

(No Model.)

F. W. PARSONS.

CAR COUPLING.

No. 385,000.

Patented June 26, 1888.

Fig. 1.

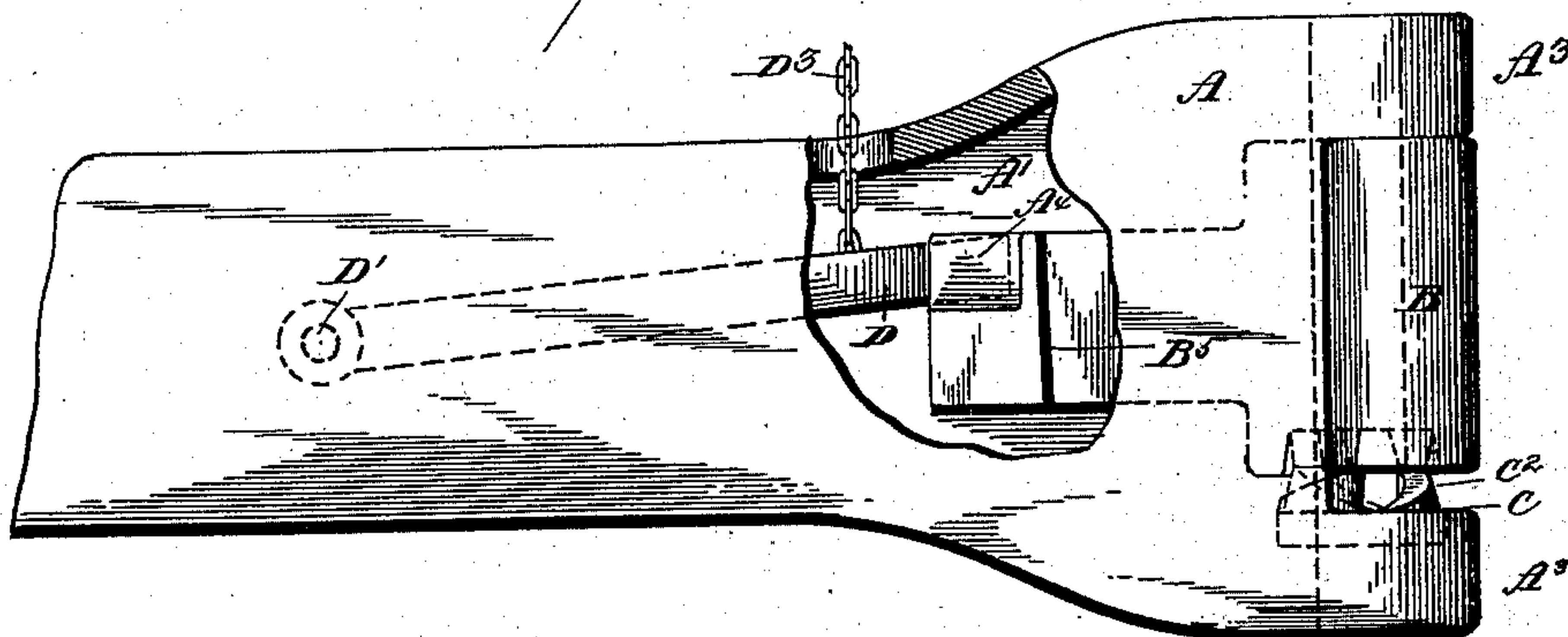


Fig. 2.

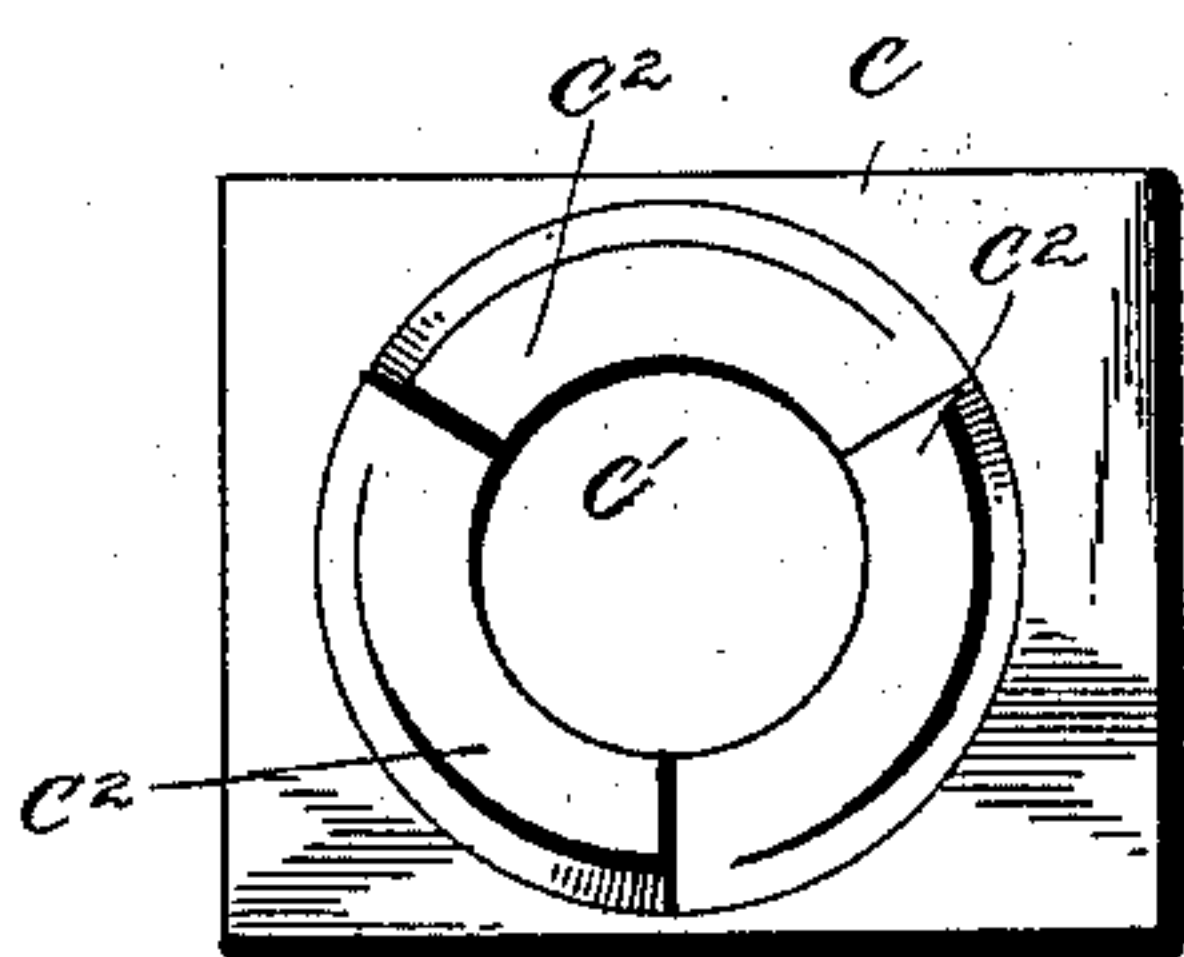
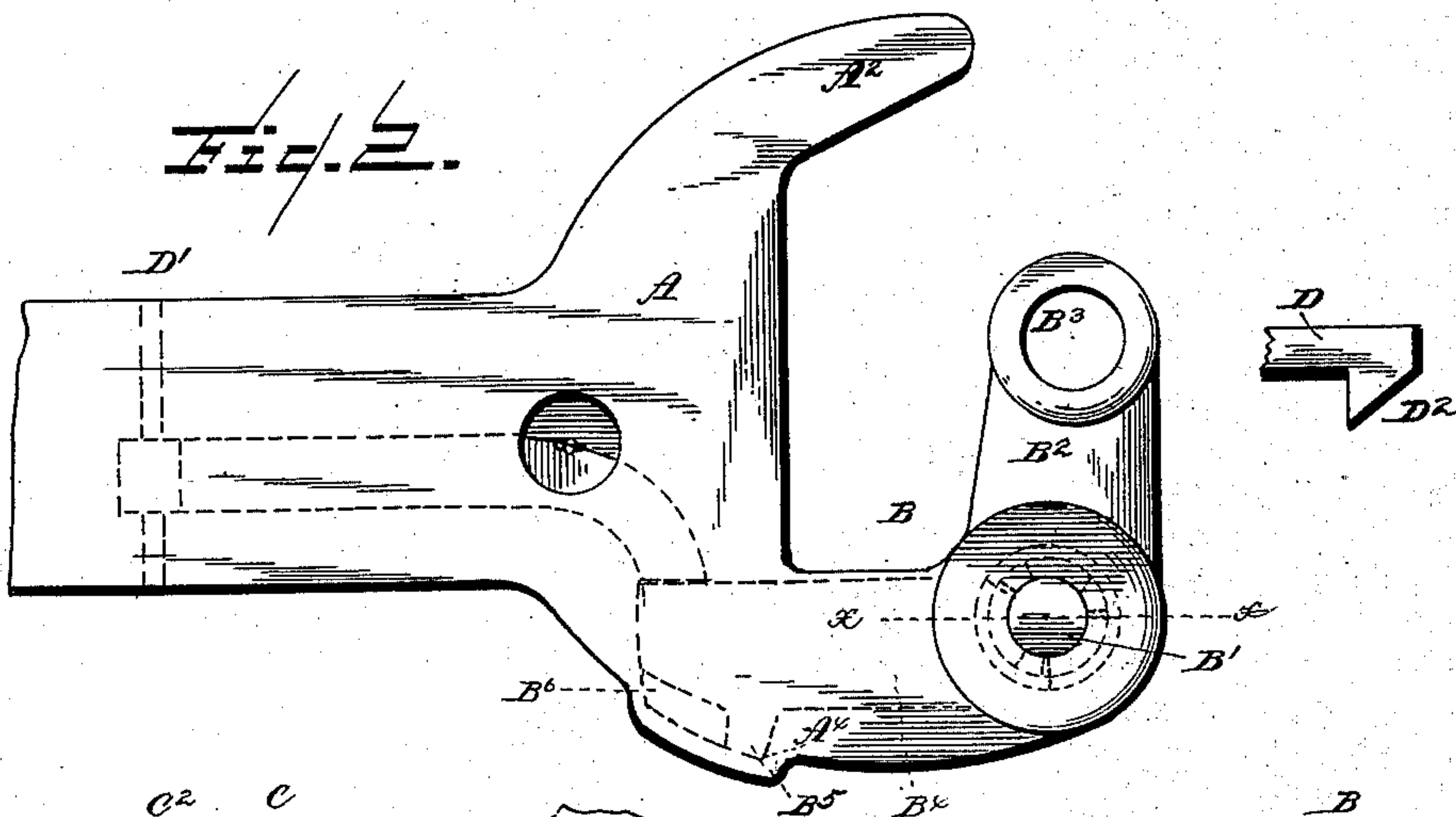


Fig. 3.

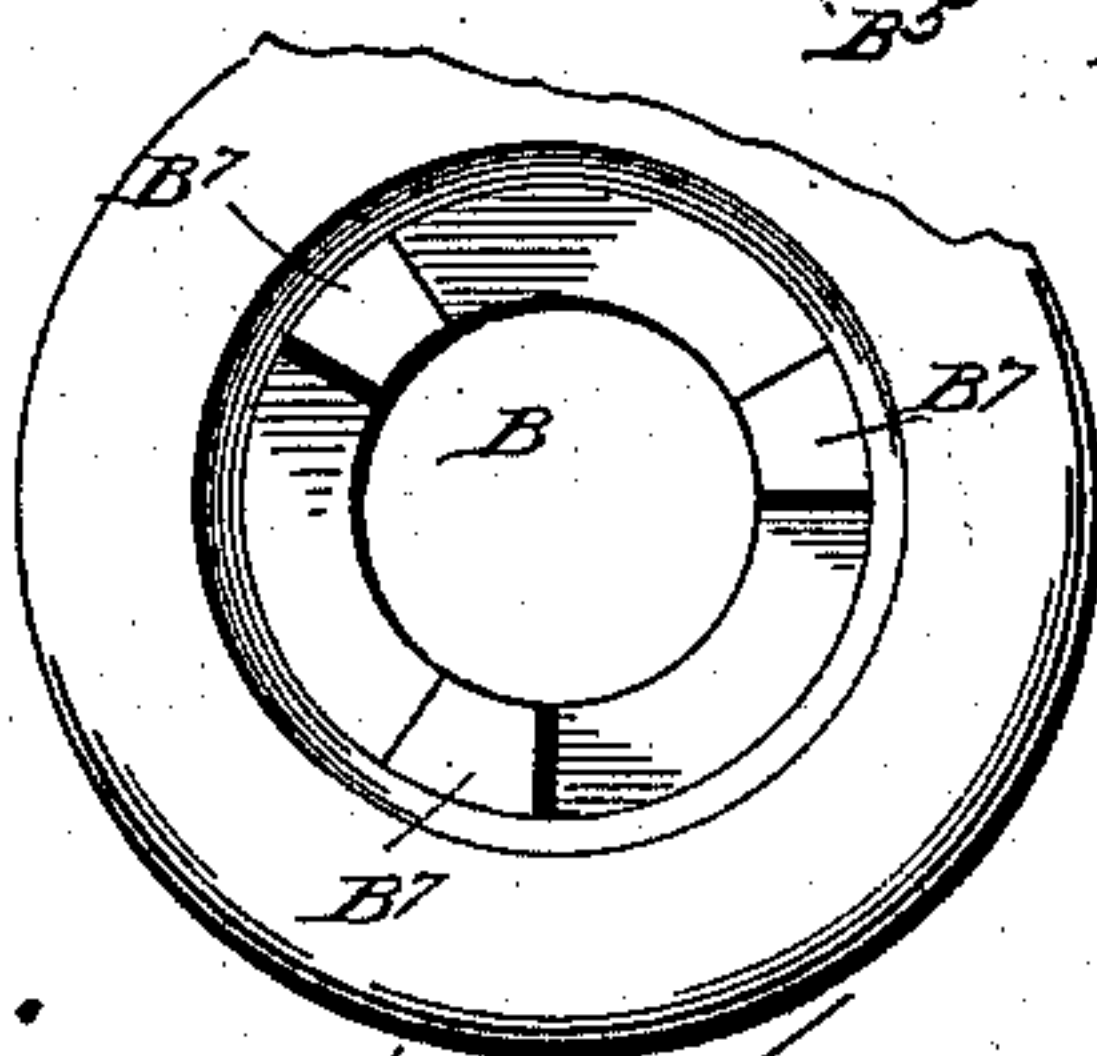


Fig. 4.

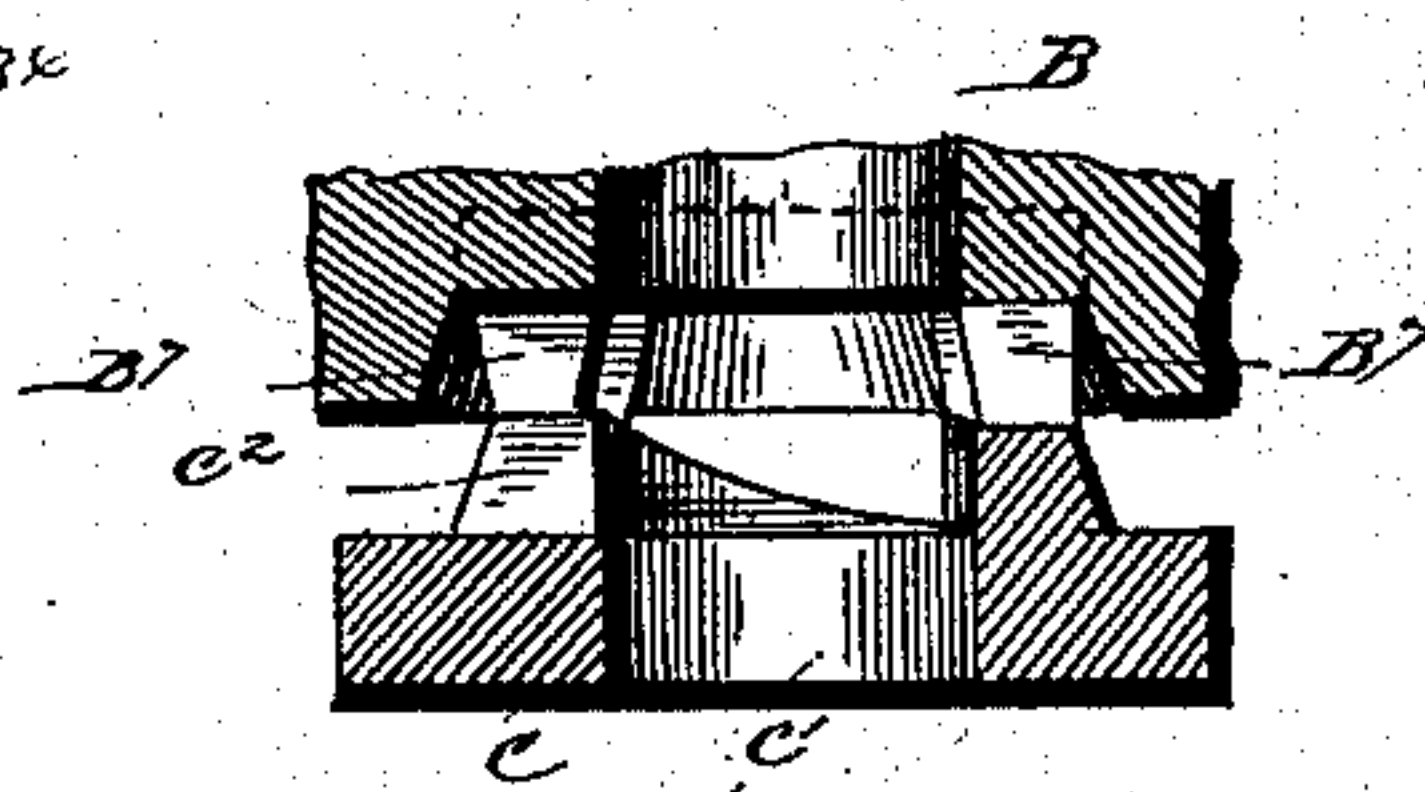


Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

FRANCIS W. PARSONS, OF PHILADELPHIA, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 385,000, dated June 26, 1888.

Application filed January 19, 1888. Serial No. 261,293. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS W. PARSONS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to that class of car-couplers commonly known as "twin-jaw;" and among the objects in view are to provide a coupler of the class described consisting of as few parts as possible, which parts may be cheaply and conveniently cast, which shall be automatic and positive in its operation of coupling and uncoupling, and which shall be adapted for coupling with an ordinary companion link-and-pin coupling and with what is known as the "Janney" coupler or other couplers of this class.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation, with parts in section, of a coupler constructed in accordance with my invention, the coupling-jaw being shown in a locked position. Fig. 2 is a plan; Fig. 3, a plan of the lower bearing of the pivoted coupling-jaw; Fig. 4, a plan of the lower end of the coupling-jaw; Fig. 5, a section on the line $x x$ of Fig. 2.

Like letters of reference indicate like parts in all the figures.

A represents the draw-head, which is formed with the usual coupling chamber, A' , the fixed projecting arm A^2 at one side, and the vertically-opposite arms or lugs A^3 at the opposite side, which lugs are centrally perforated for the passage therethrough of the bolt B' , upon which is swiveled the pivotal and swinging coupling-jaw B, which is likewise perforated for the reception of said bolt.

The jaw B is of an L shape, and consists of the forward arm, B^2 , perforated, as at B^3 , for the reception of an ordinary link and pin, and the rear arm, B^4 , having the shoulder B^5 , adapted to take into a corresponding recess, A^4 , formed in the draw-head, and with a cut-away or chamfered portion, B^6 , at its end.

The lower one of the lugs A^3 is formed with a recess in its upper face, in which is seated a correspondingly-shaped plate, C, centrally perforated, as at C' , for the passage therethrough of the pin B' , and provided with a series of concentric inclined ways, C^2 , in this instance three in number.

The pivotal jaw B is of a width less than the space between the two lugs or ears A^3 of the draw-head, to which it is pivoted, and, as clearly shown in Figs. 1, 4, and 5, is formed with a series of depending lugs, B^7 , corresponding in number with the inclined concentric ways C^2 of the plate C, the lugs and inclined ways being placed in such relative position and so proportioned that when the pivotal jaw is in a locked position the lugs B^7 thereof will be resting upon the ways at or about their highest point.

The means which I employ for automatically locking the jaw in position are both simple and effective, and in this instance they consist of a gravity latch or lever, D, which is pivoted at its rear end to a shaft, D' , passing through the draw-head and curved at its front end to one side and in the path of the arm B^4 of the pivotal jaw B. The gravity-lever D is formed with a depending chamfered lug, D^2 , against which the chamfered portion B^6 of the arm B^4 comes, and over which the chamfered portion of the lug D^2 rides when said jaw is being swung to the rear for coupling.

If desired, the lugs B^7 may be formed upon a plate and set in a recess formed in the jaw B, as indicated by dotted lines in Fig. 5, which plate, like the plate C, may be replaced by new ones when occasion may require or by reason of wear.

The operation of my invention will be apparent from the foregoing description, and may be briefly stated as follows: The pivotal jaw of an approaching draw-head first comes in contact with the arm B^4 , which is transversely across the mouth of the draw-head, in the usual manner, and forces the same to swing to the rear until the chamfered portion B^6 comes in contact with the lug D^2 on the gravity-lever D, when said lever is caused to ride over the arm B^4 , which continues on its passage until the shoulder B^5 takes into the recess A^4 of said draw-head, by which time the gravity-lever D will have passed entirely over the arm B^4 and

retain the same in a locked position, said arm resting against the vertical face of the lug D². When in this position, the two heads will be coupled. It will be noticed that as the jaw B swings to the rear it will, by reason of the inclined concentric ways C², be carried upwardly. Now, to uncouple the heads, any desired means may be employed; but in this instance I have shown a chain, D³, which may lead to the platform or other portion of the car, and extends through an opening formed for that purpose in the top of the draw-head. By lifting upon this chain the gravity-lever D is elevated until its lug D² is withdrawn from in front of the arm D¹, when, by reason of the inclined ways C² and the lugs B¹, said lugs will be caused to ride down said inclined ways, and thus the weight of the pivotal lever serves to automatically uncouple itself with the jaw of a companion coupler.

Having described my invention and its operation, what I claim is—

1. In a car-coupler of the class described, the combination of a pivotal jaw with an inclined concentric removable bearing plate for said jaw, substantially as specified.

2. In a car-coupler of the class described, a draw-head having a pivotal jaw, in combination with a removable bearing plate for said jaw, comprising inclined concentric ways, substantially as specified.

3. In a car-coupler of the class described, a draw-head having a pivotal jaw having inclined lugs, in combination with a bearing plate set in a recess in said head and formed with a series of inclined concentric ways for said lugs, substantially as specified.

4. In a car-coupler of the class described, the combination of a pivotal jaw having lugs, and a bearing for said jaw comprising inclined concentric ways, with a gravity-lever pivoted to swing vertically in rear of said jaw and adapted to lock the same, substantially as specified.

5. The head A, having recess A¹, the jaw B, formed with the cut-away portion B⁶, and lug B⁵, in combination with the gravity-lever D, pivoted, as at D', and having the chamfered lug D², substantially as specified.

6. The combination of the head A, having the lugs A³, the plate C, seated therein and having the perforations C', and inclined ways C², in combination with the jaw B, the bolt B', and the lugs B¹, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

FRANCIS W. PARSONS.

Witnesses:

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W. S. DUVALL.