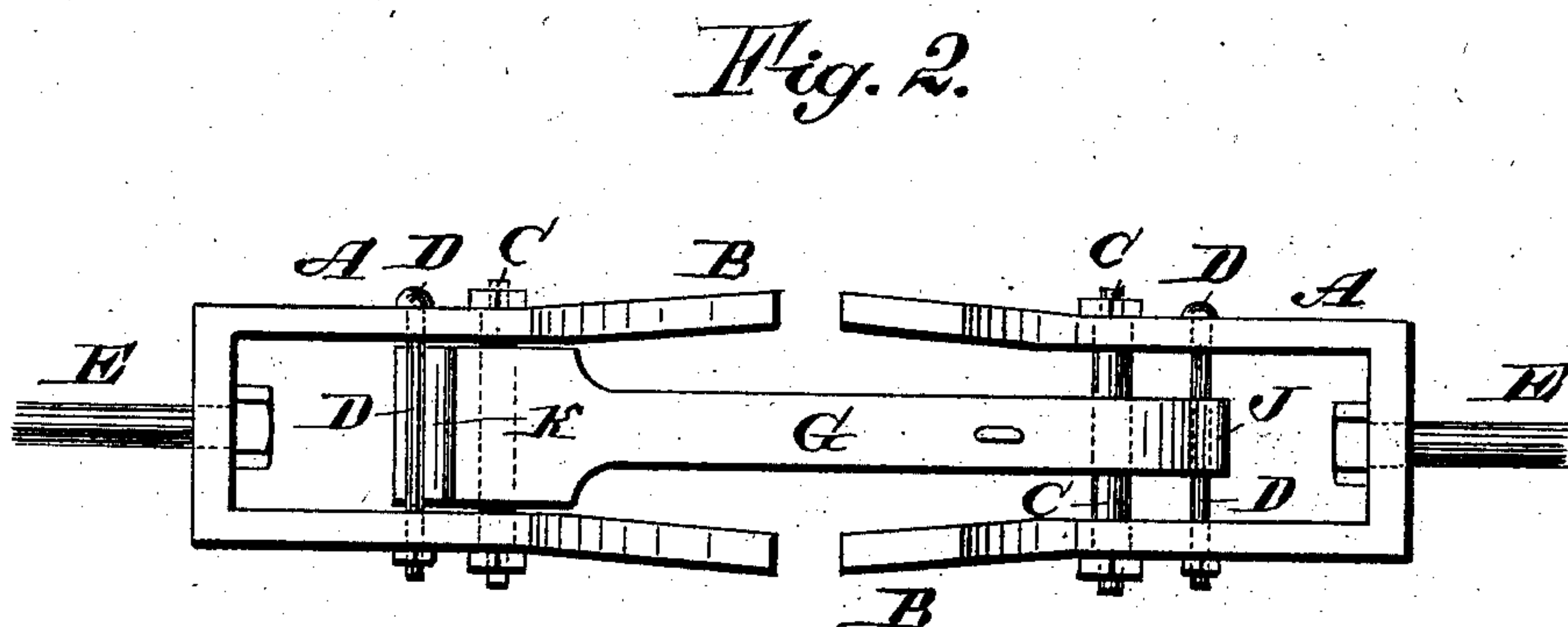
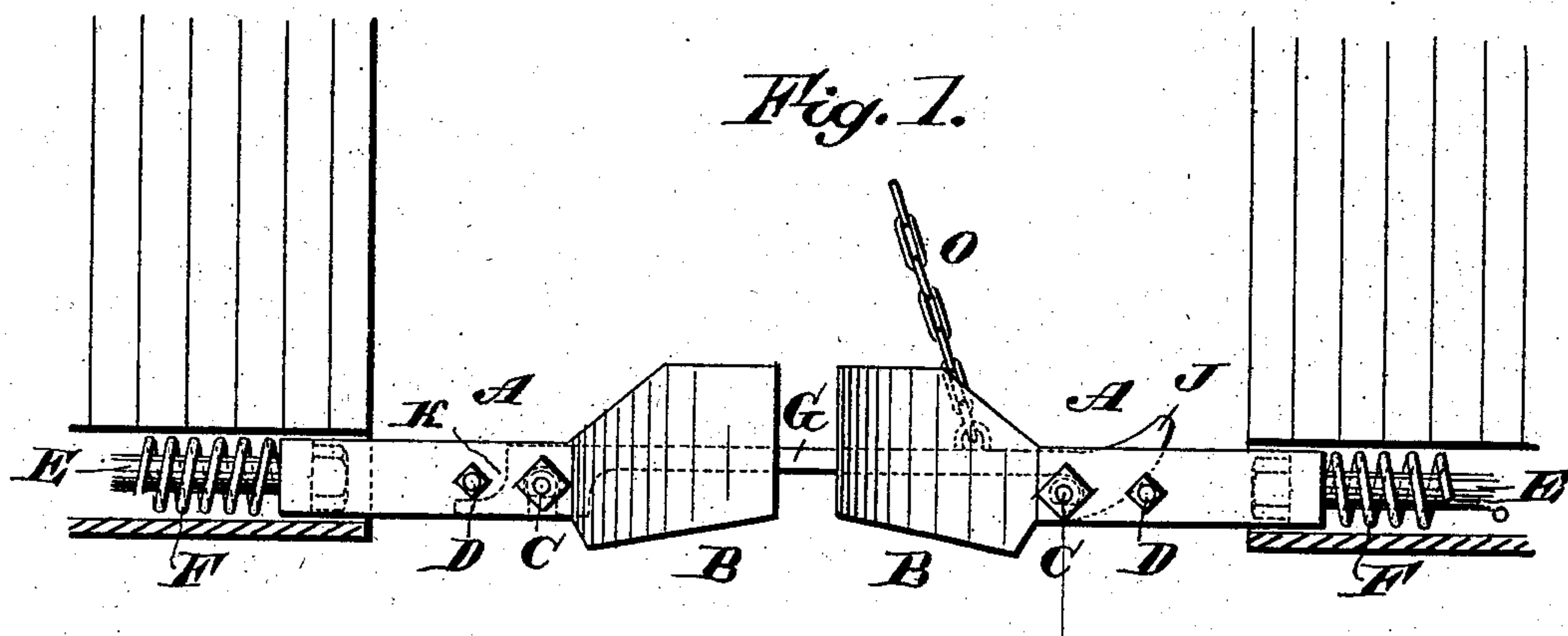


(No Model.)

T. C. O'DONOVAN.
CAR COUPLING.

No. 290,097.

Patented Dec. 11, 1883.



WITNESSES:

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UNITED STATES PATENT OFFICE.

TIMOTHY C. O'DONOVAN, OF WALKER'S MILLS, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 290,097, dated December 11, 1883.

Application filed June 28, 1883. (No model)

To all whom it may concern:

Be it known that I, TIMOTHY C. O'DONOVAN, of Walker's Mills, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

The invention consists in the combination, with a draw-head having a flattened cross-rod, of a coupling-link provided with a transverse groove, having an enlargement for receiving the cross-rod of the draw-head, which link can then be swung so that its hook can catch on the cross-rod of the opposite draw-head, whereby the cars will be coupled.

The invention also consists in various parts and details and combinations of the same, as will be fully described and set forth hereinafter.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal view of my improved car-coupler, showing two cars coupled. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal view of the coupling-link. Fig. 4 is a side view of the modified link as used with cars having the usual pin-coupling draw-head. Fig. 5 is a plan view of the same.

The draw-head A is formed of a U-shaped piece or frame, having an enlargement, B, extending above and below the edges of the frame, on the end of each shank, the said enlargements being bent outward slightly, so that the width of the draw-head will be increased at its outer end. Directly behind the enlargements the shanks of the U-shaped frame A are united by two transverse rods, C and D, a short distance from each other and on the same horizontal plane, of which rods, C, which is nearer the outer end of the draw-head, has a greater diameter than the rod D. A draw-rod, E, is fastened to the inner end of each draw-head, and is surrounded by a powerful spiral spring, F. The rod C is cut circular in cross-section, but is flattened at the bottom, so that its vertical axis will be less than the horizontal axis.

The coupling-link G is provided at one end

with a hook, H, having an upwardly-projecting prong, J. At the opposite end the link G is provided with a transverse recess or rabbet, K, in its upper and end surface. In its bottom surface it is provided with a transverse groove, L, which is provided with an enlargement, M. If the cars having the usual draw-head are to be coupled, the link is provided with a longitudinal slot, N. The free end of the link is secured to a chain or rope, O, extending to the top of the car. The link G is held vertically, with the groove L facing the rear side of the rod C, the inner end of the link being between the rods C D and parallel with the same. Then the link, while being held vertical, is moved toward the outer end of the draw-head, so that the rod C will pass through the slot L into the enlargement G. Then the link G is swung down until the rod D is in the rabbet K, and the end of the link rests against the bottom of the rod D, thus preventing the outer end of the link from descending too far. The rod C fills the enlargement M and holds the link in place in the draw-head, which link cannot be removed as long as it is in a horizontal or inclined position. When the draw-heads come together, the beveled prong J strikes the cross-rod C in the opposite draw-head, and slides up and over the same, and the cars are thus coupled automatically.

If the draw-heads are at different elevations above the tracks, the link must always be held in the lower draw-head, as the link can be inclined upward from the draw-head, but not downward from the same, on account of the rod D.

If a car having the usual pin draw-head is to be coupled with a car having my improved draw-head, the link provided with a slot N is used. If the cars coupled by means of the hook-link G are to be uncoupled, the link is swung upward by means of a rod.

The outwardly-inclined enlargements B guide the end of the link in case it strikes the sides of the draw-head at an angle.

I do not abandon or dedicate to the public any patentable feature set forth herein and not hereinafter claimed, but reserve the right to claim the same either in a reissue of any pat-

ent that may be granted upon this application or in other applications for Letters Patent that I may make.

Having thus described my invention, I claim
5 as new and desire to secure by Letters Patent—

1. The combination, with a draw-head, of a transverse rod having a smaller vertical diameter than horizontal diameter, and of a coupling-link having a transverse groove provided
10 with an enlargement, substantially as herein shown and described.

2. The combination, with a draw-head, of the flattened cross-rod C, the cross-rod D, and the link G, provided with a groove, L, having
15 an enlargement, M, and with a rabbet, K, substantially as herein shown and described.

3. The combination, with a draw-head, of the flattened cross-rod C, the cross-rod D, and the link G, provided with a transverse groove, L, having an enlargement, M, and with a hook, 20 H, and prong J at the opposite end, substantially as herein shown and described.

4. The draw-head A, consisting of the U-shaped frame having enlargements B at the ends of the shanks, substantially as herein 25 shown and described, and for the purpose set forth.

TIMOTHY C. O'DONOVAN.

Witnesses:

J. SCOTT WALKER,
M. E. HARVISON.