

(No Model.)

2 Sheets—Sheet 1.

R. R. ASBURY.

CAR COUPLING.

No. 373,042.

Patented Nov. 15, 1887.

Fig. 1.

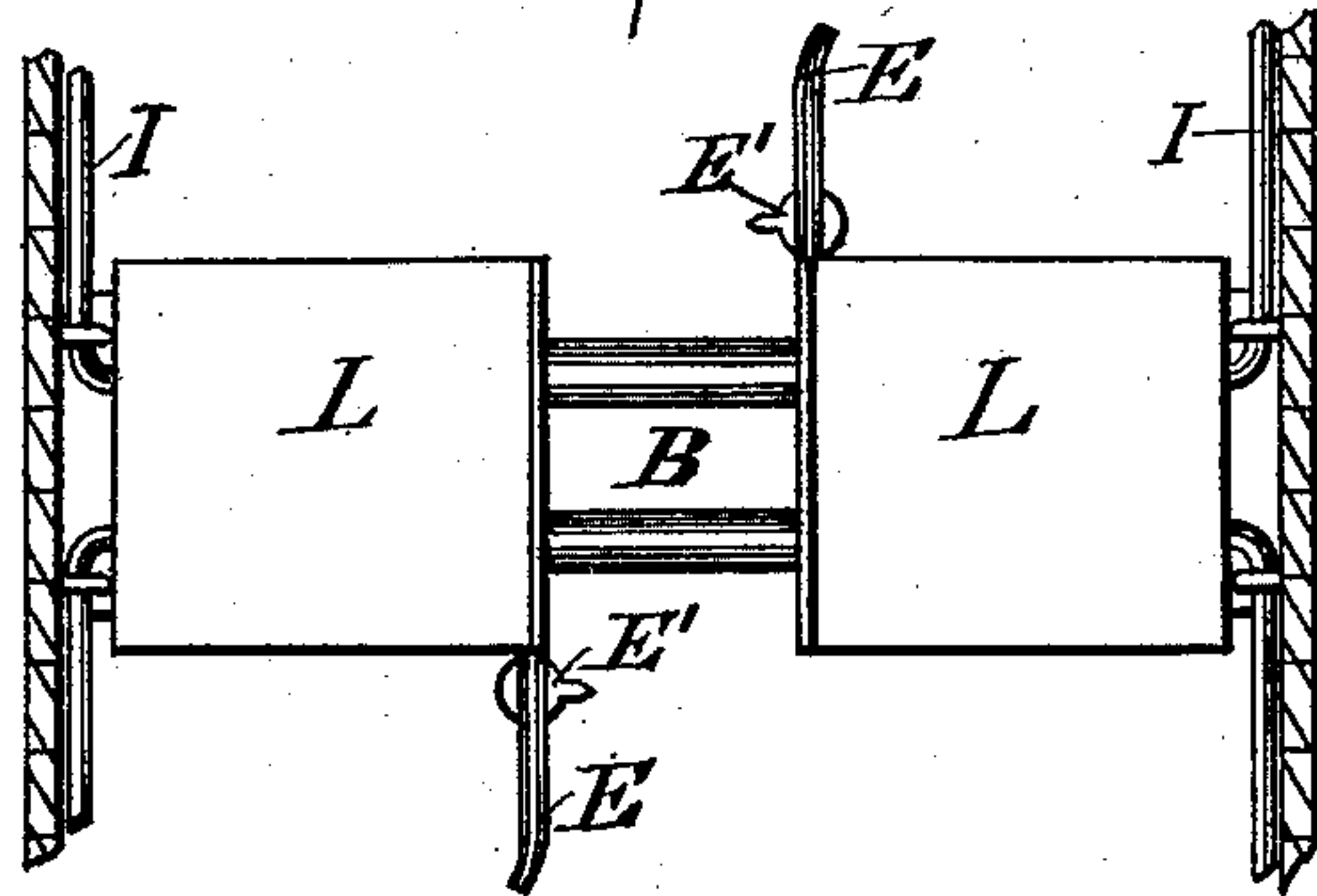


Fig. II.

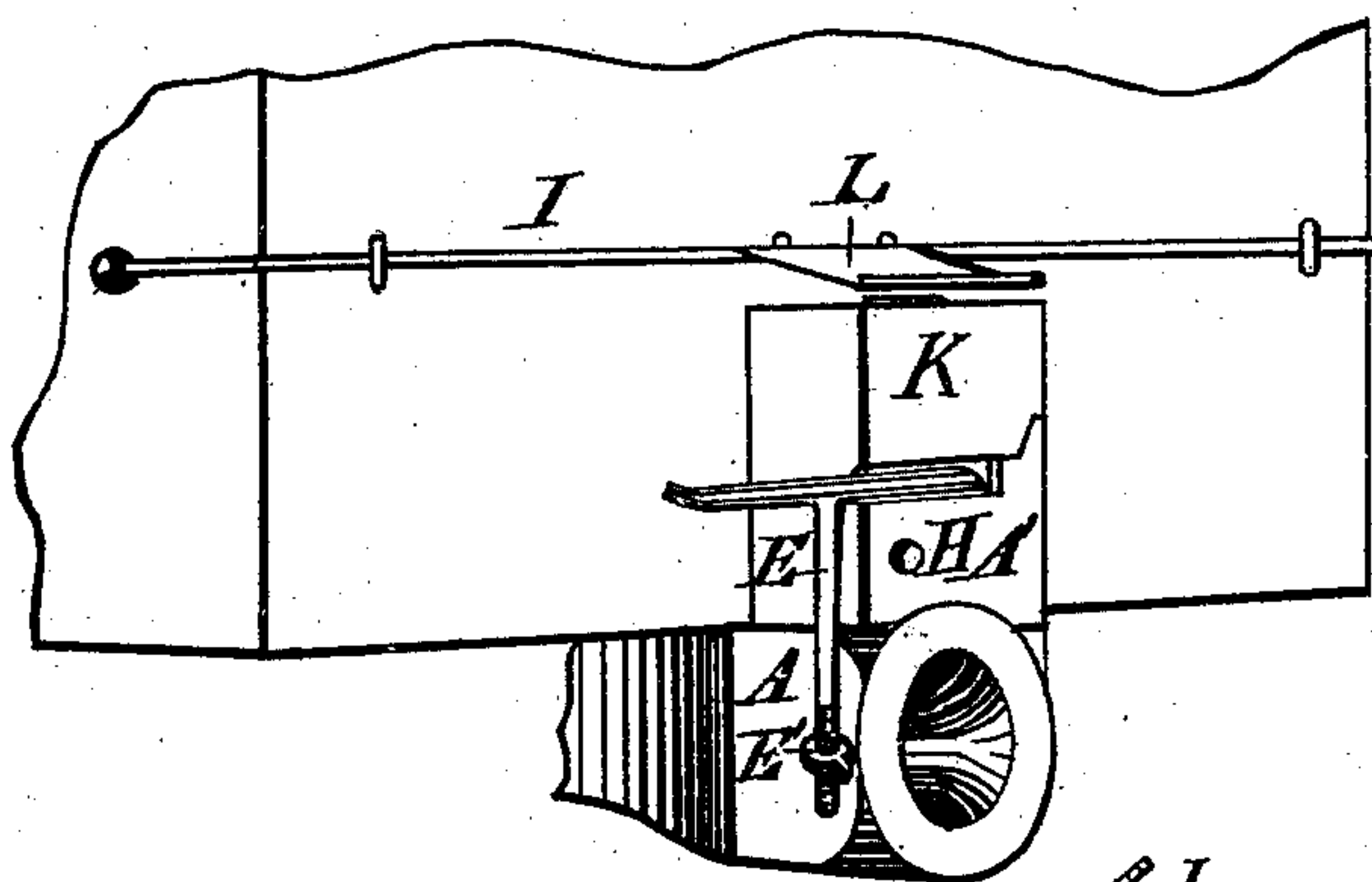
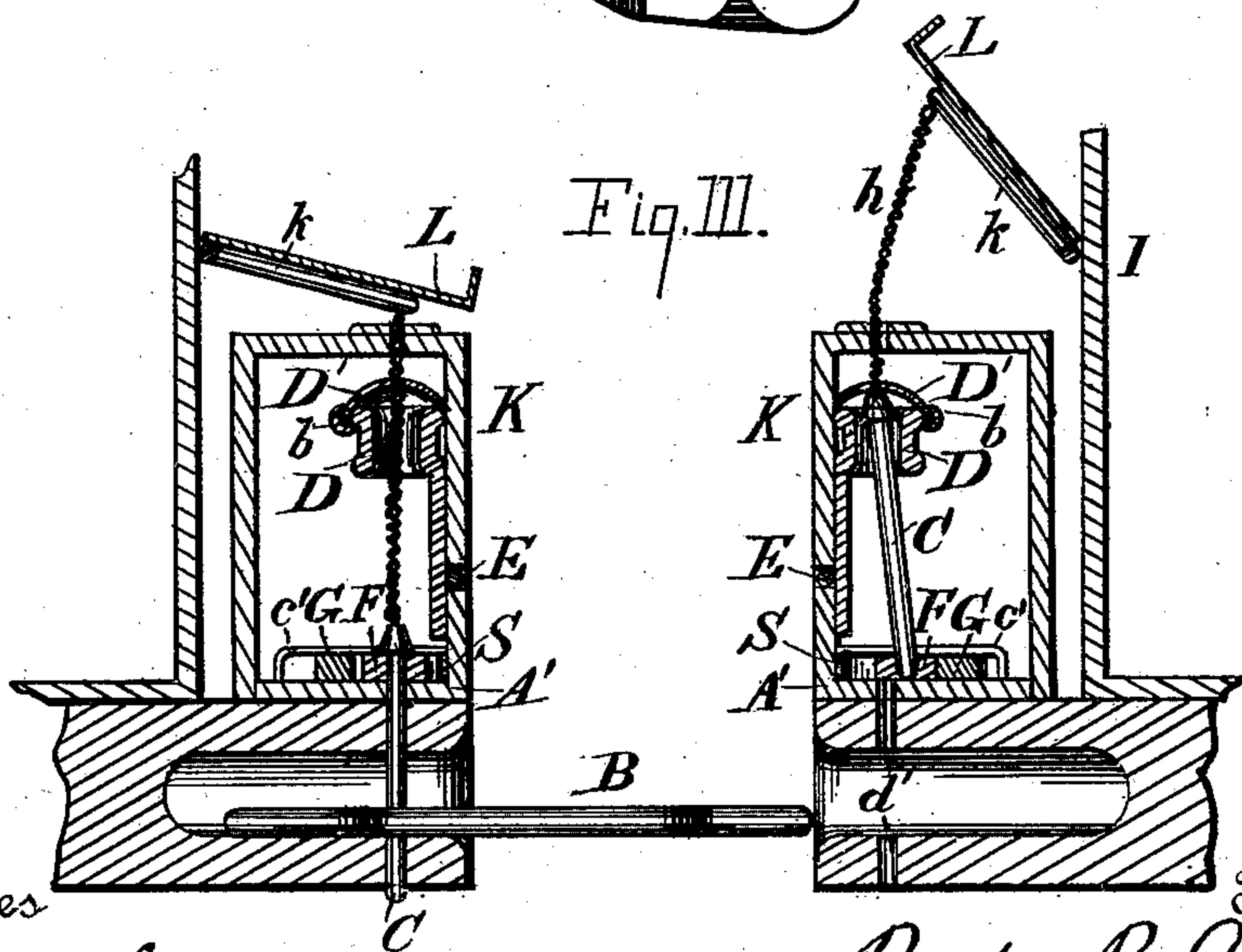


Fig. III.



Witnesses

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Attorney

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Fig. IV.

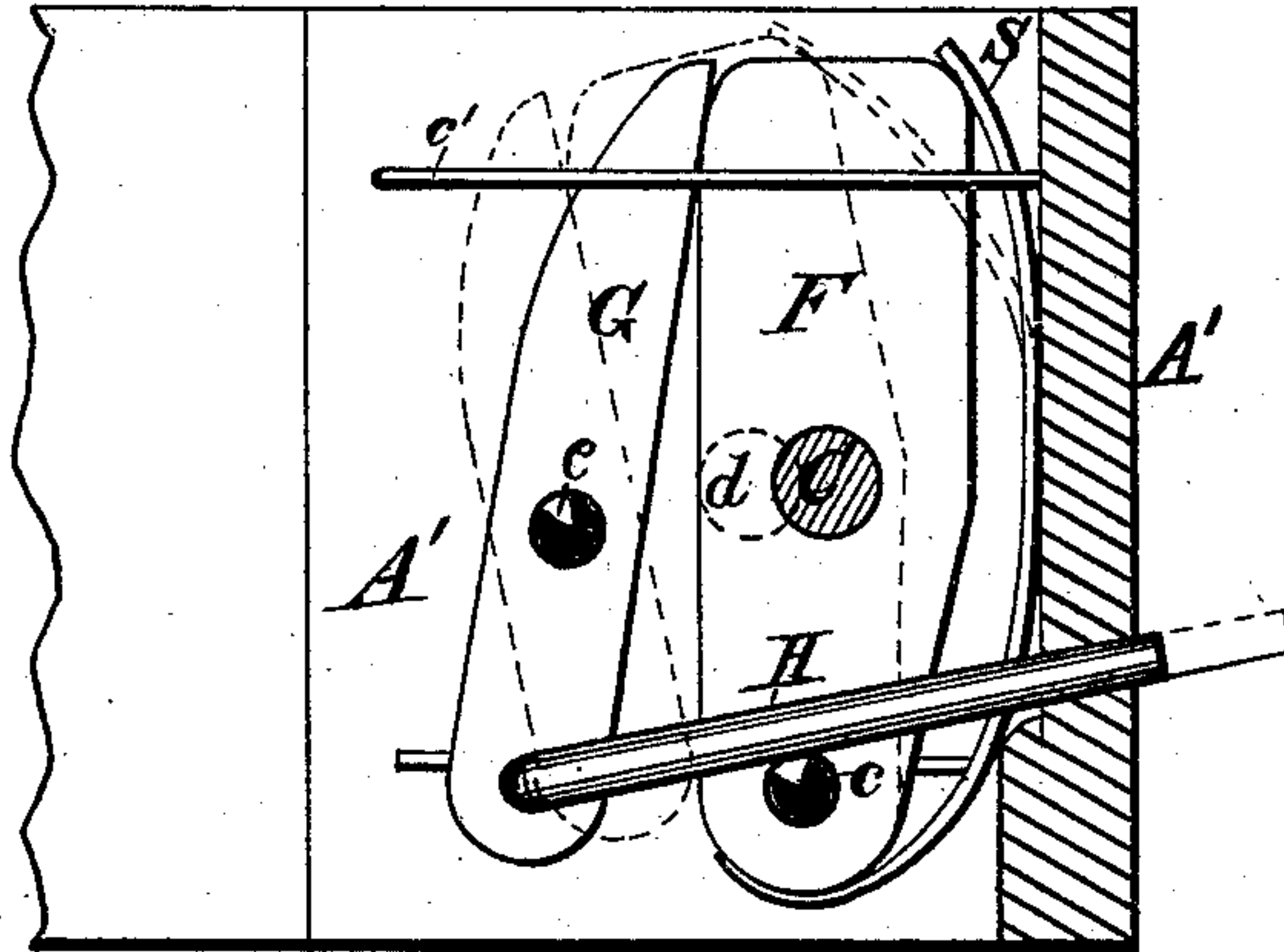


Fig. V.

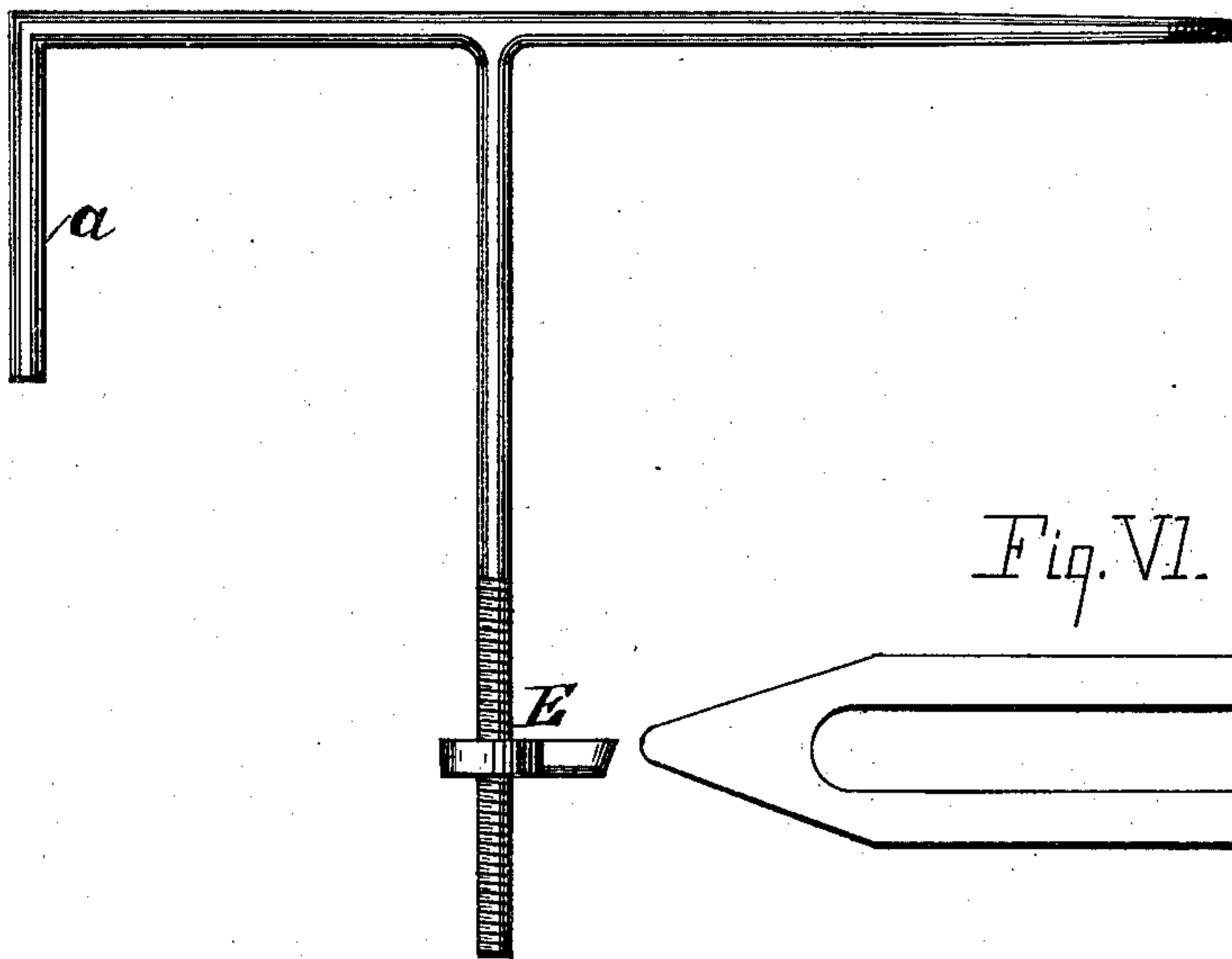
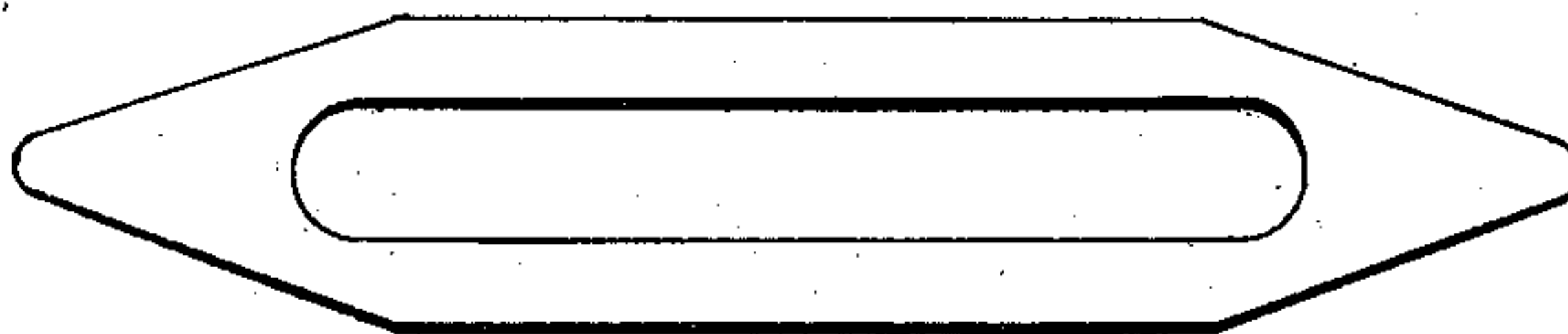


Fig. VI.



Witnesses

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# UNITED STATES PATENT OFFICE.

RUFUS R. ASBURY, OF PLEASANT RETREAT, GEORGIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 373,042, dated November 15, 1887.

Application filed August 5, 1887. Serial No. 246,239. (No model.)

*To all whom it may concern:*

Be it known that I, RUFUS R. ASBURY, a citizen of the United States, residing at Pleasant Retreat, in the county of White and State of Georgia, have invented certain new and useful Improvements in Car-Couplings; 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 ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain additions and improvements upon the link-and-pin coupling for which Letters Patent of the United States, bearing date August 2, 1887, have been granted to me, by which it is made capable of acting as an automatic coupler, and wholly  
20 avoids the necessity of entering the space between the cars and holding up or guiding the link when a coupling is to be made; and the invention consists in the application to the draw-head of a car of an adjustable link and link-supporter and devices for holding up the pin until the link enters the opposite draw-head, when the pin is dropped through the link and the link-supporter turned to one side by the automatic action of the parts in the  
30 act of coupling, all as will be hereinafter fully set forth.

In the accompanying drawings, which illustrate my invention, similar letters of reference indicate like parts.

35 Figure I is a plan view of the couplings as seen when connecting the draw-heads of two cars. Fig. II is a perspective view of a draw-head provided with my improvements. Fig. III shows a longitudinal section of two draw-heads provided with my improved coupling devices, the link being attached to one draw-head, but not to the other. Fig. IV is a horizontal section of one draw-head, showing the arrangements of the devices for supporting  
40 the pin. Fig. V shows a front and side view of the adjustable link-supporter, upon an enlarged scale. Fig. VI is a perspective view of the link.

In applying these improvements I make  
50 little change in the draw-head or bumper used

generally upon freight-cars. The link and pin being employed, a spring-actuated swinging piece or stop is fitted upon the top of the draw-head, perforated with an opening for the passage of the pin. The draw-head is also pro-  
55 vided with an adjustable link-support and a support for the upper end of the coupling-pin when it is raised, so arranged as to retain said pin in a vertical position ready to drop through the hole in the draw-bar when the swinging  
60 stop is pushed back far enough to cause the pin-hole in said stop to register with that in the draw-head.

In the drawings, A represents the draw-head; B, the link by which the draw-heads of two  
65 cars are connected; C, the coupling-pin; D, the guide and holder for the upper end of said pin; E, the adjustable link-support; F, the swinging stop by which the pin is supported when the couplings are disengaged.  
70

G is a lever by which the swinging stop may be forced in position to allow the passage of the pin through it.

H is a rod projecting from said lever into position to receive a thrust from the draw-  
75 head of an approaching car.

I is a rock-shaft attached to the end of the car, and by which the pin may be withdrawn from the link; and K is a cover which incloses the pin-operating devices on top of the draw-  
80 head, and protects them from injury, as well as from becoming inoperative through the gathering of ice and snow around the parts in cold weather.

The above-named devices form the principal parts of the apparatus; but many minor features will appear in the following detailed description of the apparatus and its operations.

In constructing the draw-heads for these im-  
90 proved couplings their upper sides are left with an upward projection, A', in front; but when a draw-head now in use is to have these appliances a separate piece is added. Its under side, shaped to conform to the draw-head,  
95 and its top flat, also having the projection A' attached, is secured to the top of said draw-head by screws or other suitable means. This projection A' carries the point of the link-sup-  
100 port E, which is of T shape, its vertical arm



being provided at its lower end with a screw-thread, upon which the supporting-arm E', that carries the link B, is adjusted. The horizontal part of the link-support is provided at its inner end with a short vertical arm, *a*, which enters a hole in the part A' and forms the hinge upon which said support swings, the outer end of this horizontal part forming a handle by which the position of the device may be adjusted and against which the opposing draw-head strikes when two cars come together, thus swinging it backward and carrying the arm E out from beneath the link. This link B (see Fig. VI) is preferably formed with pointed ends, so that it must necessarily enter the opposing draw-head if brought within the area of its opening, although it will be apparent that the ordinary round ended link may be used, if desired, without any change in the construction of the several parts.

Attached to the part A' is the pin guide and holder D, the upper part of which is bored out so as to receive the head of the pin C when it is raised so as to release the link. This pin-holder is provided with a dome-shaped hinged cover, D', having a small orifice through its apex for the passage of the cord or chain by which the pin is operated. This cover may be raised when the pin is introduced and then turned down and secured in place by the bolt *b* or other suitable fastening device.

In order to support the pin in a proper position on top of the draw-head and allow it to drop through the holes prepared for its reception in the same when the link enters said draw-head, I pivot upon the top of the same, as at *e*, the swinging stop F, its free end swinging in guides *b'* *c'*. This stop is pierced with an opening, *d*, of sufficient size to allow the pin to drop freely through the same when the stop swings into position, so as to allow the opening *d* to register with the pin-hole *d'* in the draw-head. The stop F is held normally out of this position by the curved plate-spring S, one end of which is secured to the pivoted end of the stop, while its free end bears against the free end of said stop and its outwardly-curved portion against the inner side of the part A', thus keeping the lower end of the pin C in the hole *d* of the stop in the rear of the hole *d'* of the draw-head. It therefore becomes necessary to provide some means by which the stop may be forced forward, so as to bring the holes *d* and *d'* in line with each other. This I accomplish by means of the lever G, pivoted at *e* to the top of the draw-head in the rear of stop F. To one end of this lever is attached, by a pivotal connection, the rod H, which passes forward over the stop and projects through an orifice in the part A' of the draw-head. It is evident that when the projecting part of this rod is struck by the draw-head of an approaching car it will be forced inward, causing the end of the lever G, to which it is attached, to swing to the rear, and consequently forcing its opposite end,

which rests against the free end of the stop F, forward, causing the latter to swing upon its pivot until the holes for the passage of the pin register, when said pin will drop through the same and also through the link, which by this time has reached a proper position in the draw-head to receive it.

To the upper end of the pin is attached a cord or chain, *h*, which passes upward and is attached to the arms *k* *k* of the rock-shaft I, journaled in suitable bearings upon the end of the car. Each end of this rock-shaft is provided with arms by which it may be operated from either side of the car. A rod or chain may also be connected therewith, by which it may be operated from the top of the car, thus allowing the pin to be withdrawn and the car disconnected either from the ground or from the car itself.

As the operating parts of the mechanism would be liable to clogging from an accumulation of ice and snow in cold weather, as well as by catching dirt when used upon gravel, coal, or ore trains, I provide a cover, as K, which completely incloses them, resting upon the top of the draw-head and secured thereto by screws or other appropriate means; and as water might enter this cover through the opening in its top for the passage of the chains *h*, I attach to the arms *k* of the rock-shaft a shelter-plate, L, which completely covers the whole and protects it from drip or other injury by inclement weather.

The operation of the various parts of the apparatus will be clear from the foregoing description of its construction, and need not therefore be repeated. Its advantages are perfect safety to the train-men, automatic action in coupling, and full protection to the operative parts from the weather or injury from accidents.

Having thus described my invention, I claim as new and desire to secure by Letters Patent of the United States the following:

1. As an improvement in car-couplings, the draw-head and the horizontally-swinging stop, in combination with the pivoted lever and rod for operating the same, arranged substantially as set forth.

2. As an improvement in car-couplings, the combination of the headed coupling-pin, the pin guide and holder, and a hinged cover, D', provided with an orifice in its top for the passage of the chain *h*, as set forth.

3. As an improvement in car-couplings, the draw-head, the swinging stop, and the lever by which it is operated, in combination with the pin, pin-guide, and the devices for raising said pin, arranged and operating substantially as specified.

4. As an improvement in car-couplings, the combination, with the draw-head and operating mechanism, arranged as set forth, of the cover K, secured to said draw-head to protect the operating devices, as set forth.

5. In a car-coupling, the swinging link-sup-



port E, provided with the vertically-adjustable arm E', in combination with the draw-head and link, as set forth.

6. As an improvement in car-couplings, the combination, with the operating mechanism protected by a cover, as set forth, of the shelter-plate attached to the arms of the rock-shaft, as specified.

7. As an improvement in car-coupling devices, the link B, pointed at both ends and

adapted to enter and be secured in the draw-heads, in the manner substantially as specified.

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

RUFUS R. ASBURY.

Witnesses:

J. W. H. UNDERWOOD,

J. L. LOGAN.