

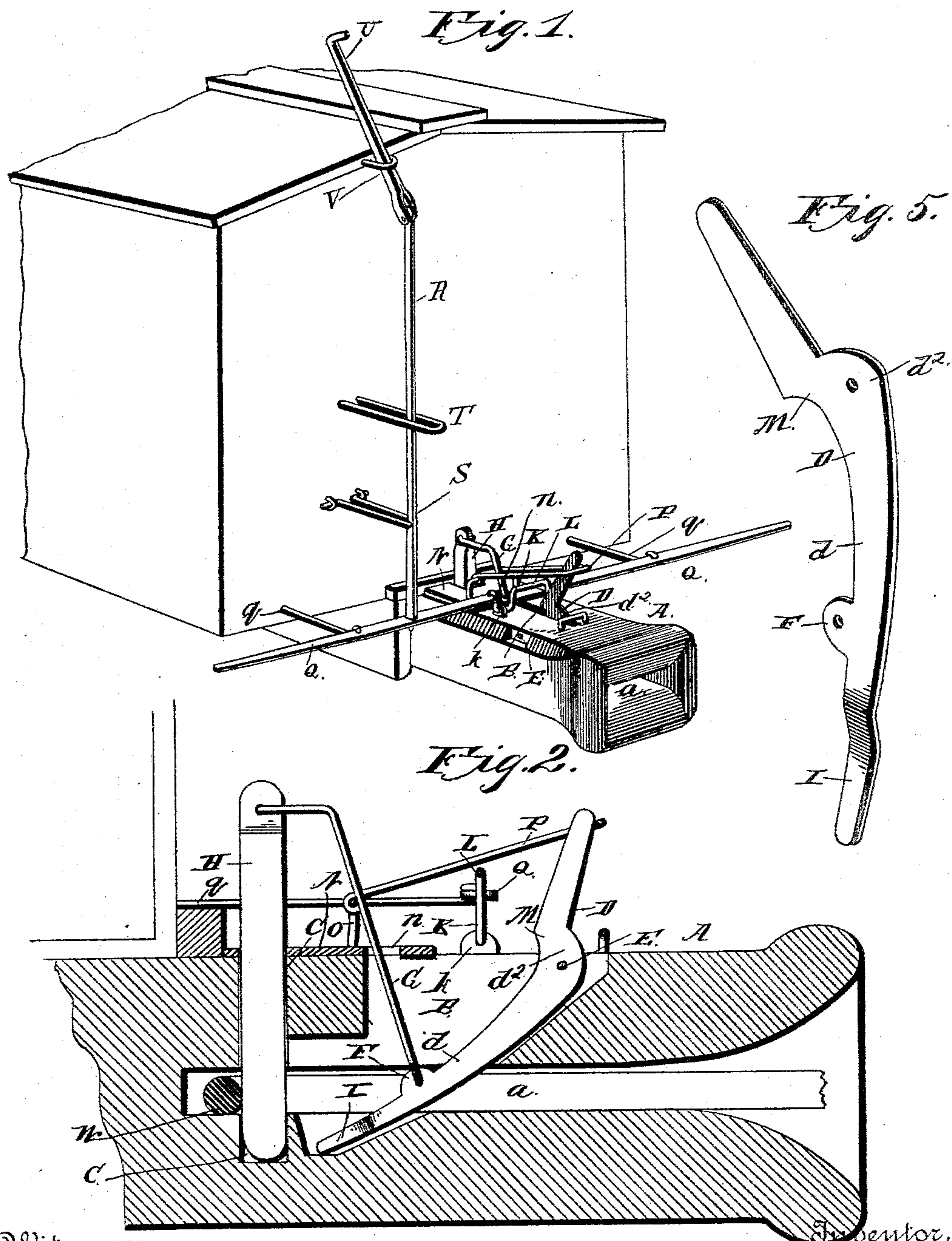
(No Model.)

2 Sheets—Sheet 1.

H. B. JOHNSON.  
CAR COUPLING.

No. 388,777.

Patented Aug. 28, 1888.



Witnesses  
*Geo. J. Drake.*  
*C. E. Doyle.*

Inventor,  
*Henry B. Johnson.*  
By *his* Attorneys  
*C. A. Howard & Co.*

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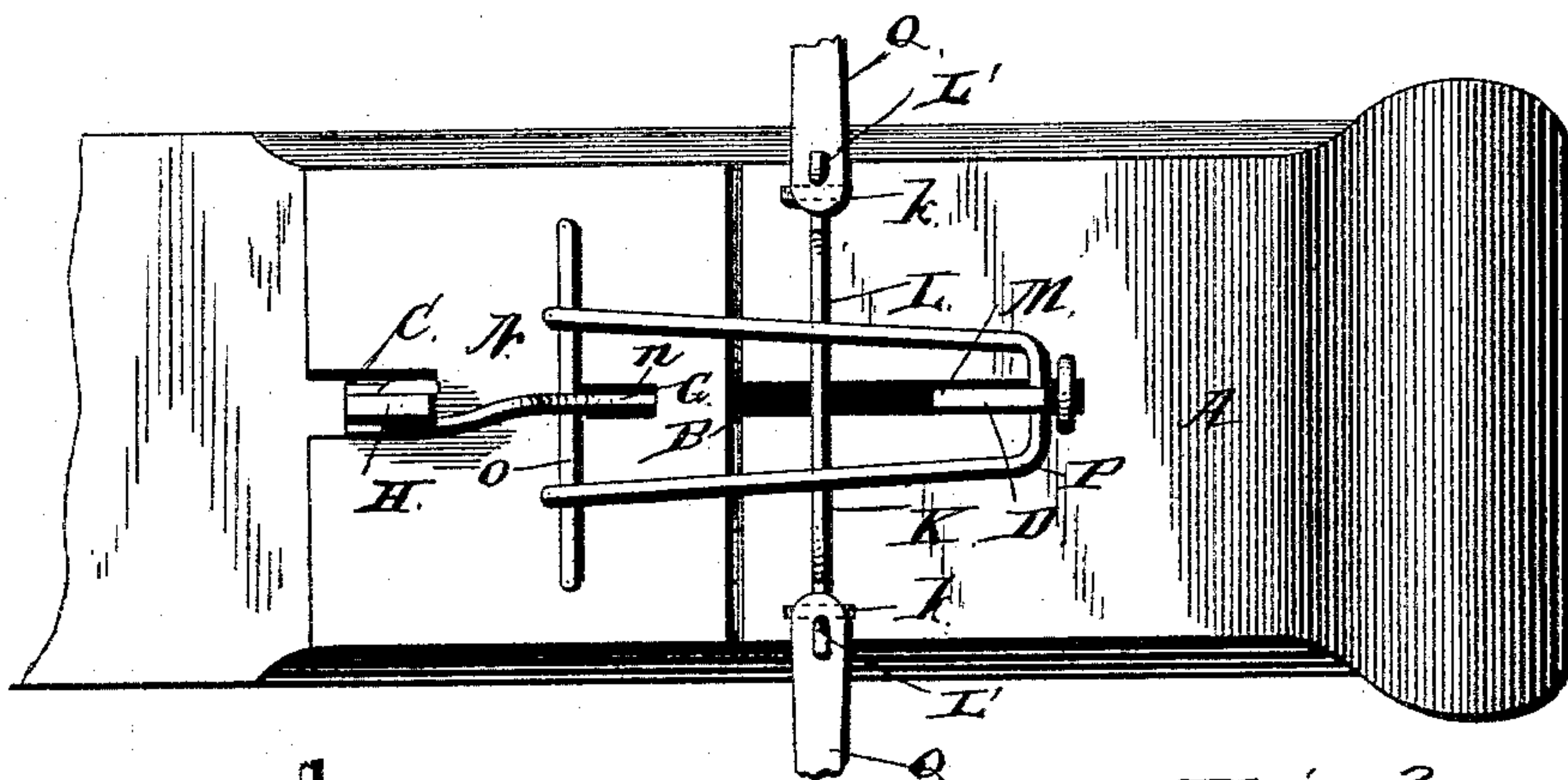


Fig. 3.

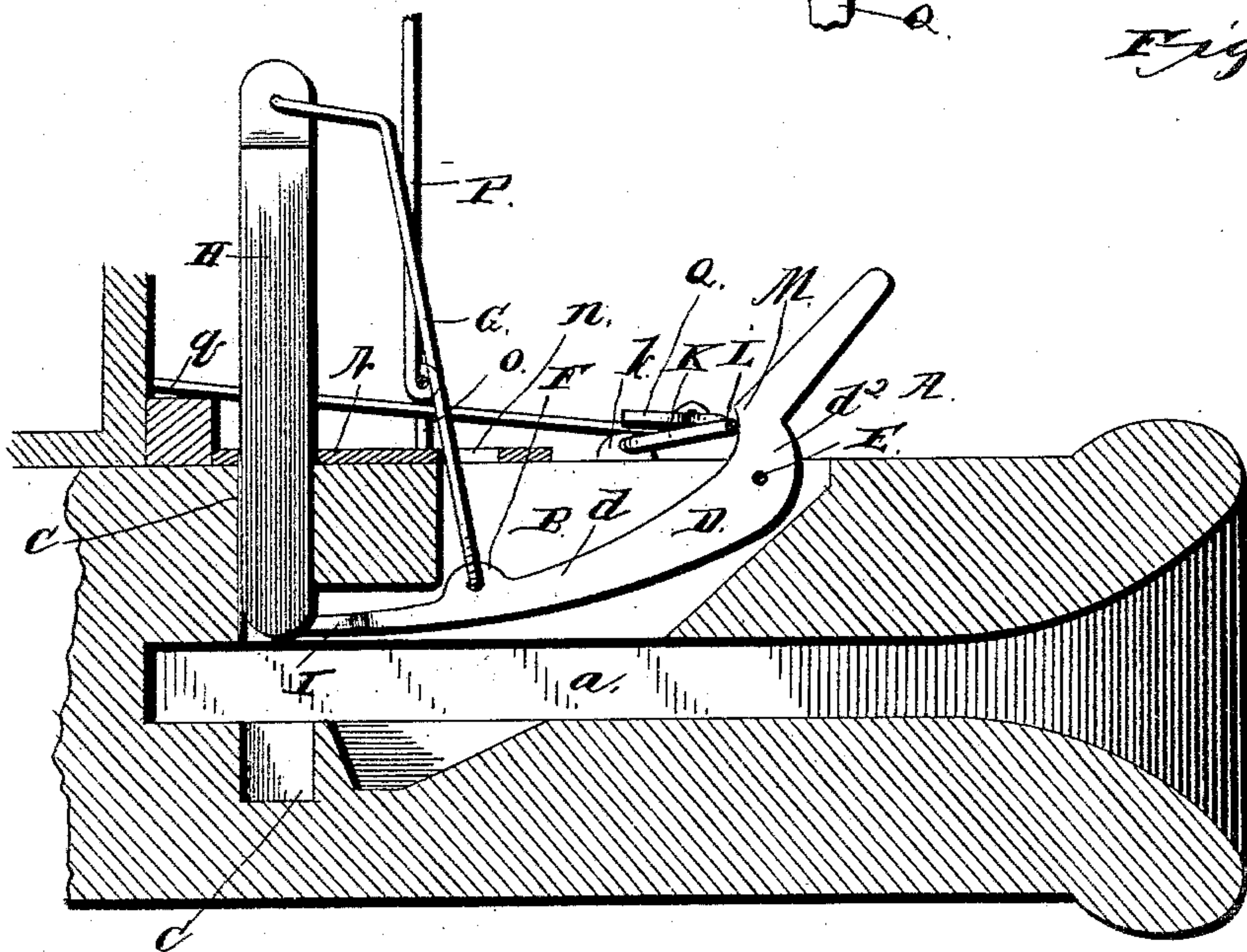


Fig. 4.

Witnesses.

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Inventor,  
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By *his* Attorneys.

*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

HENRY B. JOHNSON, OF CLAY CENTRE, KANSAS, ASSIGNOR OF ONE-HALF  
TO REZIN IAMS, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 388,777, dated August 28, 1888.

Application filed May 24, 1888. Serial No. 274,958. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY B. JOHNSON, a citizen of the United States, residing at Clay Centre, in the county of Clay and State of Kansas, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

The invention relates to a coupling, and has for its object to provide effective and reliable means for automatically connecting railway-cars, and also to provide simple and convenient means for uncoupling the same.

The invention consists in a certain novel construction and arrangement of devices, fully set forth hereinafter in connection with the accompanying drawings, wherein—

Figure 1 is a perspective view of the coupler applied to a car. Fig. 2 is a longitudinal central sectional view of the same. Fig. 3 is a plan view. Fig. 4 is a longitudinal sectional view with the coupling-pin locked out of engagement. Fig. 5 is a detail view of the operating-lever.

Referring to the drawings, A designates the draw-head, which is attached in any preferred manner to the car-body, and it is provided with a longitudinal recess, *a*, and a longitudinal slot, B, in its upper side, and aligned apertures C C are formed in the upper and lower sides of the draw-head in rear of the said slot.

A bent operating-lever, D, having an inclined lower arm, *d*, is mounted on a transverse pivot-pin, E, in the slot B, and the front side of the lever is provided with a rounded offset, *d'*, which fits snugly in the space between the lever and the front end of the slot.

An apertured car, F, on the lower arm of the lever is connected by the rod G to the upper end of the coupling-pin H, which is mounted in the aligned apertures C C.

It will be seen that when the upper end of the operating-lever is swung forward the lower end thereof is raised, and the pin H is consequently raised. The lower end of the lever is provided with a laterally-bent toe, I, on the extremity of the lower arm, which passes on one side of the pin as the latter is raised, for a purpose to be hereinafter explained.

In suitable bearings, *k k*, on the upper side of the draw-head, on opposite sides of the slot

and slightly in rear of the operating-lever, is mounted the rock-shaft K, having the loop L between the bearings to bear against the operating-lever, and the cranks L' L' on its ends, whereby to turn the said shaft. When the cranks are swung forward, the loop slides on the operating-lever, thereby swinging it forward and raising the coupling-pin, and the end of the loop engages a shoulder, M, on the lever, and thus locks the parts of the coupler in their uncoupled position.

A plate, N, is secured to the upper side of the draw-head, in a guide-opening, *n*, in which the rod G operates, and on a staple, O, on the upper side of the plate is mounted the loop P, which is adapted to engage over the upper end of the operating-lever when in the coupled position and lock it thus.

Horizontal levers Q Q are mounted on suitable brackets or supports, *q q*, on the end of the car, and are mounted at their inner ends on the cranks, and the outer ends of the levers extend beyond the sides of the car within reach of a person standing close to the track.

A vertical uncoupling-lever, R, is mounted near its lower end on the end of the swinging link S, which is pivoted to the car, and the said lever operates in the horizontal guide-brackets T. The lower end of the uncoupling-lever is stepped in an aperture in one of the horizontal levers Q, and a handle, U, is pivoted to the upper end of the operating-lever and operates in a keeper, V, on the end of the car.

By means of the uncoupling-lever the coupler may be operated from the top of the car.

When the coupling-link W enters the draw-head, it bears against the front side of the operating-lever and raises it, thereby raising the coupling-pin, and after the end of the link passes the lower end of the said pin the latter drops and engages the same. The toe on the end of the operating-lever guides the link past the lower end of the pin and enables the link to hold the lever in its raised position until the pin is passed. The said toe also prevents the link from catching or engaging the end of the pin, and thus preventing an easy coupling.

Having thus described the invention, I claim—

1. In a car-coupling, the combination, with



the draw-head having a longitudinal slot therein, of the bent operating-lever D, mounted in the slot and having a toe, I, on its lower end, and the pin E in rear of the lever and 5 connected thereto, substantially as and for the purpose specified.

2. In a car-coupling, the combination, with a draw-head having a slot, B, therein, of the operating-lever mounted in the slot and hav- 10 ing an inclined lever-arm connected to the coupling-pin, and the loop or arm mounted on the upper side of the draw-head and adapted to bear against the upper arm of the lever, and having cranks whereby it may be 15 operated, substantially as specified.

3. In a car-coupling, the combination, with the draw-head, of the operating-lever mounted therein and having a shoulder, M, on its rear side, the coupling-pin mounted in rear of the 20 lever, the connecting-rod between the lower arm of the lever and the said pin, and the rock-shaft mounted on the draw-head, and having a loop to bear against the upper arm of the lever and adapted to engage the said 25 shoulder, substantially as specified.

4. In a car-coupling, the combination, with the draw-head, of the vertical pin, the operating-lever connected thereto, the rock-shaft having a loop to bear against the lever and crank- 30 arms on its ends, and the horizontal levers mounted on suitable brackets or supports on the car and connected at their inner ends to the said cranks, substantially as specified.

5. In a car-coupling, the combination, with the draw-head, the pin, the operating-lever 35 connected thereto, and the rock-shaft having a loop and cranks, as described, of the horizontal levers connected to the said cranks, the vertical uncoupling-lever mounted on the end of a pivoted loop and connected at its lower 40 end to one of the horizontal levers, and the handle connected to the upper end of the uncoupling-rod and operating in a keeper on the car-body, substantially as specified.

6. In a car-coupling, the draw-head having 45 a slot, B, the pin mounted in the draw-head, the operating-lever mounted in the slot and connected to the pin, the rock-shaft adapted to operate the lever and having a crank on its ends, and the horizontal levers connected 50 to the said cranks, combined with the vertically-movable uncoupling-lever mounted on the end of the swinging loop and seated at its lower end in an aperture in one of the levers, the guide-bracket to guide the uncoupling-le- 55 ver, and the loose handle mounted in a keeper on the car and connected at its lower end to the upper end of the uncoupling-lever, substantially as and for the purpose specified.

In testimony that I claim the foregoing as 60 my own I have hereto affixed my signature in presence of two witnesses.

HENRY B. JOHNSON.

Witnesses:

D. LAMOUREUX,  
WM. B. MORRISON.