

(No Model.)

2 Sheets—Sheet 1.

C. H. SLATON.

CAR COUPLING.

No. 365,641.

Patented June 28, 1887.

Fig. 1.

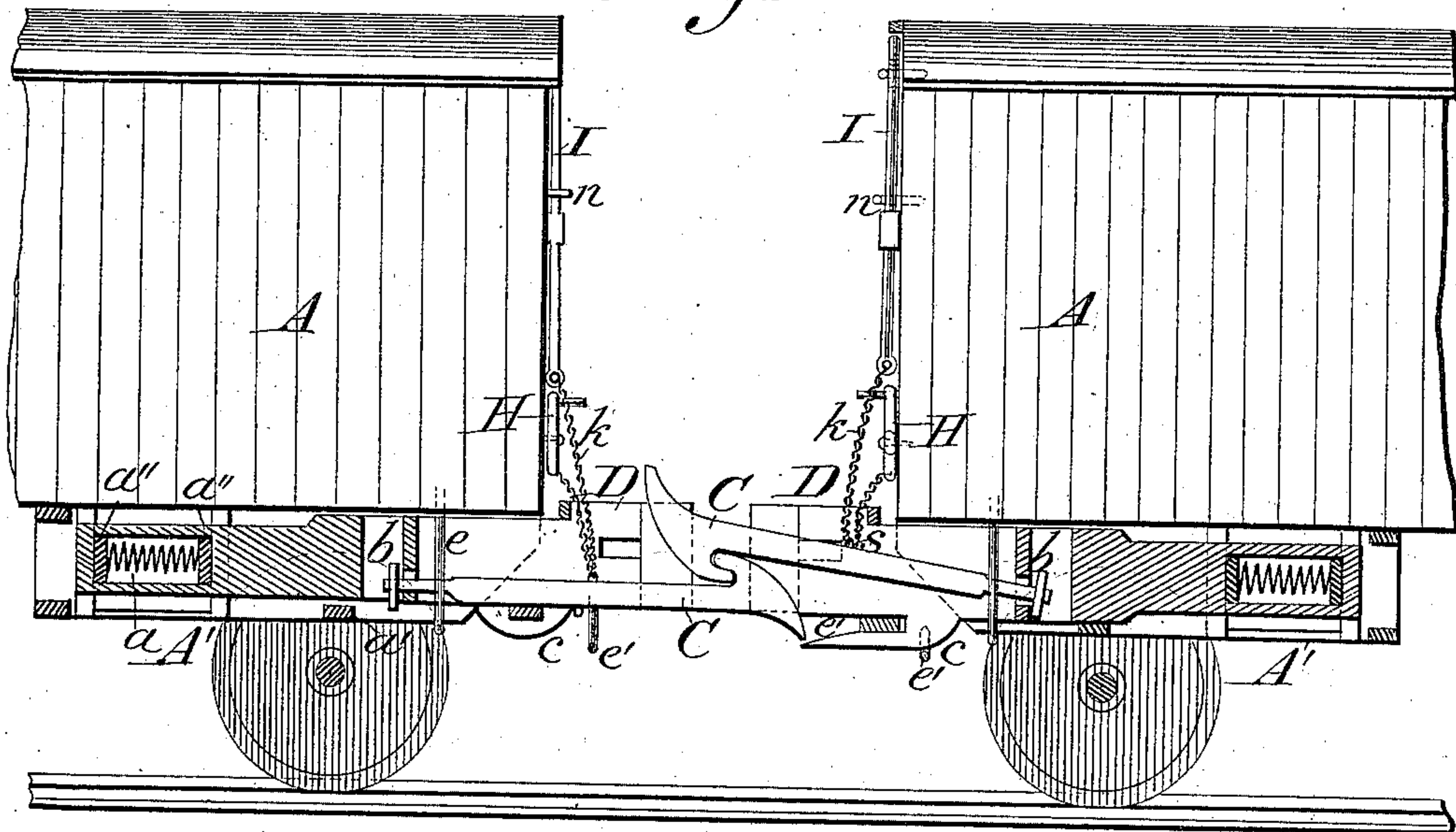
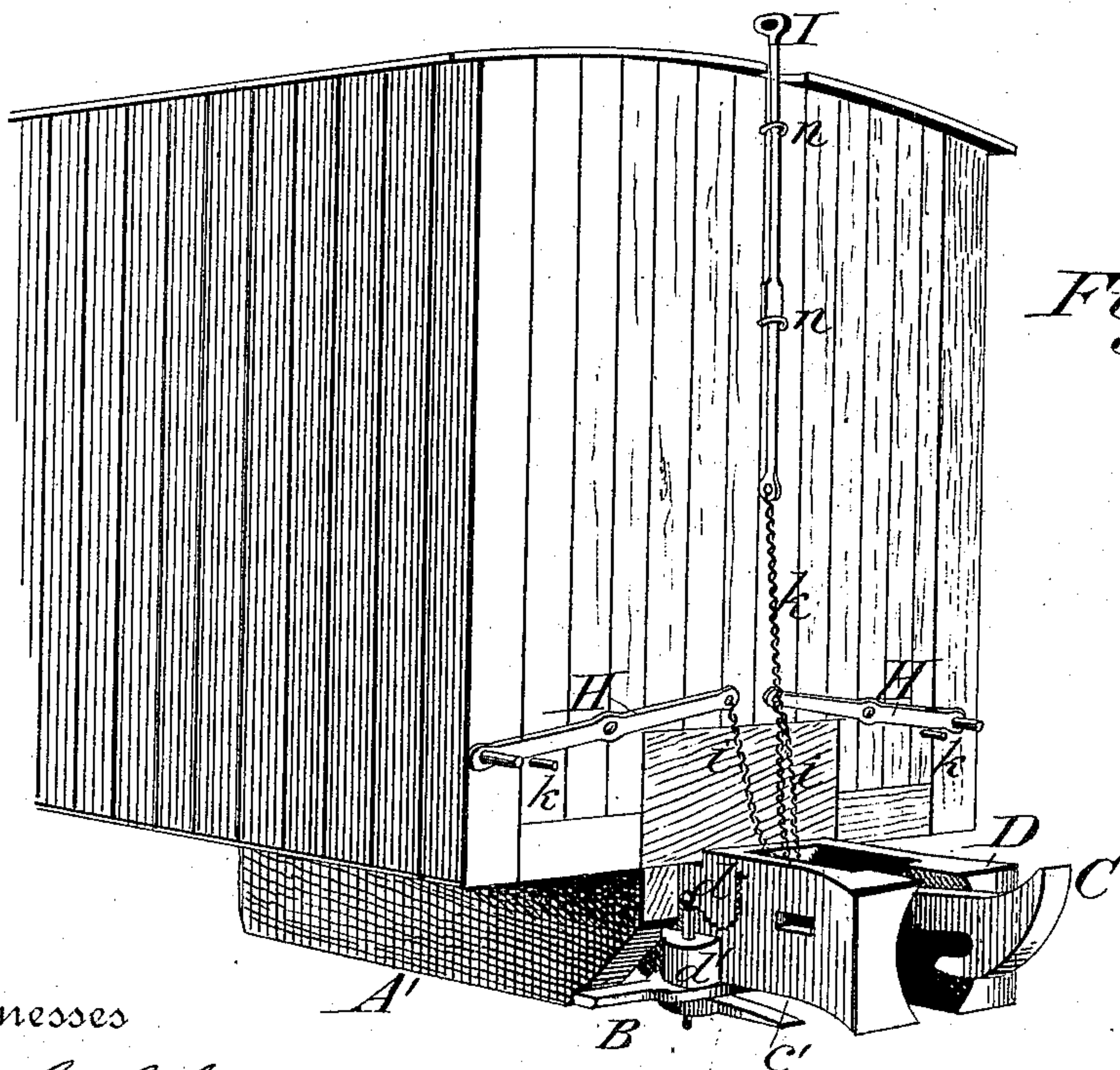


Fig. 2.



Witnesses

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(No Model.)

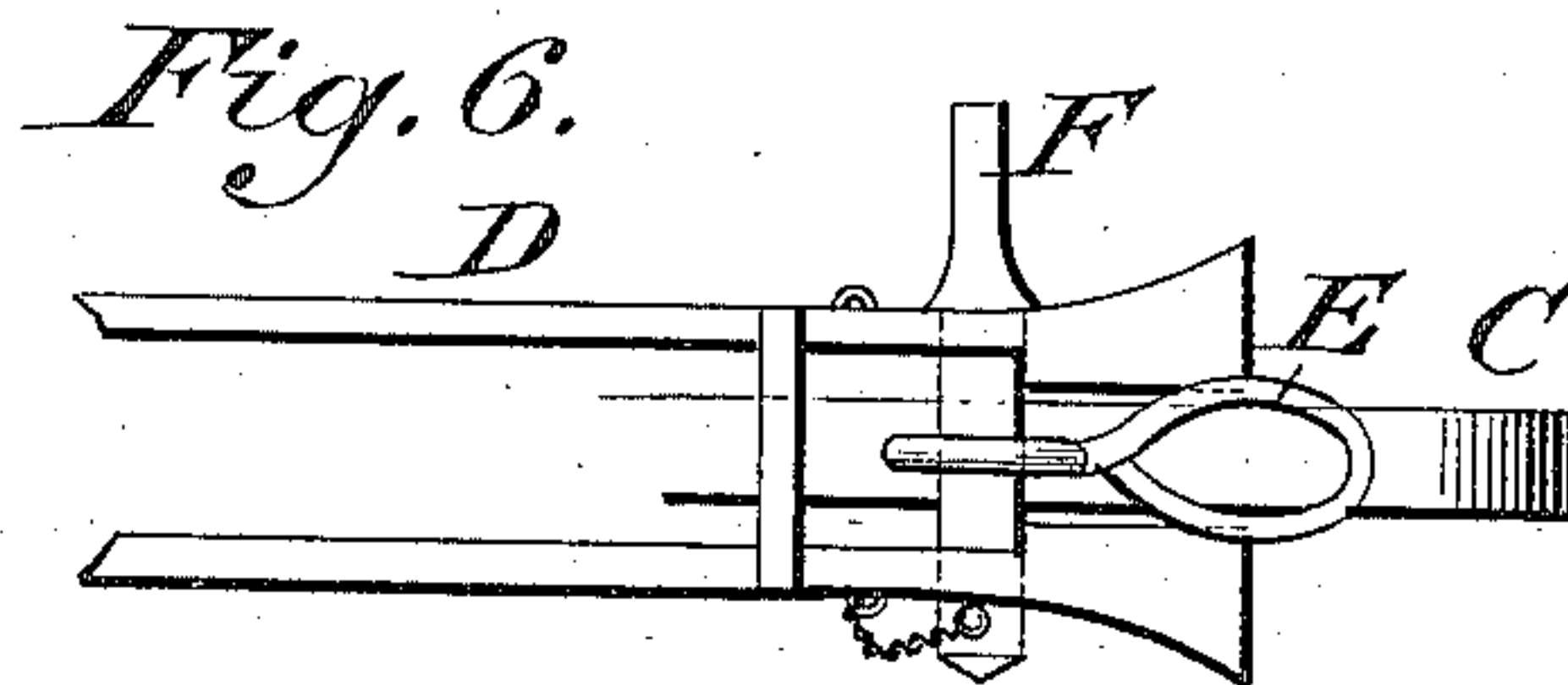
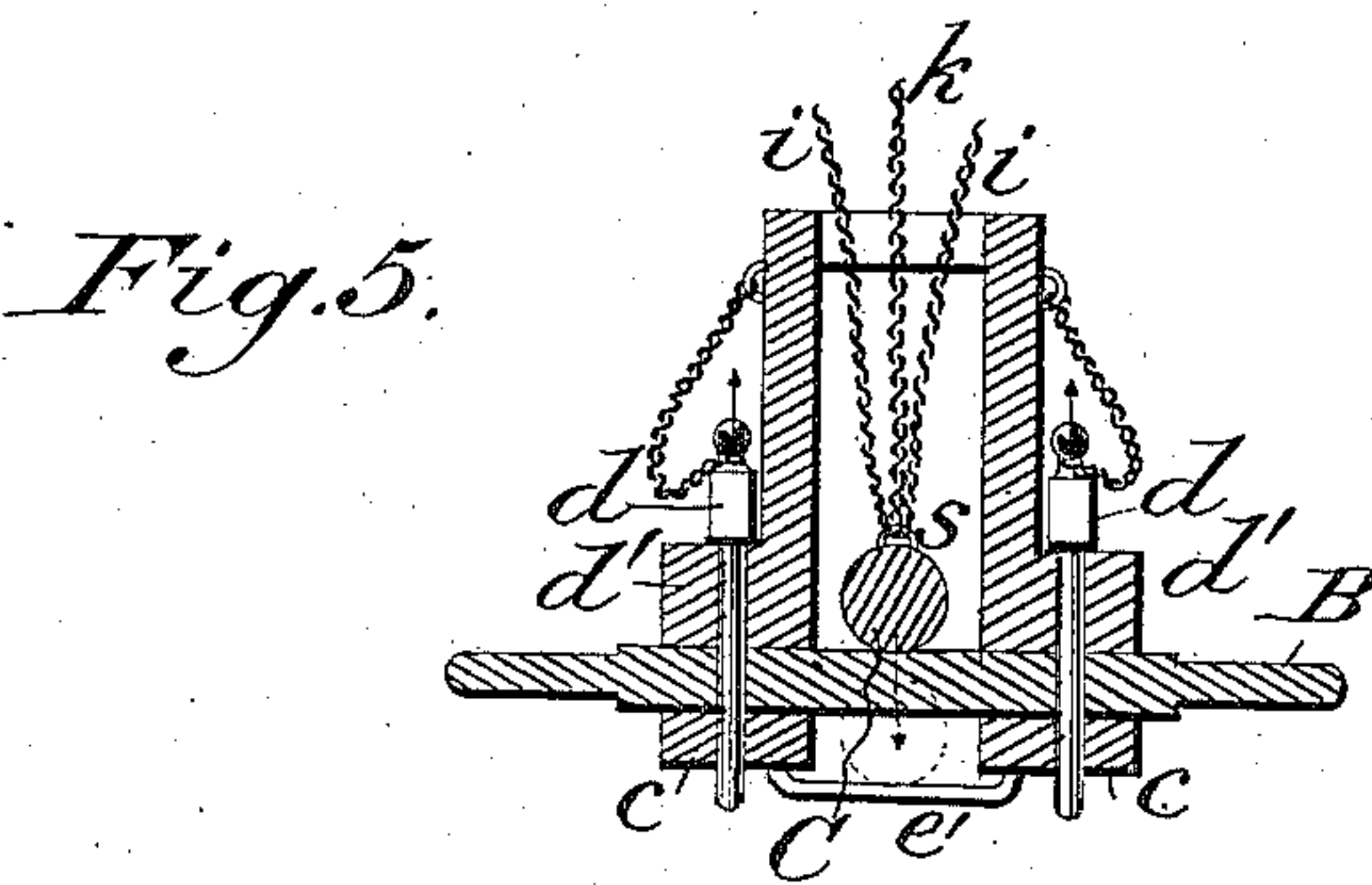
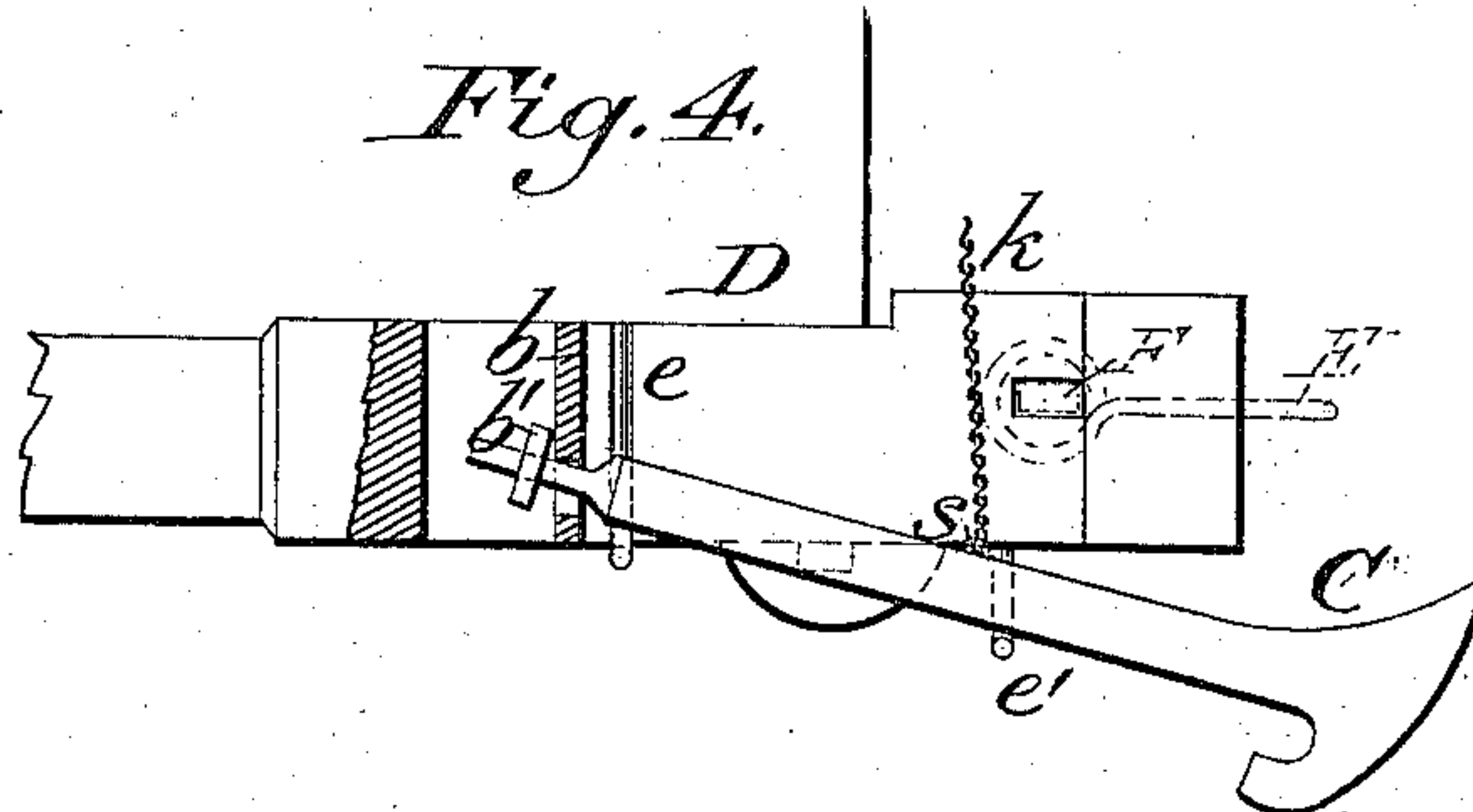
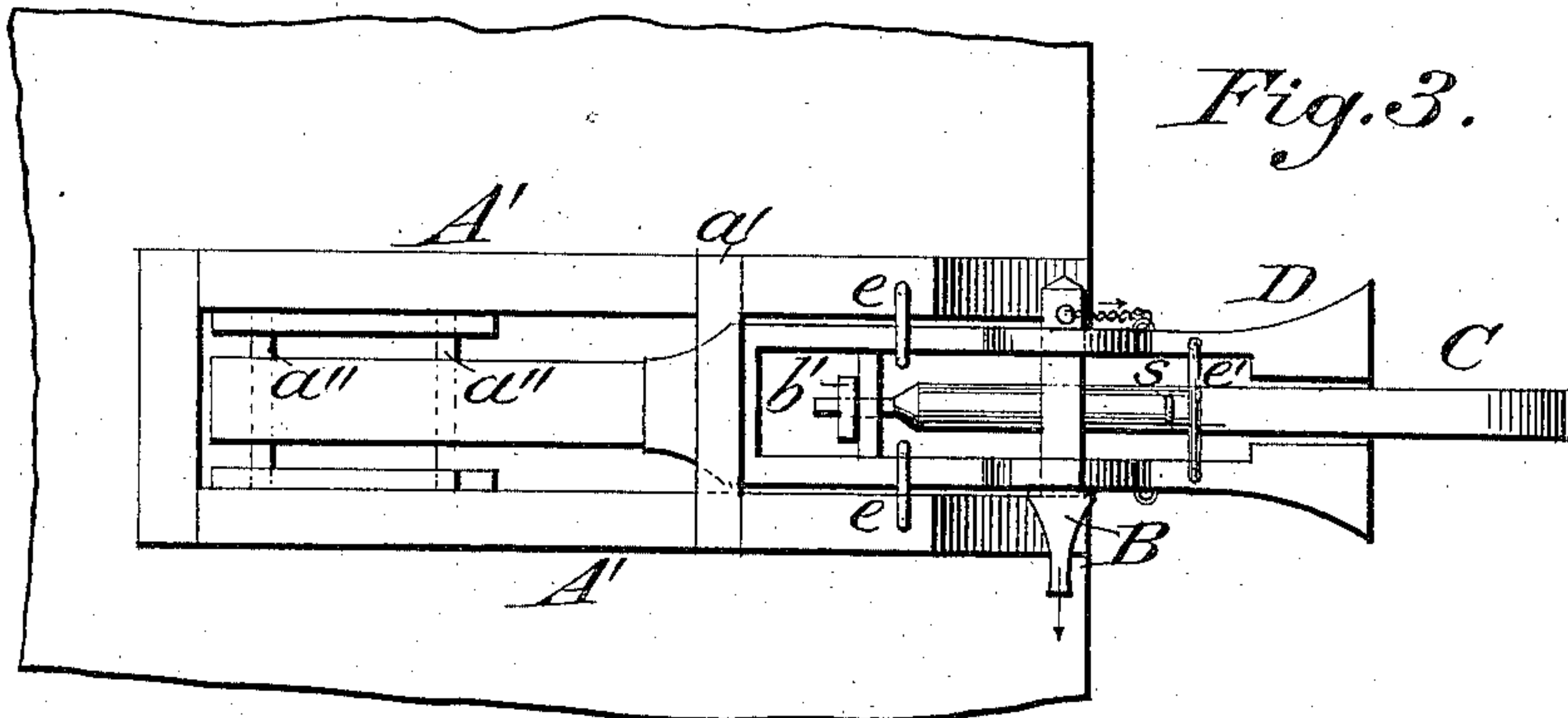
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

CLIFTON H. SLATON, OF MADISONVILLE, KENTUCKY, ASSIGNOR TO HIMSELF,
DAVID A. MORTON, JAMES H. PREWITT, AND JOHN T. ADAMS, ALL OF
SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 365,641, dated June 28, 1887.

Application filed April 11, 1887. Serial No. 234,387. (No model.)

To all whom it may concern:

Be it known that I, CLIFTON H. SLATON, a citizen of the United States, residing at Madisonville, in the county of Hopkins and State of Kentucky, 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in that class of car-couplings in which the draw-heads are fitted with swinging hooks, that, when the cars are brought together, engage with each other automatically, and which may be disengaged by means of a lever from the side of the car, thus avoiding the necessity of entering the space between the cars for the purpose of engaging or disengaging the couplings; and the invention consists in the means by which the coupling-hooks are operated and made reversible, as well as certain other details of construction, as will be hereinafter fully described, and specifically pointed out in the claims.

In the accompanying drawings, in which similar letters of reference indicate like parts in the different figures, Figure 1 represents a side view of two cars coupled, a part of the running-gear being in section to show clearly the coupling-hooks and their attachments. Fig. 2 is a perspective view of one end of a car provided with my improved coupling, illustrating the mechanism by which it is operated. Fig. 3 is a bottom plan showing the draw-head and coupling-hook. Fig. 4 is a side view of the draw-head and coupling-hook, the supporting-bar removed and the hook in position for being reversed. Fig. 5 is a vertical transverse section through the draw-head, coupling-hook, and supporting-bar. Fig. 6 is a plan of the draw-head, the coupling-hook being lowered and a link secured to the supporting-bar for the purpose of coupling to a

draw-head of the ordinary construction by means of a pin. 50

In the drawings, A represents one end of an ordinary freight-car, and A' the sills or draft-timbers, between which is placed the draw-head D, provided with the usual draw and buffer spring, *a*, the draw-head being supported in position between said draw-timbers by the cross-piece *a'* and the bars *a''*, which pass through an elongated rectangular opening in said draw-head and receive the pressure of the spring. The forward part of the draw-head D is bifurcated, the two arms or sides extending forward and terminating in expanded ends, which serve as buffer-heads when two cars come together, and for the better retention of said draw-head in position metal strips or stirrups *e e* are passed around each jaw and firmly secured to the draw-timbers, but leaving sufficient room for the free longitudinal movement of the draw-head. A cross-piece, *b*, connects the two sides of the draw-head near the point of bifurcation, through which cross-piece is an orifice that receives the rear end of the coupling-hook C. This hook has its forward or engaging end formed, as shown, with a long curved extension, which serves as an incline upon which the hooks ride as they come together, thus allowing them to readily couple, even when there is a difference of several inches in the heights of the draw-heads of the two cars to be connected. 80

The engaging part of the hook may be made with a long tongue, as illustrated, which effectually prevents them from uncoupling, except when the draw-heads of contiguous cars are nearly in contact; or they may be formed with straight engaging surfaces, as shown by dotted line in Fig. 4, which form allows the disengagement of the hook even when under strain, but is more liable to accidental displacement. The rear end of the shank of the coupling-hook is rounded and passed loosely through the orifice in the cross-piece *b*, and prevented from being withdrawn therefrom by a nut or collar, *b'*, screwed or otherwise firmly secured upon said shank in the rear of the cross-piece. The orifice in the cross-piece *b* is so much 95

larger than the rounded shank of the coupling-hook that the latter may be readily turned therein and have plenty of vertical play between the jaws of the draw-head to enable it to assume the different positions required in making a connection with another car, or dropped down, so that the hook shall be out of the slot in the draw-bar, to allow it to be turned over when it is desirable to reverse the position of said hook.

As it is necessary that the hooks upon the two cars which are to be coupled should occupy reverse positions—that is, the engaging part on one hook should be at the top and on the other at the bottom—it becomes necessary when two cars are to be coupled, the hooks of which occupy the same position, to turn one of them over, so that their engaging parts shall be in the right position to make the connection. This I accomplish by providing each jaw of the draw-head with a projection, *c*, upon its lower side. Through these projections is formed a mortise, which receives the supporting-bar B, passing transversely across the bottom of the slot between the jaws of the draw-head and forming a support for the coupling-hook, which is prevented from turning by said jaws when it is in place between them; but when it is desired to turn one of the coupling-hooks the bar B is removed and the hook allowed to drop down until its broad end is below the jaws of the draw-head, when it may be turned over, raised into position between said jaws, and secured by again inserting the bar B through the mortises in the projections *c c*, the bar being retained in place by pins *d*, passing through holes in said bar and similar holes in the ears *d'*, projecting from each side of the draw-head. I prefer, however, to provide the projection *c* upon the under side of each jaw of the draw-head with a forwardly-extending slot, *c'*, as shown in Fig. 2 of the drawings. When the pin *d* is removed from one jaw, the bar B is retained in the projection *c* of the opposite jaw of the draw-head by the pin *d* in that jaw, but may be swung around, the pin serving as a pivot and retaining the connection of the bar with the draw-head, thus preventing the danger of misplacing or losing the bar B, which might occur when it is entirely disconnected and removed from the draw-head.

In order to prevent loss of the pins *d*, used for the purpose of securing the supporting-bar B in position, they are securely connected by chains to the jaws of the draw-head. A stirrup, *e*, is also provided, which passes from one jaw to the other of the draw-head and serves as a support for the coupling-hook when the supporting-bar B has been removed from beneath it, as when the hook is to be reversed or a connection with an ordinary pin-and-link coupling is to be made.

To make a connection with the common draw-head, I employ the link E, (shown in Fig. 6,) the pin-loop at one end being at right angles with that at the other, so that a pin, F,

may be passed through the jaws of the draw-head and through the vertical loop of the link, leaving the horizontal loop to receive the coupling-pin of an ordinary draw-head.

In order to operate the coupling-hook from either the top or sides of the car, I pivot upon each end of the same two levers, H H, their inner ends coming near each other and connected with the coupling-hook by chains *i i*, their outer ends projecting at the sides of the car, being provided with handles, by which that end of either lever may be depressed, thus raising the coupling-hook.

When it is desired to retain the hook in an elevated position for some time, to prevent the car from coupling with others that may be pushed against it, one of the levers H is brought beneath a pin, as *k*, or other suitable holding device attached to the end of the car.

To operate the coupling-hook from the top of the car, I attach to said hook a chain, *h*, the upper end of which chain is connected to the lower end of a rod, I, said rod being loosely secured to the end of the car by staples *n*, which allow the rod longitudinal and turning movement. This rod I is provided with an expanded section, *o*, which will pass through the staples when turned in one direction; but when the rod is turned so that the expansion is parallel to the end of the car it will not pass through the staple, and in this condition forms a support for the hook, holding it up so that it will not engage with the hook of another car.

Two staples, as *s*, may be placed one on the upper and the other on the lower side of each coupling-hook, so that when said coupling-hook is turned over the chains may be detached from one staple and attached to the other. It will be apparent that a similar arrangement of coupling devices may be attached to the front of a locomotive or rear of a tender for the purpose of coupling with cars at either end of the engine, the construction and arrangement of which would differ but little from that already described as applicable to railway-cars.

I am aware that many forms of coupling-hooks and devices for operating them have been invented, and do not, therefore, broadly claim the hooks as my invention, but limit my claims to the specific construction and arrangement of parts as hereinbefore described.

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

1. As an improvement in car-couplings, the reversible coupling-hook and the devices for operating said hook, as shown and described, in combination with the bifurcated draw-head, open at both top and bottom to allow the hook to rise above or drop below said draw-head, substantially as specified.

2. As an improvement in car-couplings, the combination of the reversible hook, bifurcated draw-head, and bar B, arranged as shown and described, to support the coupling-hook and

allow it to drop into position for reversal, substantially as set forth.

3. As an improvement in car-couplings, the bifurcated draw-head provided with projections *c* and slots *c'*, in combination with the bar B and its securing pins *d*, arranged and operating as set forth.

4. As an improvement in car-couplings, the combination of the bifurcated draw-head, reversible coupling-hook, bar B, and stirrup *e'*, arranged to support the coupling-hook while it is being turned, substantially as set forth.

5. As an improvement in car-couplings, the

bifurcated draw-head having cross-piece *b*, in combination with the reversible coupling-hook 15 loosely connected with said cross-piece, the chains *i* and *k*, levers H, and rod I, arranged as shown and described, to operate said hook from either the side or the top of the cars, as set forth. 20

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

CLIFTON H. SLATON.

Witnesses:

SAM. D. LANGLEY,

B. A. SLATON.