

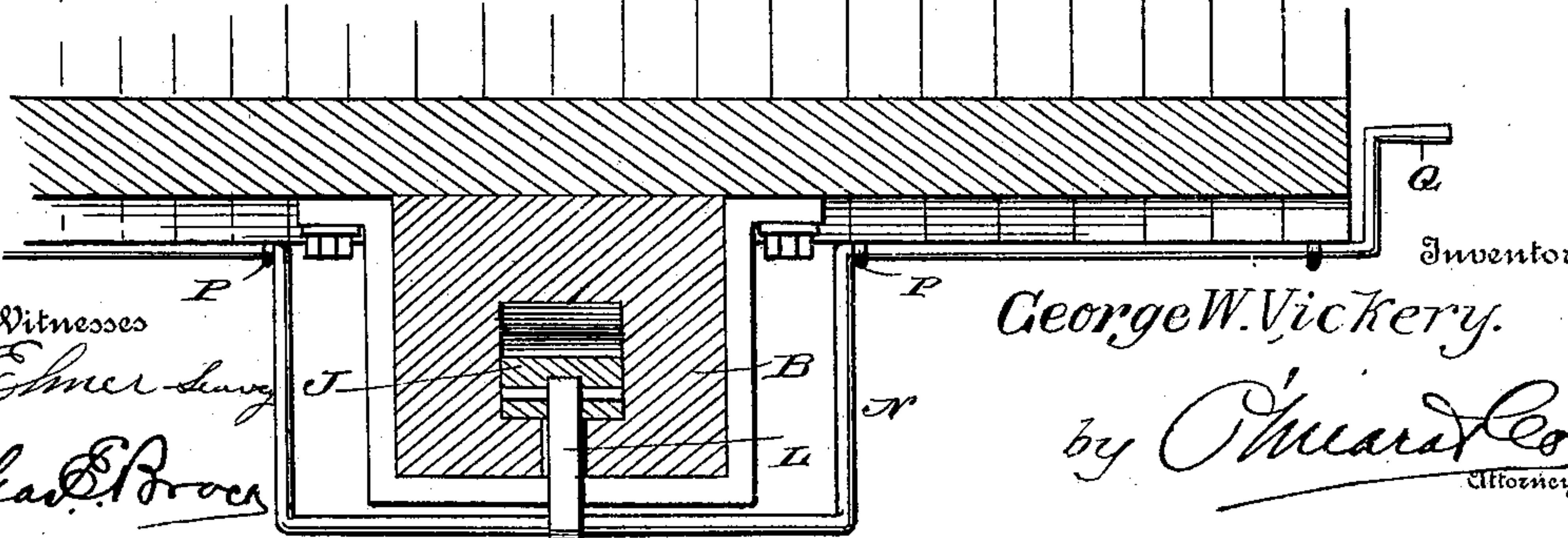
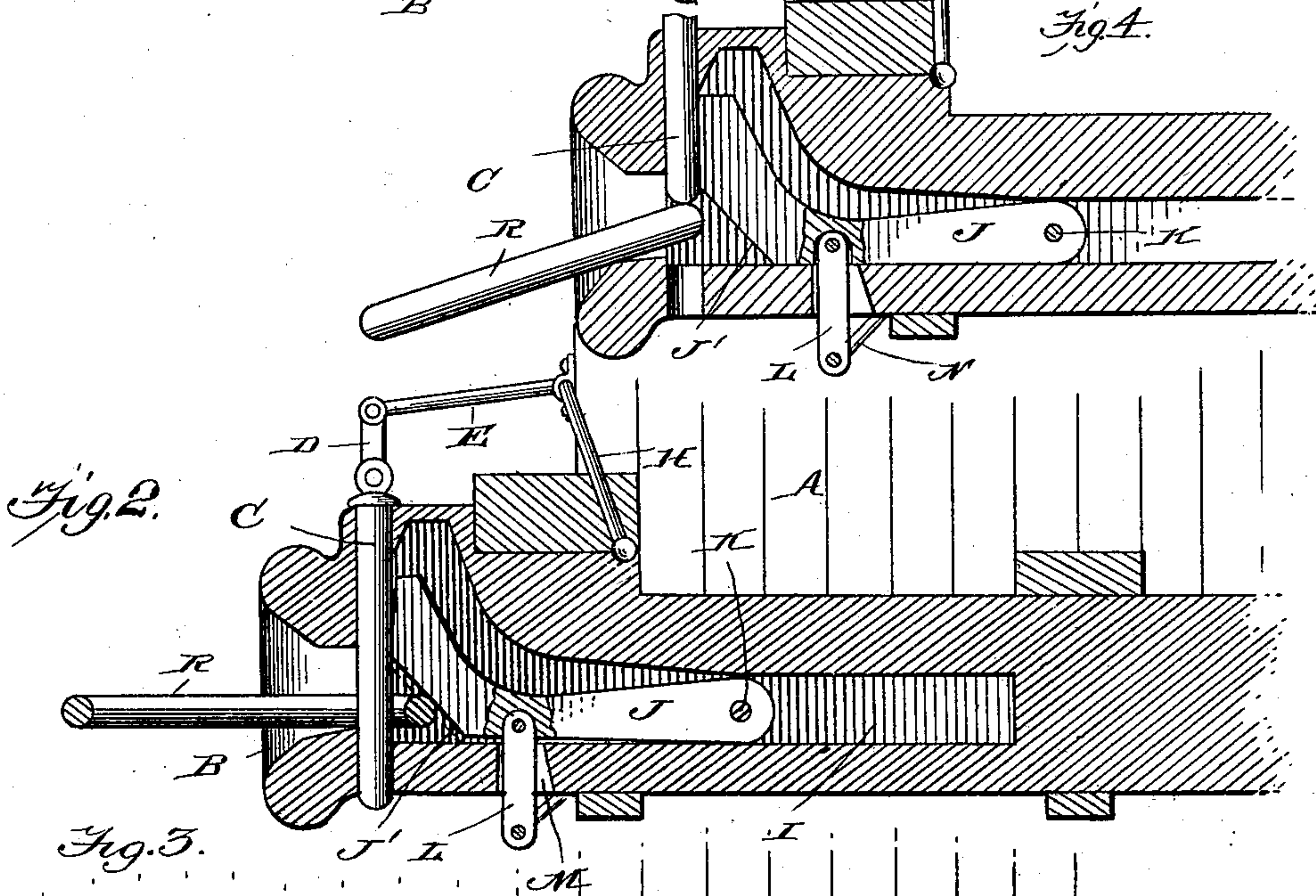
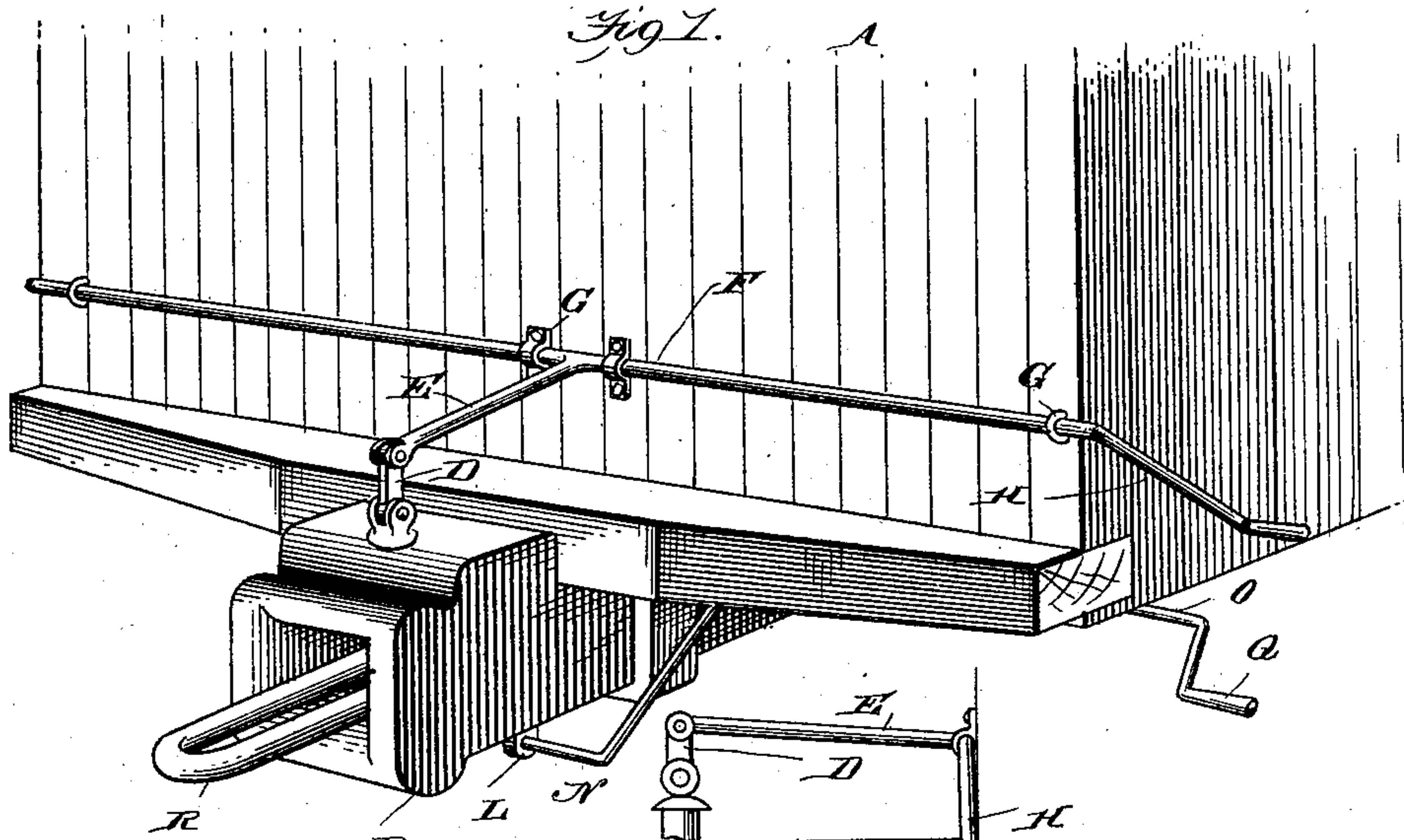
No. 636,301.

Patented Nov. 7, 1899.

G. W. VICKERY.
CAR COUPLING.

(Application filed Mar. 8, 1898.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. VICKERY, OF BUTLER SPRINGS, ALABAMA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 636,301, dated November 7, 1899.

Application filed March 8, 1898. Serial No. 673,028. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. VICKERY, a citizen of the United States, residing at Butler Springs, in the county of Butler and State of Alabama, have invented a new and useful Car-Coupling, of which the following is a specification.

My invention relates to certain new and useful improvements in car-couplings, the object being to generally improve, simplify, and render more efficient the operation of this class of devices.

A special object of my invention is to furnish an improved car-coupling by means of which cars may be automatically coupled when brought together, even though the draw-heads are slightly different in height, and by means of which cars may be uncoupled from the sides without the necessity of the trainmen or yard-hands getting between the bumpers.

With these objects in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the appended claim.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of so much of a car as is necessary to illustrate the practical operation of my invention. Fig. 2 is a longitudinal central section through the same with the parts in the positions they assume when the cars are coupled together. Fig. 3 is a vertical section on the line 3 3 of Fig. 2. Fig. 4 is a view similar to Fig. 2, illustrating the parts in the positions they assume when the coupling-pin is held up ready to admit the link from the next car.

Like letters of reference mark the same parts wherever they occur throughout the various figures of the drawings.

Referring to the drawings by letters, A indicates the box or body of an ordinary freight-car, and B the draw-head. The draw-head is provided with a vertical bore or opening to receive the coupling-pin C, which is sus-

ended upon a link D, pivotally secured to the outer end of a crank-arm E, projecting from a rod F, journaled in bearings G on the end of the car and provided at each side of the car with a crank-handle H. Within the draw-head is formed a chamber I of a shape and size to accommodate a dog J, pivotally secured at K within the draw-head. A link L, pivotally secured to the dog J, drops through a slot M in the bottom of a draw-head and is pivotally connected at its lower end to a crank N, formed in a rod mounted in bearings P under the car and provided at each side of the car with a handle Q. The dog J projects forward from its pivot to a short distance beyond where the link L connects with it, from whence it inclines outward and upward, its length being regulated so that when it is dropped in its lower position, as shown in Fig. 4, it will bind on the inside of the coupling-pin C and hold it against falling from any position in which it is placed, but when raised into the position shown in Fig. 2 or higher it will permit the free movement of the pin either up or down. The lower front edge of the dog, as at J', is inclined, as shown.

R indicates an ordinary coupling-link.

The construction of my invention will be readily understood from the foregoing description, and its operation is as follows: The parts being in the positions shown in Fig. 4, R represents a link projecting from the draw-head of a car approaching. As will be seen in this figure, the coupling-pin C is held in its upper position by means of the dog J. The link, entering the front opening of the draw-head, passes under the lower end of the pin and strikes the inclined front end J' of the dog J. This causes the dog to rise into the position shown in Fig. 2, which releases its pressure against the inside of the pin C and allows it to drop through the link, as clearly shown in that figure. To uncouple a car, it is only necessary to move the crank-handle H on either side of the car downward, which will return the horizontal bar F and raise its crank-arm E, carrying with it the link D and the coupling-pin C, the dog J bearing against the inside of the pin as it is raised, but permitting it to be raised without obstruction. As soon as the link is raised to a sufficient height—as, for instance, shown in

Fig. 4—the crank-handle H is released and the pin in attempting to drop will cause the dog J to bind against its inner surface and hold it in its raised position. Assuming the parts to be in the positions shown in Fig. 2 and it being desired to couple the car to another in which the draw-head is higher than the draw-head B, the crank-handle Q on the rod O will be turned to throw the crank N downward, which by means of the link L will draw the dog G down, which, pressing upon the inner end of the link R, will cause its outer end to be elevated to suit the height of the draw-head of the approaching car. To couple with an approaching car whose draw-head is lower than the draw-head B, the crank N will be moved in an opposite direction, throwing up the link L and dog J, leaving the inner end of the link R free to rise, when the outer end will drop by its own gravity to a position to permit it to enter the draw-head of the approaching car.

From the foregoing description it will be apparent that I have provided an extremely simple and cheap means whereby cars may be automatically coupled with the ordinary link notwithstanding the fact that the draw-heads vary in height, such automatic coupling being governed entirely by mechanism within reach of a person standing at the side of the car without requiring any nearer approach to the draw-head, thus obviating the extreme danger incident to trainmen passing between the cars to couple them. It will also be obvious that the cars may be uncoupled from the same position and with the same freedom from danger.

While I have illustrated and described the best means now known to me for carrying

out my invention, I do not wish to be understood as restricting myself to the exact details of construction shown and described, but hold that any slight changes or variations as might suggest themselves to the ordinary mechanic would properly fall within the limit and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination with a draw-head provided with a vertical bore, of an ordinary coupling-pin fitting said bore, a link pivoted to the top of the coupling-pin, a horizontal rod pivoted in bearings on the end of the car, a crank-pin projecting from the center of said rod and pivotally connected to said link, crank-handles on said rod at the sides of the car, a dog J pivoted at its rear end within the draw-head having a vertical face adapted to bind against the inside of the pin to hold it in a raised position, and a downward rearwardly inclined face to bear against the inner end of a coupling-link when engaged on the pin, a link pivotally connected with the dog and passing through a slot in the bottom of the draw-head, and a horizontal rod pivoted under the car provided with crank-handles at the sides of the car and bent to form a crank in the center portion to pivotally connect with the lower end of the link depending from the dog, substantially as described.

GEORGE W. ^{his} × VICKERY.
mark

Witnesses:

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