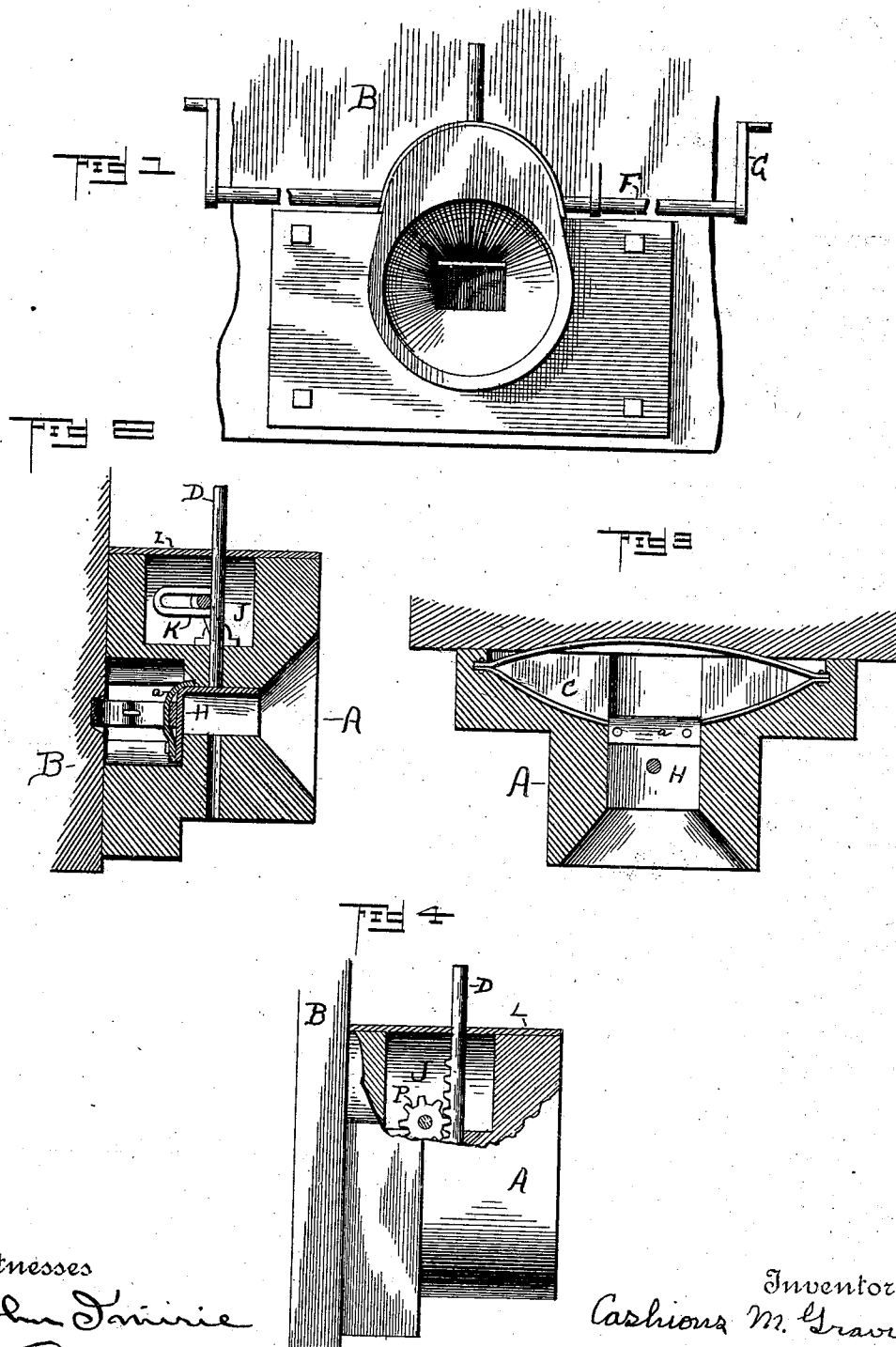


(No Model.)

C. M. GRAVES.  
CAR COUPLING.

No. 501,933.

Patented July 25, 1893.



Witnesses

John D. Irvine

R. H. Bishop

Inventor  
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By his Attorney

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# UNITED STATES PATENT OFFICE.

CASHIOUS M. GRAVES, OF EDDYVILLE, ASSIGNOR OF ONE-HALF TO M. P. MOLLOY, W. M. BOWMAN, J. L. JAMES, JR., AND J. H. CATLETT, OF LYON COUNTY, AND C. W. MATTHIS, OF LA RUE COUNTY, KENTUCKY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 501,933, dated July 25, 1893.

Application filed July 18, 1892. Serial No. 440,314. (No model.)

*To all whom it may concern:*

Be it known that I, CASHIOUS M. GRAVES, of Eddyville, in the county of Lyon, in the State of Kentucky, have invented new and useful Improvements in Car-Couplings, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in car-couplings whereby there is provided a coupling which is automatic in its operation and which may be operated without entering between the cars.

The invention consists in certain novel and meritorious features of invention all as hereinafter more fully described and specifically referred to in the claims.

In the annexed drawings similar letters of reference indicate corresponding parts in all the views in which—

Figure 1 is an end elevation showing my improved car-coupling attached to an ordinary car. Fig. 2 is a vertical section of Fig. 1. Fig. 3 is a horizontal section of the same, and Fig. 4 is a broken side view showing a modification of the device of the other figures, all as hereinafter more fully described.

In constructing my improved car-coupling I prefer to form the draw-head —A— with a widely open and flaring mouth to assist in guiding the coupling link upon entering the draw-head, and I form the draw-head with a horizontal opening extending entirely through the same, while at the rear is provided a lateral recess in which is held an elliptical spring —C—, the rear bow of which bears against the frame work of a car, while the forward bow is connected by means of a clip to a plate or latch —H— which projects forward into the draw-head sufficiently far to cover the vertical opening or guide eye in which the coupling pin —D— is held, so that, when not in use, the said pin is held in a vertical position resting at its lower end on said latch —H—.

The coupling-pin —D— is provided with a loop —K— standing at right angles thereto and in said loop there is held a cranked portion of the lifting rod —F— which rod extends clear across the end of the car and is

also provided with a cranked portion at each end thereof, to be used to rotate said rod as may be desired in lifting the link-pin —D— in uncoupling a car.

In the construction shown in Fig. 3 the lifting rod —F— is provided with a pinion —P— engaging a rack formed in or secured to the pin, so that a revolution of the rod and its connected pinion will raise the link-pin with which it engages, as may be desired.

With my invention any ordinary style of link may be used in coupling cars.

It is obvious that my improved car-coupling may be operated from a position at the side or at the top of the car without obliging the operator to go between the approaching cars while coupling. All that is necessary is to have one of the coupling pins raised to its elevated position and a link properly secured in the approaching draw-head and as the two draw heads approach each other the link will be guided into the open mouth of the open draw-head and will pass sufficiently far therein to strike against the vertical portion of the plate —H— thus causing the same to be retracted and permit the coupling pin to drop by gravity into engagement with the approaching open link of the other car and thus effectually couple the two cars together. When a train is made up and it is desired to detach a car from the train all that is necessary is to raise the pins of the car so as to permit of their rising high enough to clear the plate —H—, when said plate will be projected forward in its horizontal portion sufficiently far to close the open guide eye in which the pin —D— is held and the vertical part of said plate will strike against the inner end of the coupling link and cause the same to be projected part way out of the draw-head so as to permit the car being moved without disturbing the other cars of the train.

In practice I prefer to form the draw-heads of my improved coupling of the form shown in the sectional view—Fig. 2—in which case all of the operative parts are inclosed and protected against accidents and the inclemencies of the weather, in which case the loop —K— and cranked portion of the lifting rod

(or the rack and pinion if used) are located in the inclosed portion —J— of the draw-head and are covered by the hood —L— as shown.

5 Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

10 In an automatic coupling for cars, a draw-head provided with flaring open mouth, an opening extending horizontally through said draw-head, a vertical guide-eye for the coupling pin, a lateral recess at the rear of the draw-head, an elliptic spring held in said recess, the angular plate —H— lying partially in said recess and connected to said spring by  
15 its vertical wall, and projecting horizontally forward into the opening in said draw-head

beneath the guide-eye, a coupling-pin in said guide-eye, a cranked-rod —F— and positive connection of said pin with said cranked-rod for raising said pin to its elevated position, all  
20 combined and arranged substantially as specified.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Eddyville, in the county of Lyon, 25 in the State of Kentucky, this 3d day of June, 1891.

CASHIOUS M. GRAVES.

Witnesses:

JNO. Q. THOMAS,  
T. H. MOLLOY.