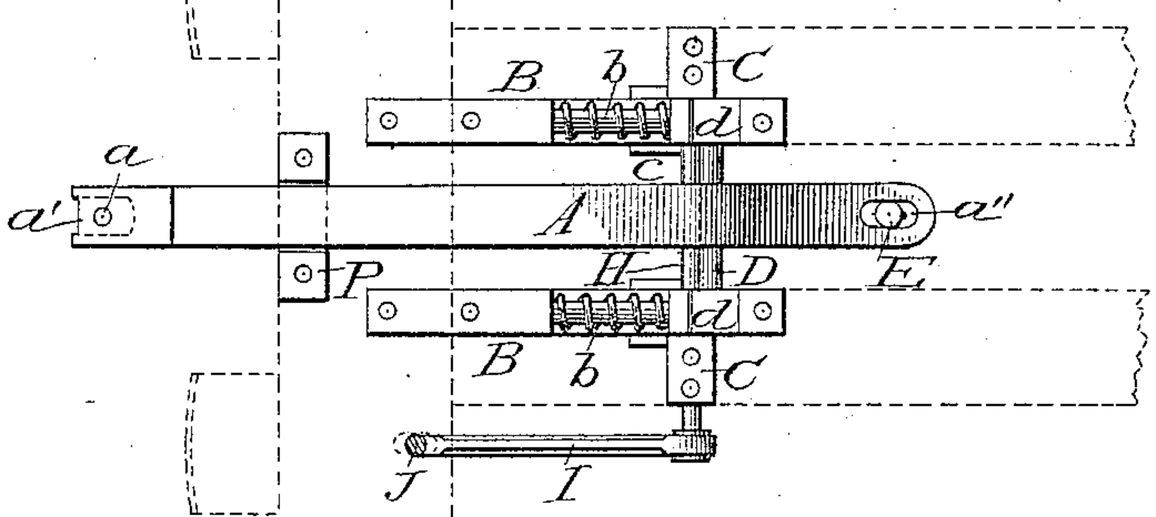
(No Model.)

A. L. DURN.

CAR COUPLING.

No. 309,936. Patented Dec. 30, 1884.

Fig. 1.



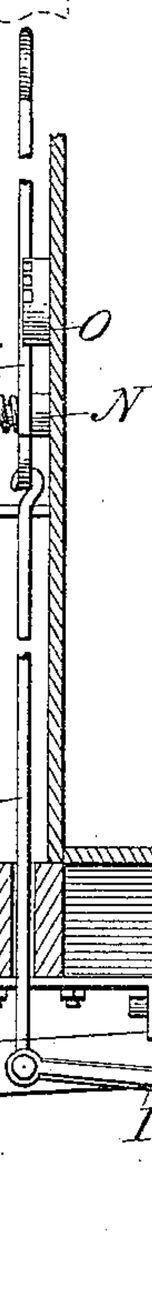
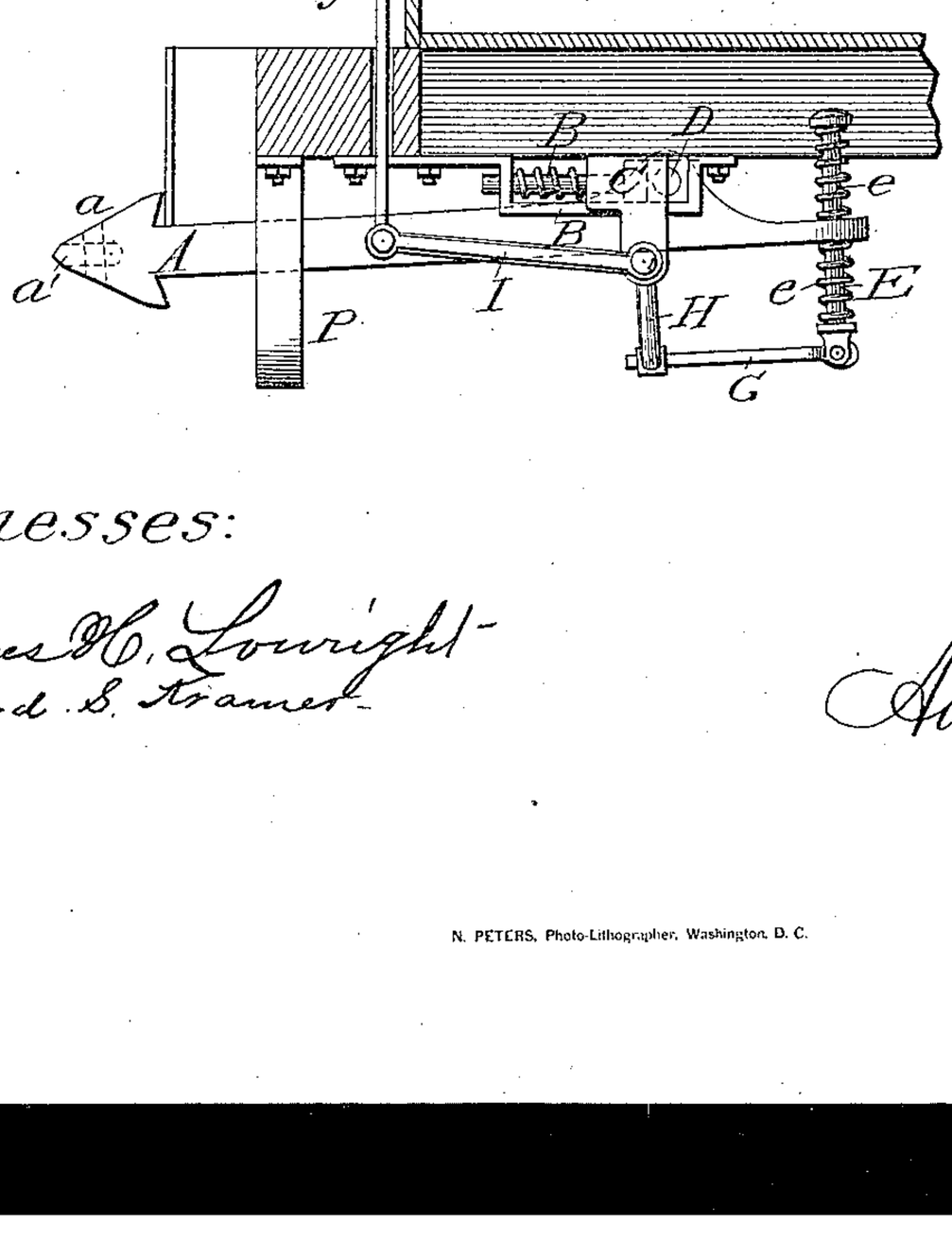


Fig. 2.



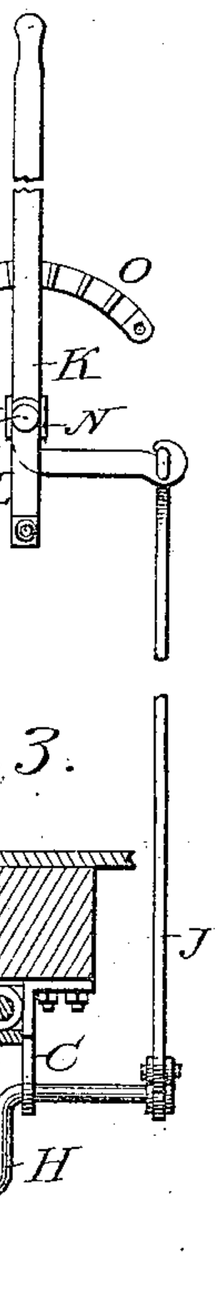
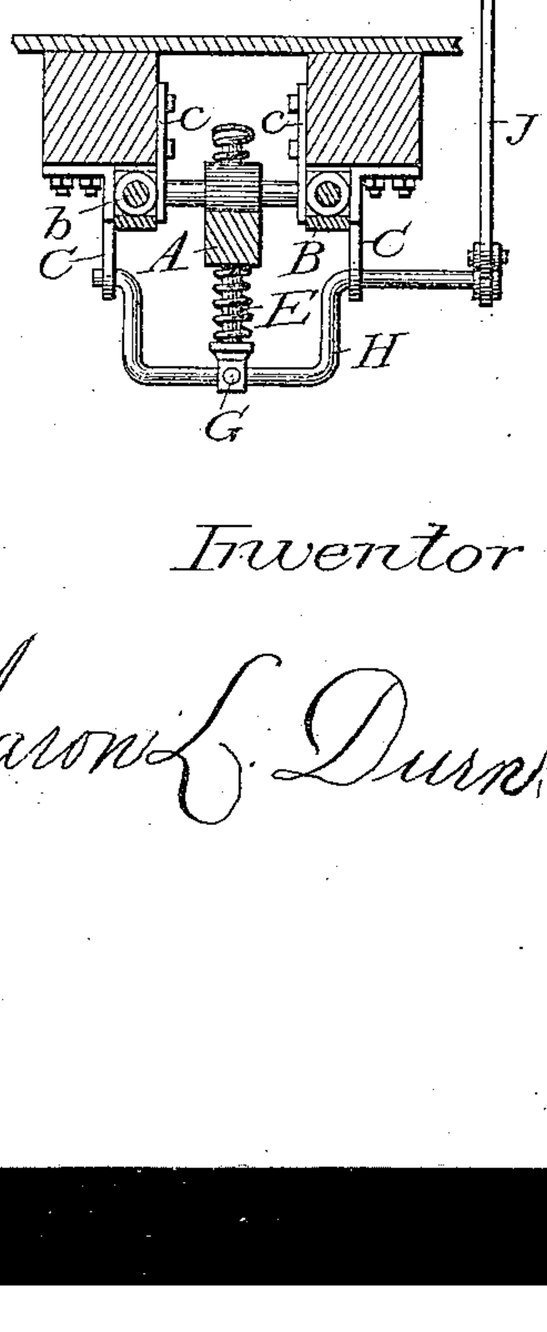


Fig. 3.



Witnesses:

James H. Lowright

Howard S. Kramer

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UNITED STATES PATENT OFFICE.

AARON L. DURN, OF RICHLAND, BUCKS COUNTY, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 309,936, dated December 30, 1884.

Application filed September 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, AARON L. DURN, of Richland township, in the county of Bucks and State of Pennsylvania, have invented certain Improvements in Car-Couplings, of which the following is a specification.

My invention relates to car-couplings; and the invention consists in the novel construction, combination, and arrangement of devices used, whereby the coupling and uncoupling can be effected by a person on top of freight or box cars, or platform of passenger-coaches, and thereby avoid the accidents which so frequently occur with the ordinary link-couplings.

Figure 1 is a top plan view as attached to the frame-work of box-cars; Fig. 2, a side view as applied thereto, and Fig. 3 a transverse vertical section.

In the drawings, A represents a combined draw head and bar, which may be made of wrought or cast iron, the head of which is made arrow-shaped, with a slotted recess, *a'*, and pin-hole *a*, to provide for the coupling with cars having the ordinary coupling link and pin, and automatically as two cars come in collision with the arrow-shaped heads by passing each other, one over the other, where they engage and are held by the points. The draw-bar near the rear end is provided with a hole transversely across, and through which the bolt D passes, secured at both ends with square or cubical shaped nuts or heads *d*, bearing on the sliding bars B, secured to frame-work of cars with bolts or otherwise, thus allowing the draw-bar to turn loosely in the line of its axis, which is essential in coupling or uncoupling, or as may be required in the application of my device to cars of varying heights to points of coupling. The draw-bar A at its rear end or termination is flattened out, and is provided with a slotted or elongated hole, *a''*, cut vertically through it, in which a spring-bolt, E, freely passes, around which a spring-coil, *e e*, on each side of draw-bar is made to bear against the same, holding the draw head and bar in position or equilibrium, and under the control by a series of levers or other equally adapted mechanism, to be moved upward or downward by a person standing on the top of the car.

To relieve the draw head and bar from having a rigid bearing, the spring-bolts *b b* on the median line of the sliding bars B, the springs bear against the sliding plate at one end of the same and against the head of the bolts at the other end, which in turn bears against the nut and head of the bolt D, giving the required elasticity to the draw head and bar.

C represents the bearing-plates for rock-shaft H, and also provides a flange for retaining bolts on the sliding bars in position, *c c* serving a similar purpose on the opposite sides of the sliding bars. A guide-bar, P, (⊔-shaped,) is secured to platform or frame-work near the draw-head to retain the same in position.

To operate the draw-head from the top of the car, a crank or lever arm, K, is employed with a handle extending up above the roof of car, the crank being secured to car by means of bracket-arm L, and bolt M, and washer N, the crank-handle being held in position by means of a notched segmental plate, O, attached to the car, and a spring-coil inserted around bolt M bearing against crank-arm and bracketed arm L. The crank or lever arm K is connected with levers J and I, the rocking shaft H and arm G, in suitable mountings, conveying the motion from the handle and crank-arm to the bolt E, operating on the draw head and bar in raising or lowering the head as desired.

I do not wish to limit myself to the above-described method for operating the draw-head, but would adapt mechanisms to effect the same object for the different styles of cars in use.

From the foregoing description the operation of my device will be readily understood. To raise or lower the draw-head as required in uncoupling the cars, the crank or lever arm is disengaged from the notch by bearing against and in the direction of the spring-bolt on which it turns, and being moved to the right or left, as required, for raising or lowering the draw-head, which separates, and the work of uncoupling is accomplished, after

which the handle is again brought to the proper notch in which the automatic coupling is effected as already described.

What I claim is—

1. The combination of the draw head and bar A, secured to the bolt D, spring-bolts *b b*, slide-bars B, and bearings C, &c., constructed and arranged substantially as shown and described.

2. In combination with the draw head and bar A, the spring-bolt E, connected to arm G, rock-shaft H, lever-arms I and J, and crank K, or equivalent means for operating the draw-head, substantially as and for the purpose set forth.

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