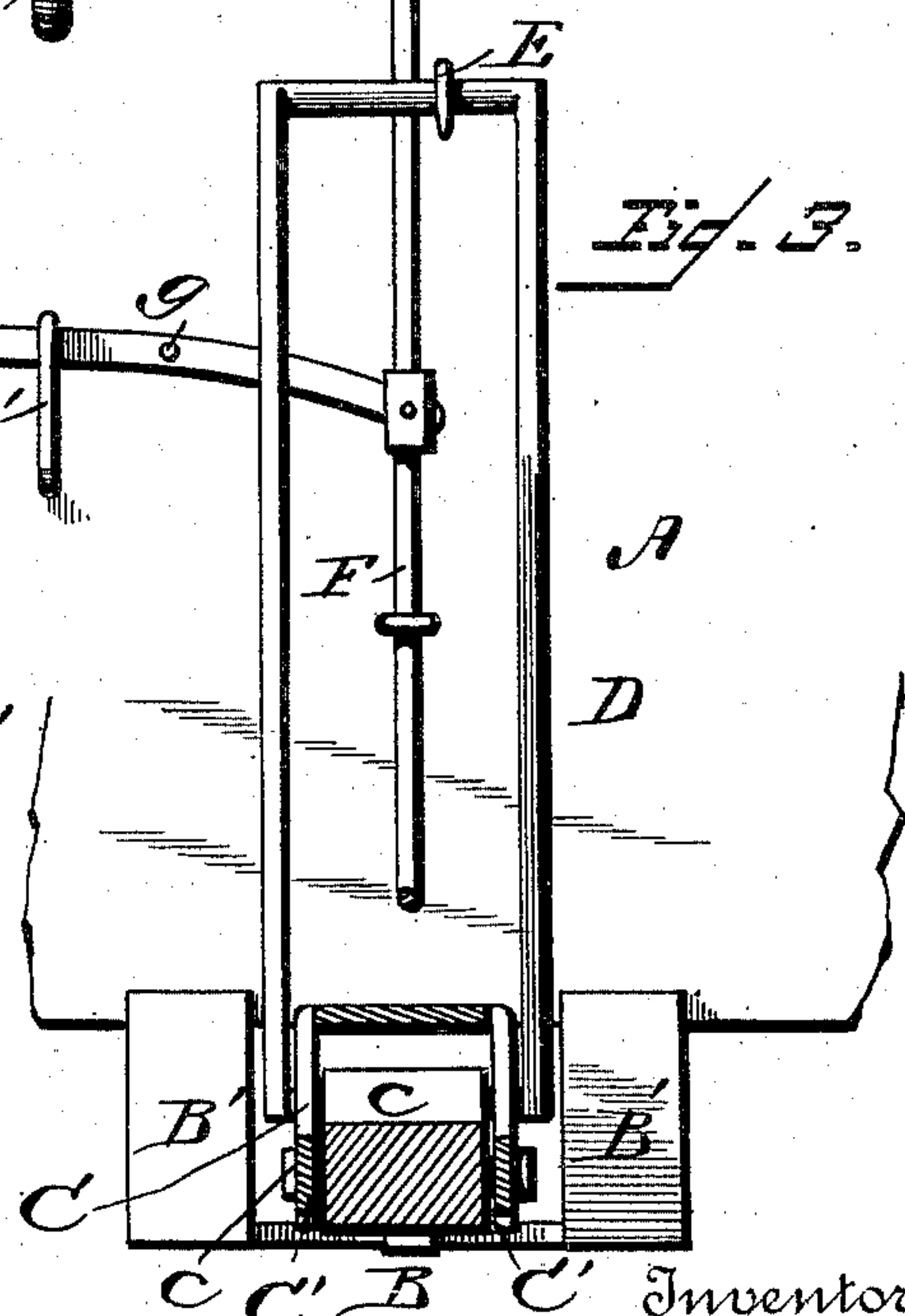
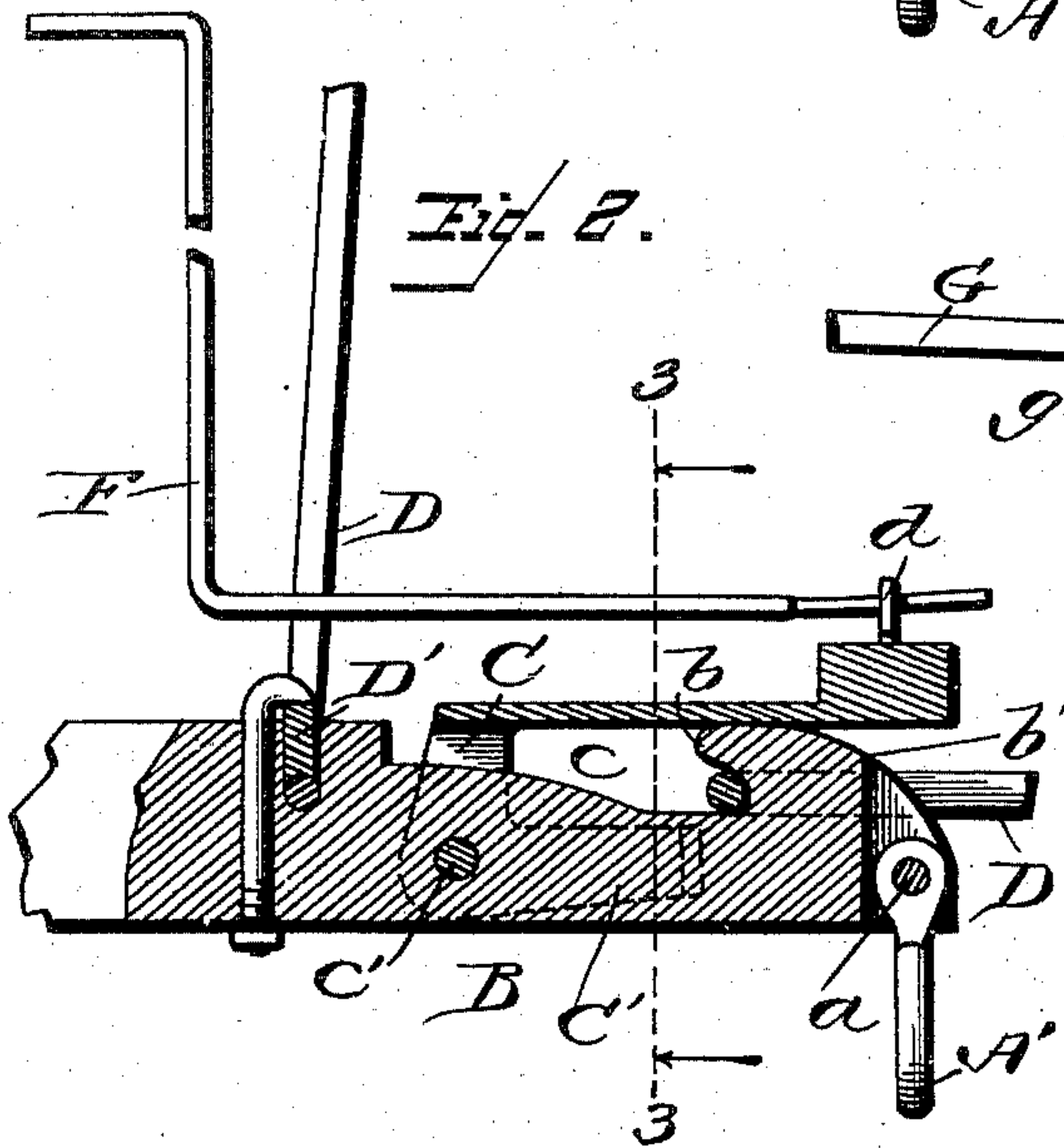
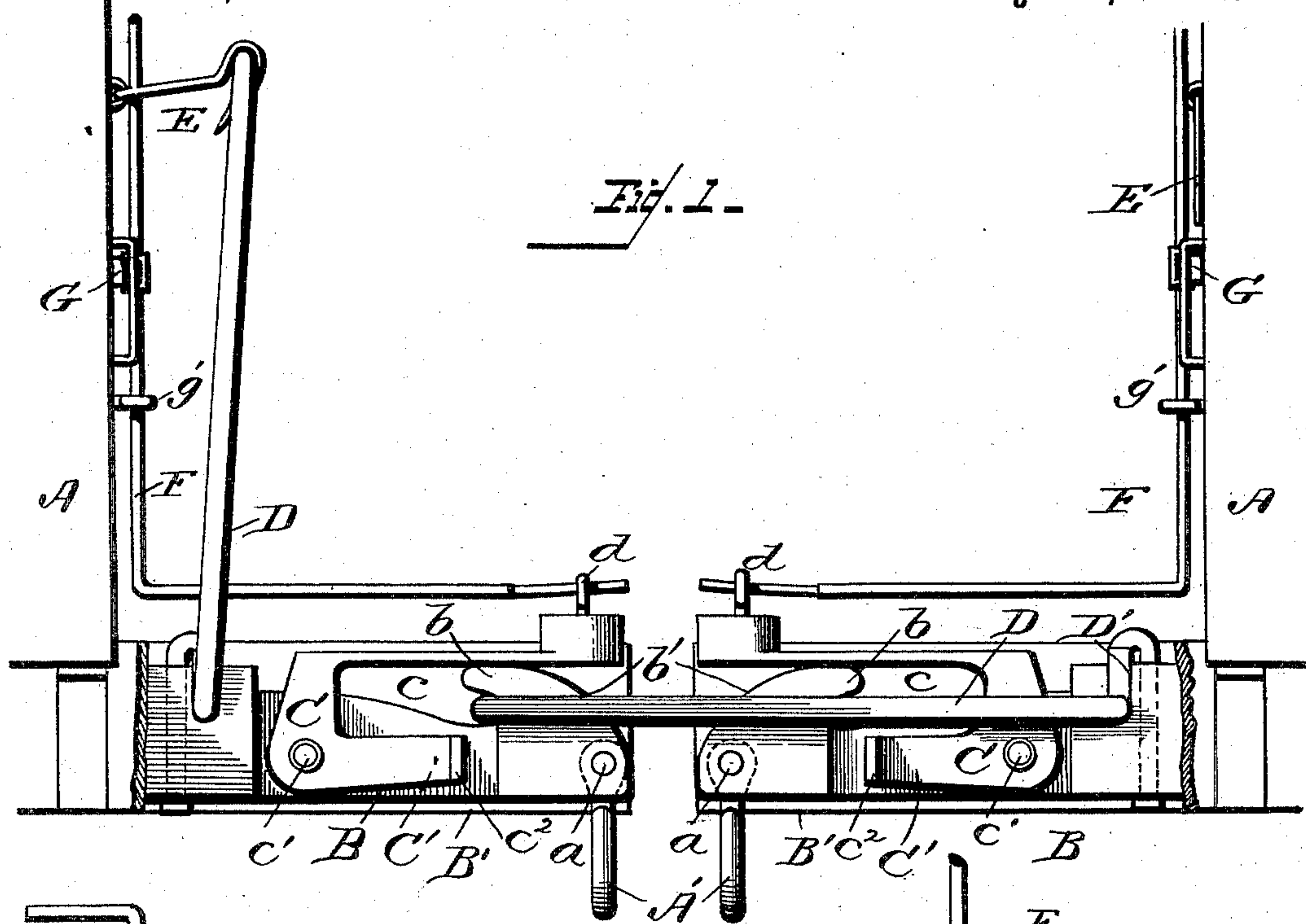


(No Model.)

M. W. TREXLER.  
CAR COUPLING.

No. 474,703.

Patented May 10, 1892.



Witnesses

*Wm. H. Heidew.*  
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Inventor  
*Milton W. Trexler*  
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# UNITED STATES PATENT OFFICE.

MILTON W. TREXLER, OF EAST GREENVILLE, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 474,703, dated May 10, 1892.

Application filed February 4, 1892. Serial No. 420,270. (No model.)

*To all whom it may concern:*

Be it known that I, MILTON W. TREXLER, a citizen of the United States, residing at East Greenville, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in car-couplings; and it has for its objects, among others, to provide an improved car-coupling which shall be automatic in its action in coupling and in which provision shall be made to keep the link in place when the cars are coupled, the same means being employed to raise the link when it is desired to uncouple. The cars may be uncoupled from either the side or the top of the car. Provision is also made for coupling with link and pin when desired.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, in which—

Figure 1 is a side elevation of portions of two cars equipped with my improved couplings. Fig. 2 is a vertical longitudinal section through one of the couplers. Fig. 3 is a vertical cross-section through the same.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates a portion of a car, which may be of ordinary or any well-known or approved construction.

B is the draw-head, which is supported beneath the car in any suitable manner, the forward end extending between the side pieces B' on the front end of the car and which protect the draw-head. The forward end of the draw-head is bifurcated, and between the bifurcations is pivoted on a horizontal pin a

the coupling-link A', which is normally dropped into the vertical position in which it is shown in Fig. 1; but when for any reason the other coupling is not intended to be used it is thrown into a horizontal position for use with an ordinary coupling-pin. Just to the rear of its forward end the draw-head is provided with a vertical shoulder b, which is undercut, and the top of the forward end of the draw-head is inclined, as seen at b', to facilitate the entrance of the coupling-link herein-after described. Extending to the rear from this shoulder or hook the draw-head is cut away upon the top and two sides, as seen at c—upon the top to provide room for the link when the cars are coupled and upon the sides for the operation of the frog or lifting-link. The lifting-link C is pivoted near its rear end upon a horizontal pivot c', held in the draw-head and is provided with the forwardly-extending arms C', one upon each side of the draw-head and the forward ends of which are preferably turned outwardly, as seen at c'. The body portion of this link extends forward and rests upon the top of the forward end or hook of the draw-head, as seen in Fig. 1. It is provided with a weighted forward end, which has an upwardly-extending eye or loop d for the reception of the uncoupling-hook, soon to be described.

D is the link, pivoted at its rear end in a recess in the rear end of the draw-head, suitable means being provided for the prevention of displacement of the link. I have shown a plate or bar D' held above the rear end of the link over the recess and held in place in any suitable manner. As only one of the links is used at the same time, I provide a pivoted hook E on the end of the car to engage the link to hold it up out of the way.

Held so as to slide vertically in suitable guides or bearings on the front end of the car is the rod F, the lower end of which is bent to extend horizontally and is tapered, as shown, and passes loosely through the eye or loop d on the lifting link or frog. The upper end of the rod is extended and bent at right angles to itself to form a handle, by which it may be operated. In order to operate the lifting-link from the side of the car, the rod F has pivotally connected thereto at one end a horizontal lever G, which is pivoted, as at g,



between its ends to the front end of the car, and is guided in a suitable guide-eye  $g'$ , as shown.

The operation is simple and apparent.  
5 When the cars are ready to couple, the link on one car is held up by its hook, the other link being horizontal and the lifting link or frog on the car which has its link elevated is closed. As the cars approach, the link  
10 rides upon the inclined end of the draw-head and over the hook end thereof, raising the lifting-link, which, as soon as the link has passed the hook and dropped, falls by its own weight and the link is held behind the hook.  
15 The cars may be uncoupled by lifting either lifting-link, the arms of which raise the link and permit it to pass over the hook of the draw-head.

Modifications in detail may be resorted to  
20 without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim as new is—

1. The combination, with the draw-head having a link pivotally connected with its  
25 forward end, of a link pivoted at its rear end to said draw-head, and a lifting-link also pivoted to the draw-head, as set forth.

2. The combination, with the draw-head having pivoted link, of the lifting-link pivoted  
30 to the draw-head and having side arms, and

the means engaging the lifting-link, as set forth.

3. The combination, with the hooked draw-head and the pivoted link, of the lifting-link and the means engaging the same, substan- 35 tially as and for the purpose specified.

4. The combination, with the draw-head and its hook and pivoted link, of the pivoted lifting-link and the means engaging the same and adapted to be operated from either the 40 side or top of the car, as set forth.

5. The combination, with the draw-head and the pivoted link, of the pivoted lifting-link having lateral arms with outturned ends, and the lifting means engaging said lifting- 45 link, substantially as specified.

6. The combination, with the draw-head having hook and cut away, as described, of the pivoted lifting-link having side arms, the vertically-movable rod having horizontal por- 50 tion engaging the lifting-link and adapted to be operated from either the side or top of the car, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MILTON W. TREXLER.

Witnesses:

N. B. KEELY,  
H. R. TEANY.