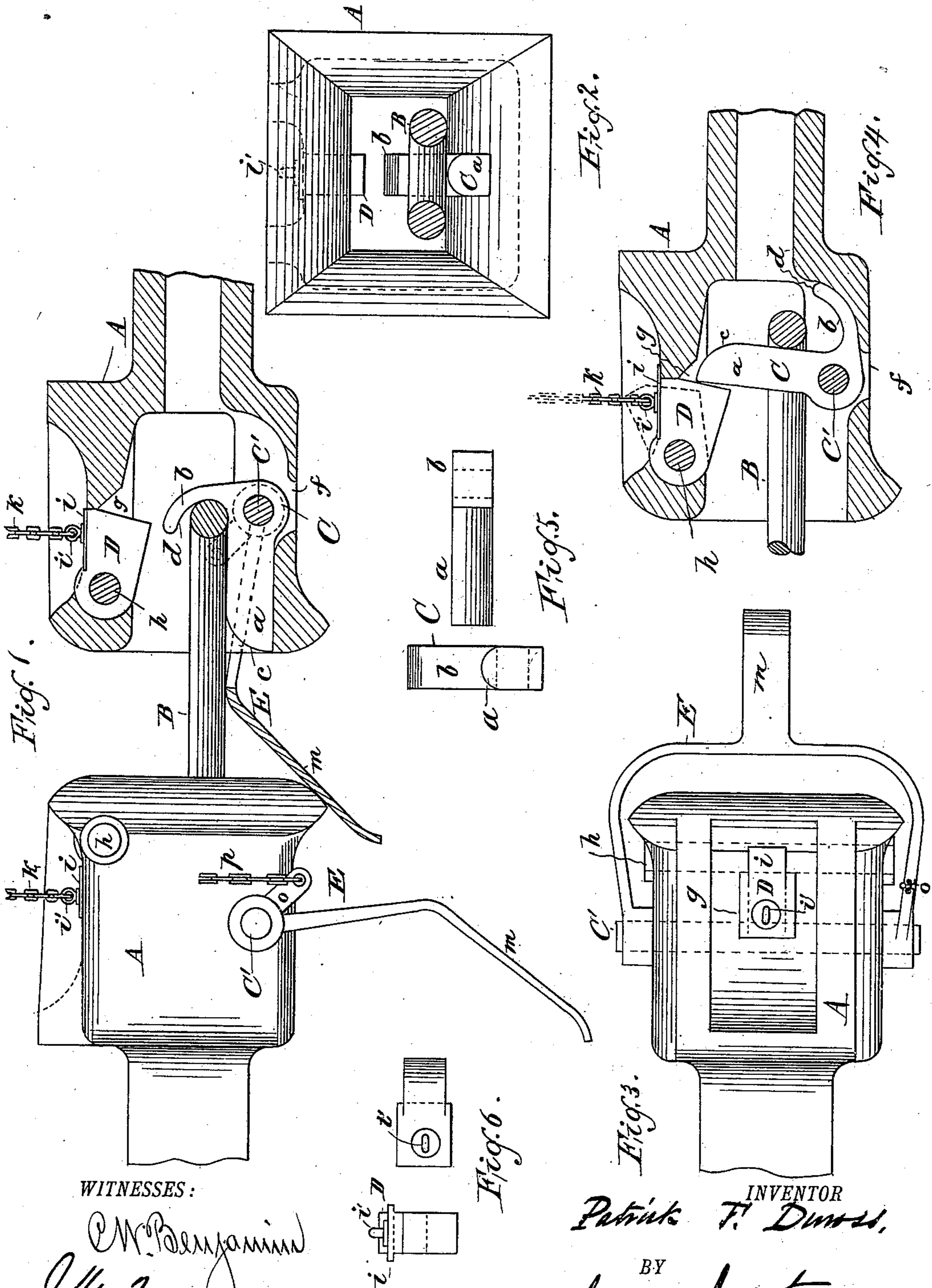


(No Model.)

P. F. DUROSS.
CAR COUPLING.

No. 358,110.

Patented Feb. 22, 1887.



WITNESSES:

W. Benjamin
J. M. Ferguson

INVENTOR
Patrick F. Duros.

BY
Jacob S. Stone,
his ATTORNEY.

UNITED STATES PATENT OFFICE.

PATRICK F. DUROSS, OF LONG ISLAND CITY, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 358,110, dated February 22, 1887.

Application filed December 28, 1886. Serial No. 222,765. (No model.)

To all whom it may concern:

Be it known that I, PATRICK F. DUROSS, of Long Island City, county of Queens, and State of New York, have invented certain new and useful Improvements in Car-Couplers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 The object of this invention is to provide an improved and automatic car-coupler.

The invention consists of a coupling-hook pivoted within the mouth of the draw-head and adapted to be locked in coupling position 15 by a gravity-latch; and it consists, further, of a novel link-director for elevating and directing that end of a coupling-link which is to be secured or coupled, all of which will be hereinafter fully set forth.

20 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation, partly in section, showing opposite draw-heads and my improved coupling device in position ready for coupling. Fig. 2 is a front elevation of a draw-head, showing a portion of the attached coupling device in position for coupling. Fig. 30 3 is a plan of a draw-head with the improved coupler attached. Fig. 4 is a sectional side elevation of a draw-head, showing the position of the coupling-hook and gravity-latch when coupling. Figs. 5 and 6 show certain details of construction in plan and elevation.

In the drawings, A represents a draw-head, and B an ordinary coupling-link.

On a pin, C', passed transversely through the draw-head, is loosely pivoted a coupling-hook, C, the heavy shank *a* of which, because of its superior weight, normally rests in a horizontal position on the floor of the draw-head mouth, as shown in Fig. 1, while the hooked end *b* is thereby held in an upright position opposed to an entering coupling-link, as also shown. The front end of the hook-shank *a* is beveled or rounded off, as shown at *c*, to facilitate the entrance of a coupling-link, B, into the draw-head, and the bent end of said 50 hook is curved forward, as shown at *d*, to enable an entering link to make a more decided

and prolonged engagement therewith for the purpose of completely turning said hook C on its pivot C', so that its shank shall be brought into a vertical position through the opening 55 of the entering coupling-link, as shown in Fig. 4. An opening, *f*, is made through the floor of the draw-head mouth to afford ample room for the free movement of the elbow of the said coupling-hook C.

60 In the top of the draw-head an opening, *g*, is made, and just forward of this opening a rod, *h*, is passed transversely through the draw-head, on which rod is loosely pivoted a gravity-latch, D, which by its own weight 65 is brought to its normal position, (shown in full lines, Figs. 1, 2, and 4,) with its rear end resting against the rear edge of the opening *g* in the draw-head. To hold this latch D in normal position it has secured on its top a 70 metal plate, *i*, larger than the opening *g*, and a ring or eye, *i'*, projects upward from this plate *i*, for the engagement therein of a chain, as *k*, by which said latch may be lifted up when desired. On the pin C' is also pivoted 75 the improved link-director E, constructed in the form of a yoke or clevis, with a long forward-projecting tongue, *m*, which is from about its center outside of the draw-head bent downward, as shown, to form an inclined 80 plane to receive the end of an approaching coupling-link and guide it upward into the draw-head mouth. To an arm of this link-director E is secured a small clevis or lug, *o*, to which is fastened a chain, *p*, by means of 85 which the operator may adjust the said link-director to receive and guide a coupling-link.

On the right in Fig. 1 the coupling-hook C and gravity-latch D are seen in their normal positions, and the link-director E is shown in 90 normal position on the left in Fig. 1. Now, when the draw-heads are approached to each other for coupling, the operator will, by means of the chain *p*, raise the link-director from its normal position to the position shown on the 95 right in Fig. 1. The free end of the coupling-link B will then come in contact with the inclined tongue of the said link-director and be lifted and guided, as indicated, until it strikes the upright curved end of the coupling-hook 100 C, as shown in Fig. 1. The lip of the opposing draw-head then coming in contact with

the inclined plane of the link-director throws the latter down into its normal position. The continued forward motion of the link B against the coupling-hook C causes the latter to turn 5 on its pivot to the position shown in Fig. 4, and in so doing the shank *a* of said hook turns up inside of the opening of the said link, and at the same time its beveled end, making contact with the under face of the latch D, raises 15 the latter, as indicated in dotted lines, Fig. 4, and passes rearward of it into a vertical position. Then the said latch falls of its own gravity in front of said coupling-hook shank and locks or holds the latter in coupling position, 15 as shown in Fig. 4.

If it be desired to uncouple, the operator, by means of the chain *k*, lifts the latch D to the position shown in dotted lines, Fig. 4,

and the coupling-hook is then free to turn to its normal uncoupling position at a pull on 20 the coupling-link.

Having thus described by invention, I claim as new and desire to secure by Letters Patent—

In a coupling device, substantially as herein shown and described, the combination, with 25 a draw-head, of coupling-hook C, gravity-latch D, and link-director E, all arranged and operating as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, in the presence of 30 two witnesses, this 16th day of December, 1886.

PATRICK F. DUROSS.

Witnesses:

JACOB J. STORER,

HERBERT VALENTINE.