

(No Model.)

C. S. MONROE & C. E. YEAGER.  
CAR COUPLING.

No. 419,341.

Patented Jan. 14, 1890.

Fig 1

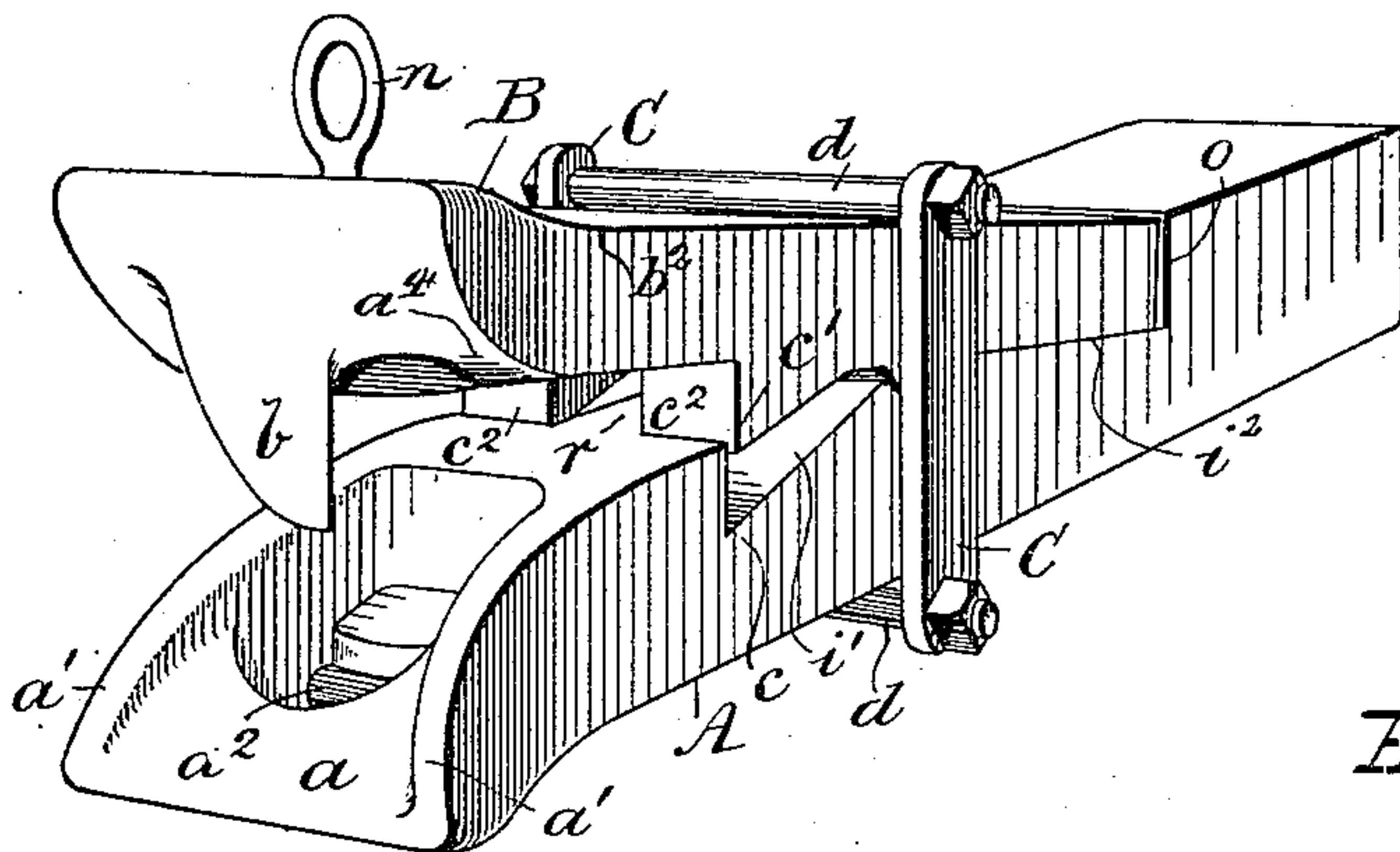


Fig 4

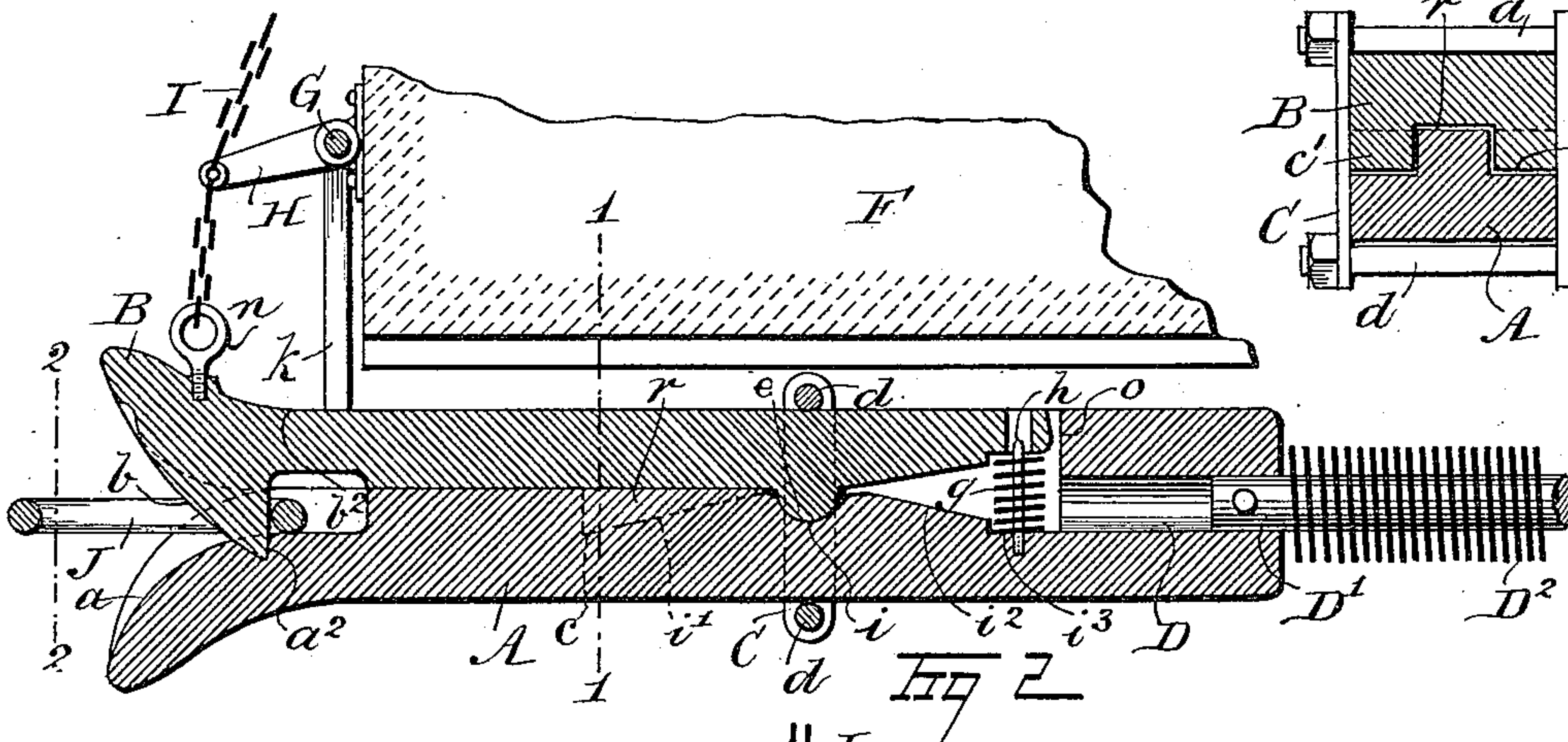
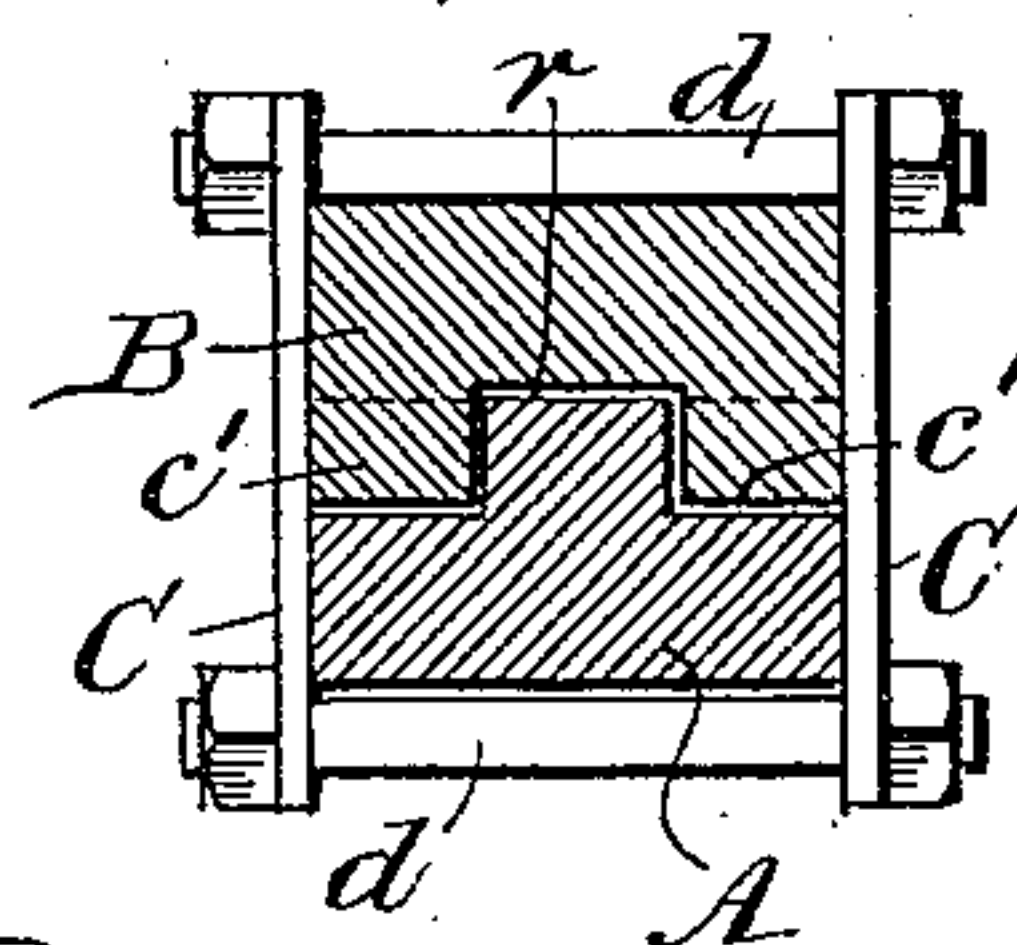


Fig 2

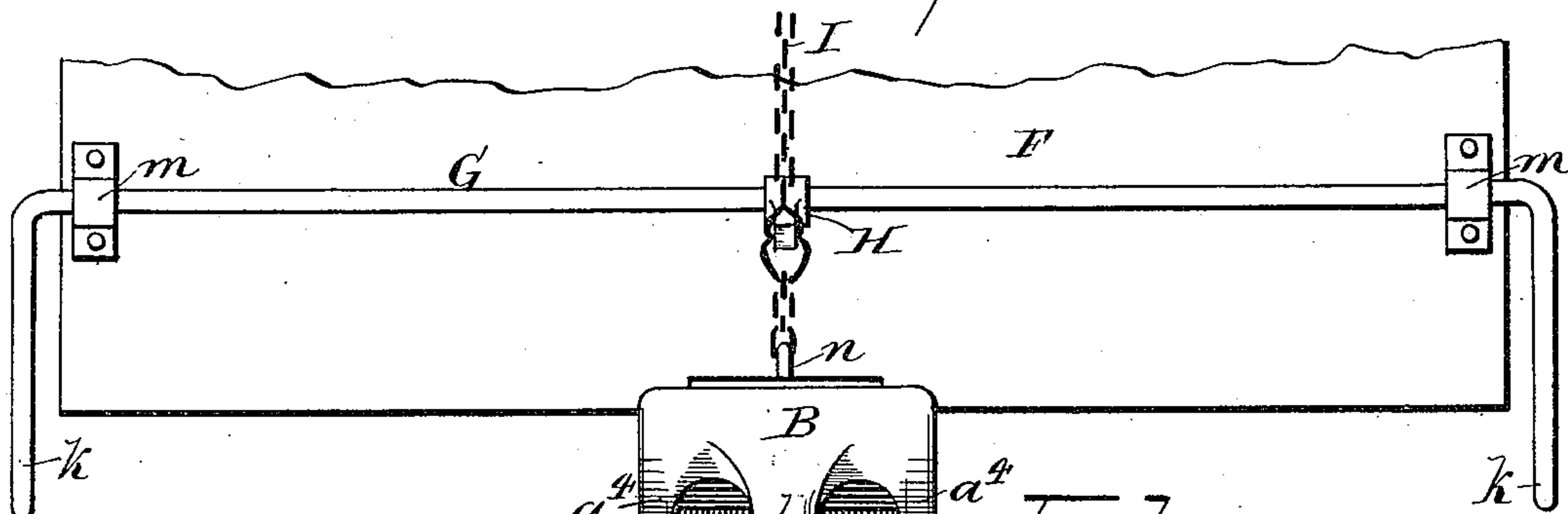


Fig 3

WITNESSES:

H. Walker  
C. Sedgwick

INVENTOR:

C. S. Monroe  
C. E. Yeager  
Munn & Co

BY

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

CHARLES S. MONROE AND CLINTON E. YEAGER, OF KINZIE, INDIANA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 419,341, dated January 14, 1890.

Application filed October 11, 1889. Serial No. 326,681. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES S. MONROE and CLINTON E. YEAGER, of Kinzie, in the county of Kosciusko and State of Indiana, have invented a new and useful Improved Car-Coupling, of which the following is a full, clear, and exact description.

The object of our invention is to produce a simple, practical, durable, and efficient car-coupling which will couple cars of different heights from bumper to track automatically and permit the detachment of coupled cars from the roof or sides of the cars, as may be desired.

With these objects in view our invention consists in certain features of construction and combination of parts, which will be hereinafter described, and indicated in the claims.

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 perspective view of the coupling removed from a car. Fig. 2 is a longitudinal sectional elevation of the coupling in position on the front portion of a car-frame. Fig. 3 is a front elevation of the coupling and its operating mechanism in place on the car body or frame, the link being in section taken on the line 2 2 in Fig. 2; and Fig. 4 is a transverse sectional view of the coupling detached, taken on the line 1 1 in Fig. 2.

A represents the main section of the draw-head or coupling-body. This is cast from metal into form, and consists, essentially, of an elongated bar having the larger portion parallel on the sides and level on the bottom face. Near the front end of the section A it is curved downwardly on the upper surface and flared outwardly on each side to widen the throat *a*, formed by recessing said end, the bottom wall of which throat is inclined upwardly from the front edge to insure easy entrance for a coupling-link J. The construction just described permits necessary lateral motion to the link when connected cars are running on curves of the railroad. At a suitable point *i* the top surface of the section A is transversely grooved, a curved seat being thus formed across the face to receive and retain from longitudinal displacement a coupling-

jaw B, as will be hereinafter explained. From the seat *i* extend the opposite inclines *i'* *i''*, the forward slope *i'* terminating at the vertical shoulder *c* and the rear slope at *o*, where a seat *i'''* is formed for a spiral spring *g* and its guide-rod *h*, which is seated in the seat *i'''* and extends through a hole in the jaw. The forward slope *i'* is divided by a central tongue *r*.

The coupling-jaw B, previously mentioned, consists of an essentially rectangular casting conforming laterally to the width of the section A, and is provided with a rounded transverse rib *e*, adapted to the seat *i* and forward of said rib with two triangular lugs *c'*, fitting into the triangular recesses formed on the incline *i'* by the tongue *r*. From the terminal shoulder *c'* of the lugs *c'* the coupling-jaw B has its top and bottom faces straight and parallel to a point *b'*, and thence to the front terminal the jaw is given an upward curve, which corresponds to the downward curvature of the section A in general form, with exception that the side flanges *a'* are not as deep as are the side flanges *a'* on the section A. An integral draft-hook *b* is formed on the front end of the coupling-jaw B, and a notch *a''* is produced in the opposite floor of the throat *a* of the section A, thus supporting the nose or terminal of the draft-hook when the parts are in closed adjustment and in service. This position of the draw-head members is shown in Fig. 2, with a link J coupled to the same. The tongue-and-groove connection of the jaw and main section of the draw-head retains these parts from lateral displacement, and to hold them together while vibration of the jaw on the seat *i* is permitted a clamp composed of the plates C and bolts *d* is adjusted thereon to align with the fulcrum-point or rocking bearing *i*. This clamp further secures the parts together laterally as well as vertically. The resilience of the spring *g* will normally retain the jaw and section A in closed adjustment and yield to allow a longitudinal thrusting movement of the coupling-link J to raise the jaw and interlock the link with the draft-hook *b*.

A longitudinal perforation D is axially produced in the body of the section A at its rear end for the reception of a draft-rod D', a cushioning-spring D<sup>2</sup> being placed on the same to



sustain shocks received by the draw-head on its front end, the draw-head being attached in the usual way to the car-frame timbers.

Across the end of the car, at suitable points  
5 above the dead-wood or transverse frame-timber thereof, a rock-shaft G is revolvably supported in bracket-boxes *m*, that are affixed to the car-body, as shown in Fig. 3. Said shaft G is provided with crank-arms *k*,  
10 whereby it may be rocked at either side of the car, and at a central point on the shaft a rock-arm H is secured or formed, to which is attached a chain I, that is also extended downwardly to connect its lower terminal with a  
15 ring *n*, secured in the outer end of the jaw B. The chain I is prolonged and vertically extended to the roof of the car, (not shown,) and is there secured in any manner to be convenient for use when the jaw B is to be elevated  
20 and the coupling-link J disconnected therefrom by such a movement.

This coupling may be used on cars having bumpers of varying heights from the track and will readily couple with ordinary link-and-  
25 pin couplings. It is claimed to be efficient in operation and not expensive to manufacture.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

30 1. In a car-coupling, the combination, with a draw-head main section having a flaring throat with a notch in its floor, of a coupling-jaw that is seated to rock on the main section and provided with a hook which engages  
35 the recess or notch in the main-section throat, a securing-clamp that holds these parts to-

gether, and a spring placed between their rear ends to close the forward ends, substantially as shown and described.

2. In a car-coupling, a draw-head formed 40 of a main or lower section having its end recessed to form a flaring throat provided with a notch in its inclined bottom, and an upper section forming a coupling-jaw mounted to rock on the lower section and provided with 45 a hook on its outer end adapted to enter the notch of the bottom of the main section and hold the coupling-link in the said main section, substantially as herein shown and described. 50

3. In a car-coupling, the combination, with a draw-head main section having a notch in the floor of its throat and provided with a transverse recess, as *i*, of a coupling-jaw provided with a hook at its forward end and with 55 a transverse rib, as *e*, substantially as shown and described.

4. In a car-coupling, the combination, with a draw-head main section having a notch in the floor of its throat, a transverse recess, and 60 inclines oppositely extending from said rib, of a coupling-jaw having a transverse rib and triangular lugs forward of said rib, a spring interposed between the rear end of the jaw and the main section, and the clamp C, sub- 65 stantially as shown and described.

CHARLES S. MONROE.  
CLINTON E. YEAGER.

Witnesses:

RAYMOND WILLIAMS,  
CLOE HOWER.