

(No Model.)

D. W. HICKMAN.

CAR COUPLING.

No. 360,880.

Patented Apr. 12, 1887.

FIG. 1.

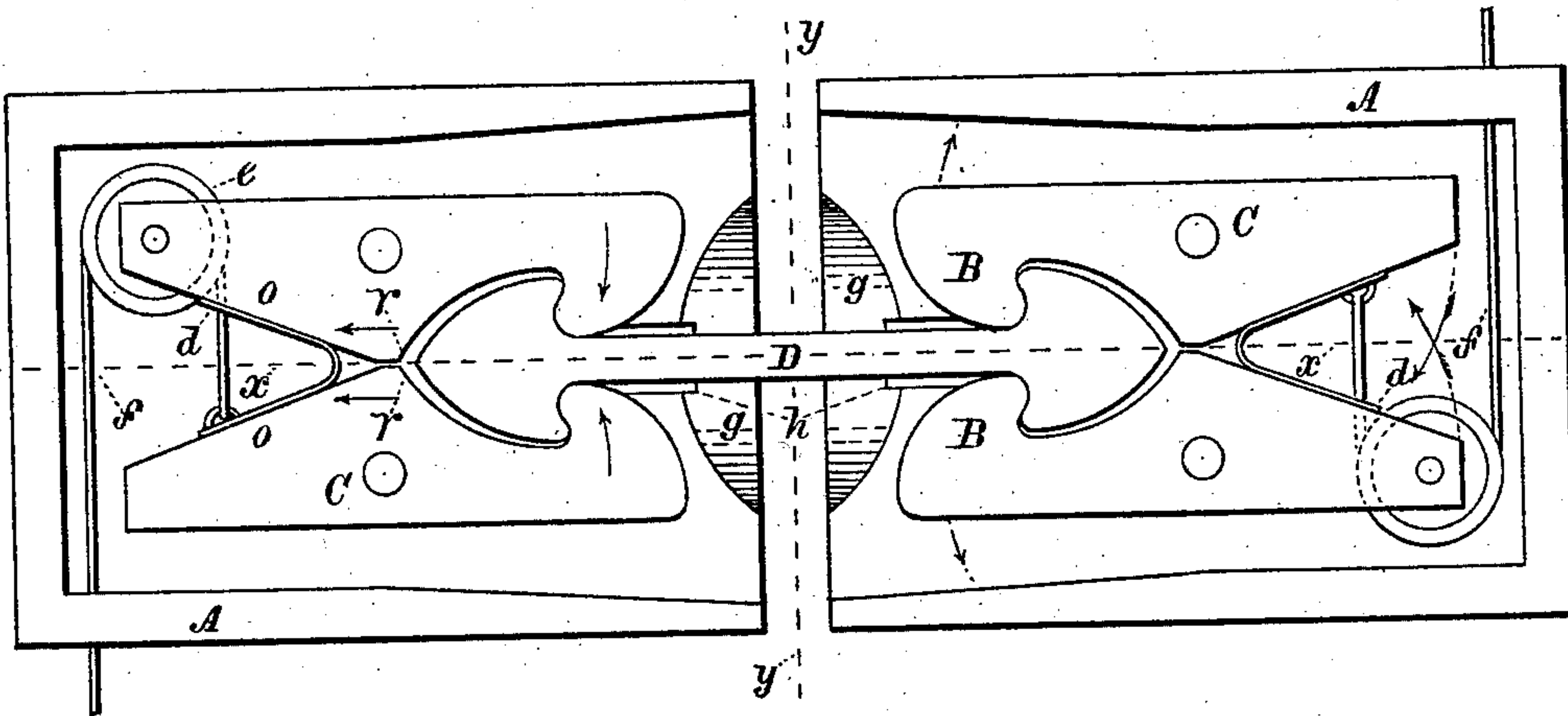


FIG. 2.

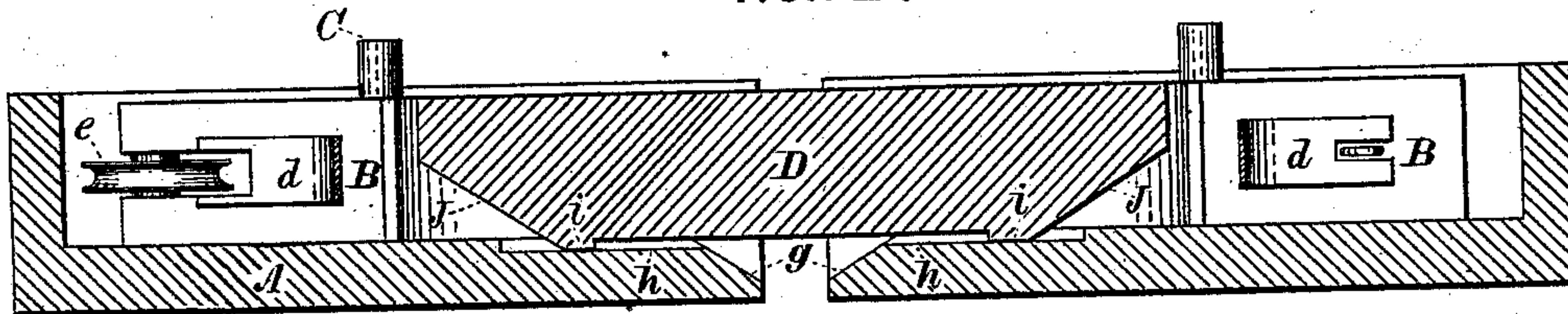
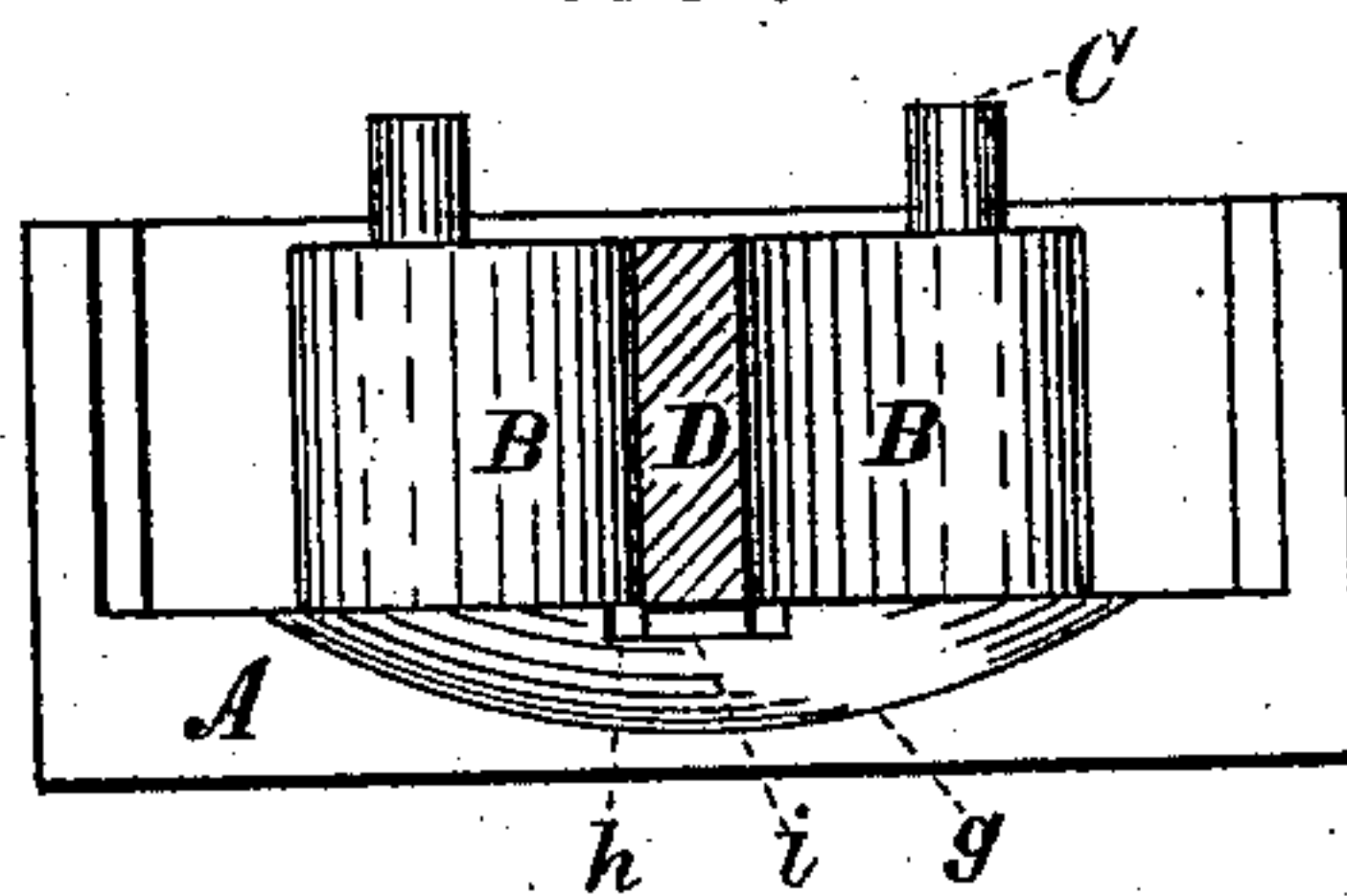


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

DANIEL W. HICKMAN, OF JERSEYVILLE, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 360,880, dated April 12, 1887.

Application filed December 20, 1886. Serial No. 222,110. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. HICKMAN, of Jerseyville, in the county of Jersey and State of Illinois, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement in car-couplings of that type consisting, essentially, of a coupling-bar barbed at both ends and adapted to engage with movable jaws secured in the interior of the draw-heads, said movable jaws being provided with barbs adapted to engage with the barbs upon the ends of the coupling-bar.

The object of my invention is to provide a coupling consisting of very few parts, adapted to couple automatically, and uncouple by hand from the side of the car.

With these ends in view my invention consists in certain details of construction and combinations of parts, fully described in the following specification, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my coupling, and Fig. 2 is a side elevational view of the same, taken in the line *x x*, Fig. 1, showing the draw-heads and coupling-bar in section. Fig. 3 is an end elevation of one of the draw-heads and movable jaws, showing the coupling-bar in transverse section, taken on the line *y y*, Fig. 1.

In the drawings, A A represent the draw-heads, which may be secured to the under side of the car by the usual or any other suitable means.

B B represent movable barbed jaws, adapted to vibrate in a horizontal plane, and pivotally secured upon studs C C', the upper ends of which are designed to project into the frame of the car, the barbs upon said movable jaws being so constructed as to engage with similar barbs upon the coupling-bar D. Between the parts *o o* of the movable jaws is a bent spring, *d*, held in position by dowels or other convenient means.

Near the rear extremity of the jaw B, in each of the draw-heads, is journaled, upon a pin secured in said jaw, a sheave, around which passes a cord or chain, *f*, the fixed end of which

is secured to an eye in the rear arm of the opposite jaw, as shown in the drawings, and the free end passes through the side of the draw-head, and thence to the outside of the car.

By reference to the drawings it will be observed that the end of each draw-head where the coupling-bar enters is flared, as shown at *g*, that said flared part leads into a narrow channel, *h*, somewhat wider than the breadth of the main length or middle part of the coupling-bar, which is provided on its under side with a projection, *i*, at each end, said projection having the same breadth as the main length of the coupling-bar, as shown in Fig. 3. It will be further observed that the coupling-bar is beveled upward at each end, as shown at J, Fig. 2, and is of such length that when the two draw-heads approach each other the two ends of said coupling-bar will impinge upon the movable jaws at the points *r r*, &c., for the purpose hereinafter explained.

The several parts of my device being constructed and combined as above described, its operation is as follows: As the cars to be coupled approach near together the point of the coupling-bar enters the flared opening *g* in the opposite draw-head, and is thereby conducted to the movable jaws, the barbed ends of which, being brought together by the action of the spring *d*, form a re-entrant angle, into which the barbed head of the coupling-bar is thrust with such force as to separate them and admit the head of said bar, after which they instantly close upon the shank thereof by the reaction of the spring *d*, as shown in Fig. 1; but to insure the necessary action of the jaws B should the spring by any accident fail, the head of the coupling-bar will, by impinging upon the points *r* of the movable jaws, as indicated by arrows, close them behind the head of the coupling-bar, in which position they are securely retained by the draft, which, owing to the inclination of the barbs, tends to draw the jaws together. The uncoupling is effected by a sharp pull upon the cord or chain *f* from the side of the lower part of the car through which the cord or chain projects, thus opening the jaws, as indicated by dotted lines in the drawings.

It will be noticed that the projection *i*, sliding in the longitudinal channel *h*, prevents

the possibility while disconnecting the cars of drawing the coupling-bar aside, and hence insures its release from both jaws simultaneously as they are drawn aside.

5 If so preferred, both jaws in each draw-head may be provided with sheaves, so that the uncoupling may be effected from either side of the car.

10 I am aware that a barbed coupling-bar is not new. I am also aware that movable jaws provided with barbs adapted to engage with similar barbs upon the coupling-bar are not new, and therefore I do not broadly claim such.

15 What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In a car-coupling having movable jaws adapted to vibrate horizontally and contained wholly within the draw-head, the combination, with either or both of said jaws, of a
20 sheave journaled in the rear end thereof, carrying a chain or cord, of which one end is secured to the extremity of the opposite jaw and

the other passed around the sheave and through the side of the draw-head to the outside of the car, as set forth. 25

2. In a car-coupling consisting, essentially, of barbed movable jaws pivotally secured in the draw-head so as to engage with the barbed ends of the coupling-bar, the projections depending from the lower edge of said coupling-bar, and the channels $\frac{1}{2}$ in the draw-head, said features constructed and adapted to each other for co-operative effect, substantially as set forth. 30

In testimony that I claim the foregoing I
35 have hereunto set my hand this 28th day of October, 1886.

DANIEL W. ^{his} ~~X~~ HICKMAN.
mark.

Witnesses:

JOEL E. CORY,

F. J. SCHATTGEN.