

(No Model.)

J. R. HARE.  
CAR COUPLING.

No. 577,298.

Patented Feb. 16, 1897.

Fig 1.

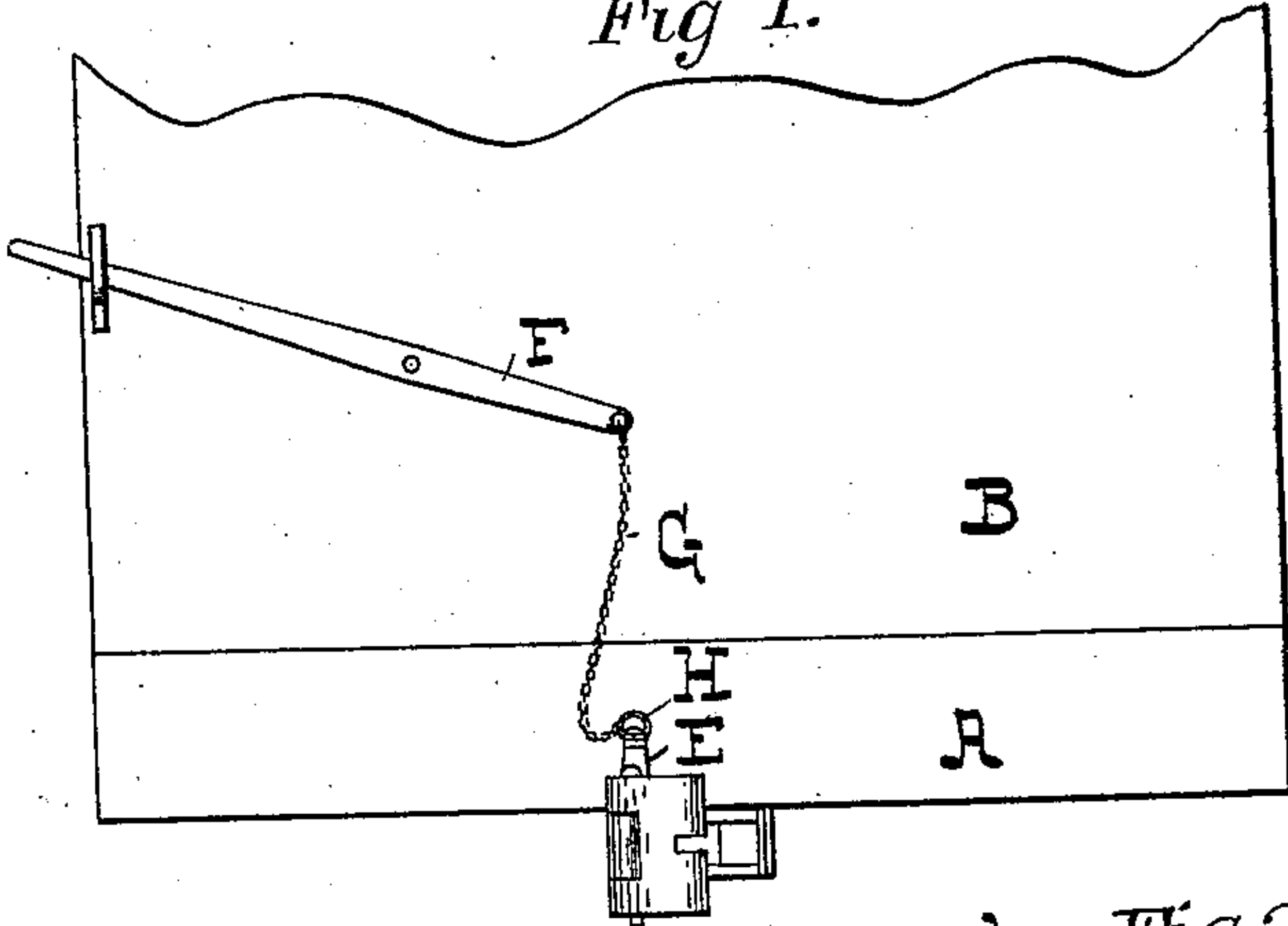


Fig 2.

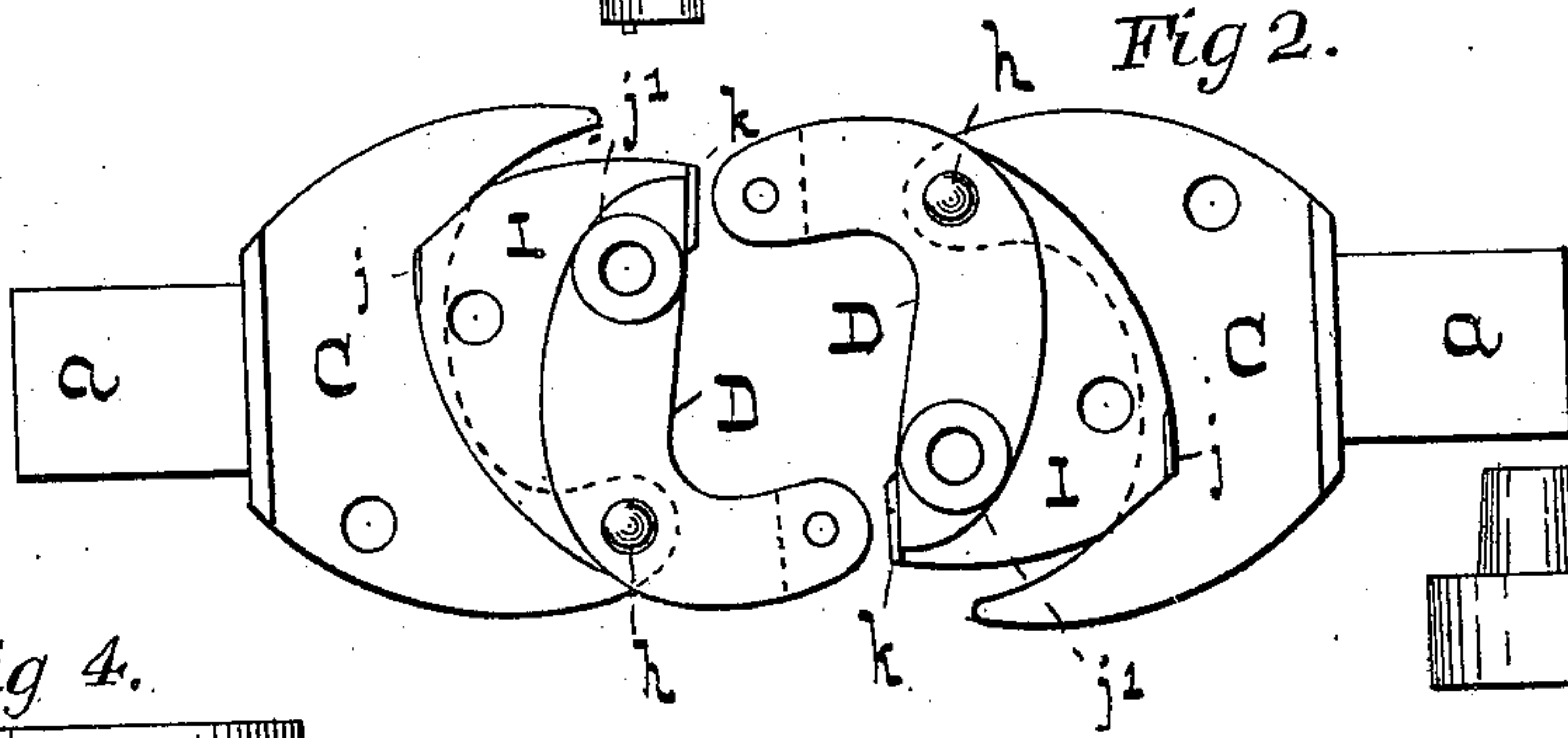


Fig 4.

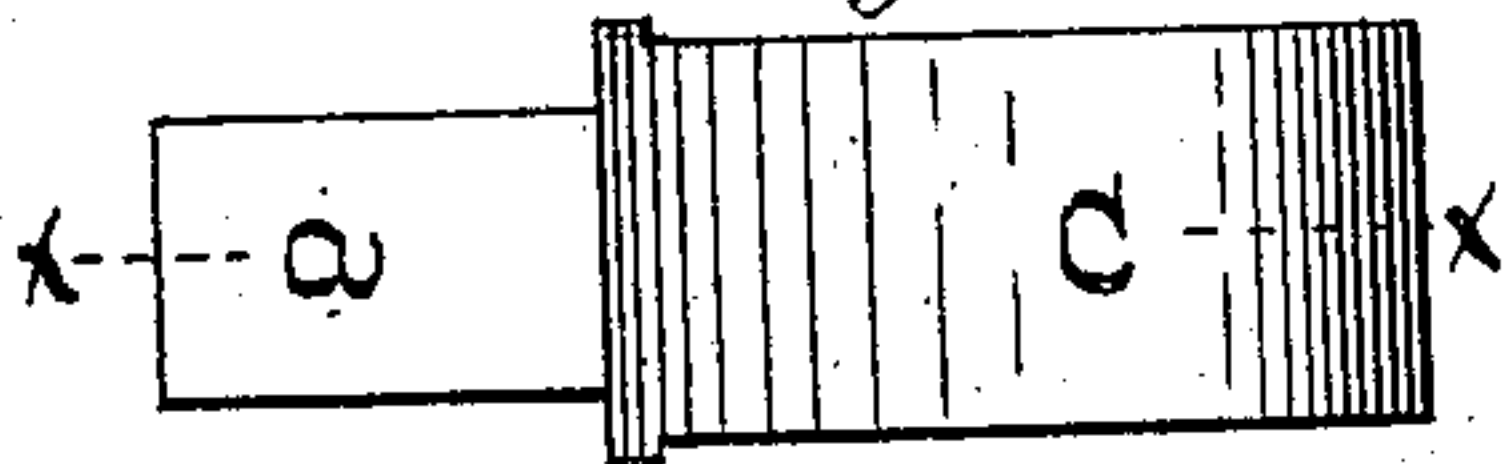


Fig 3.

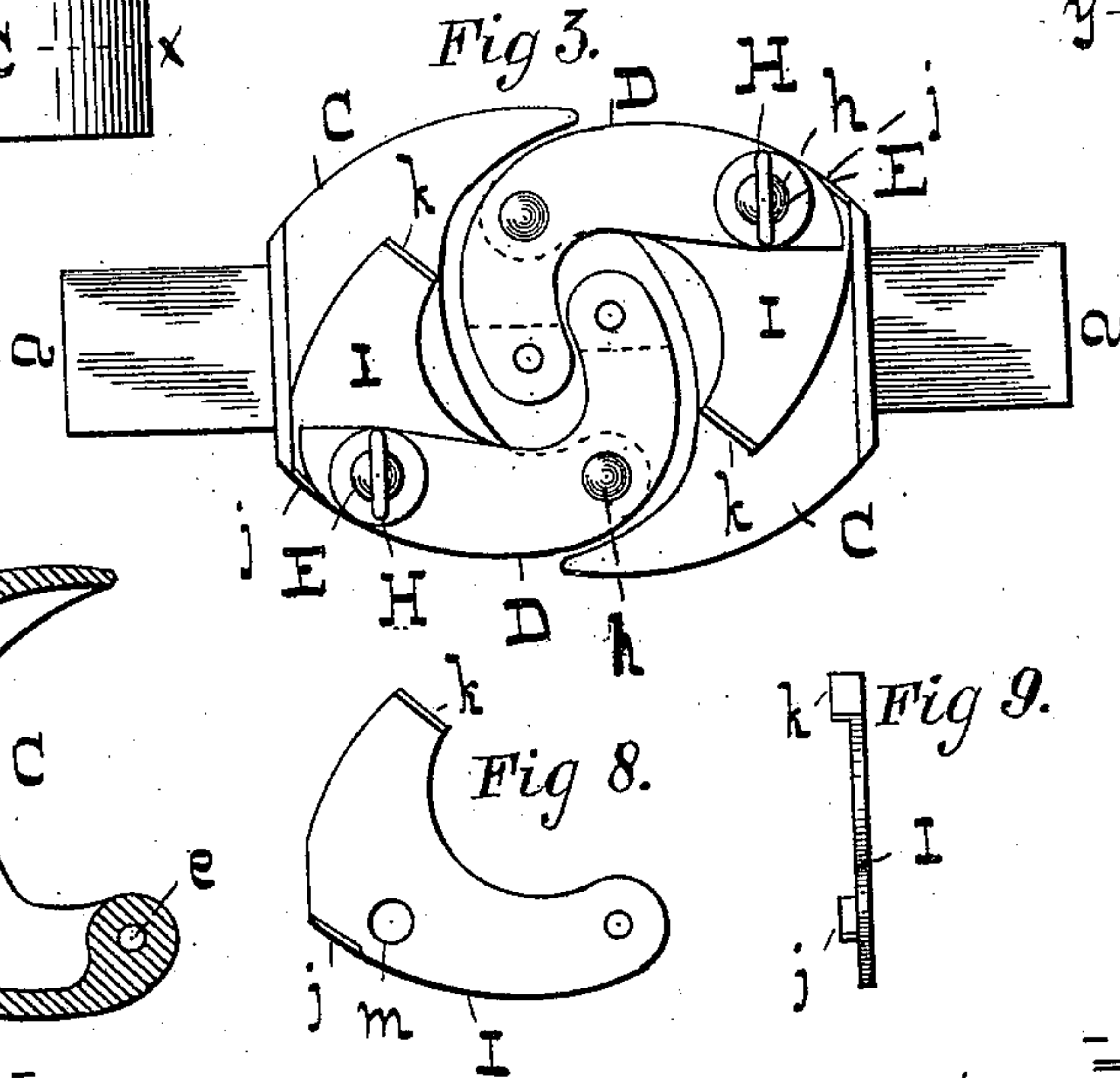


Fig 6.

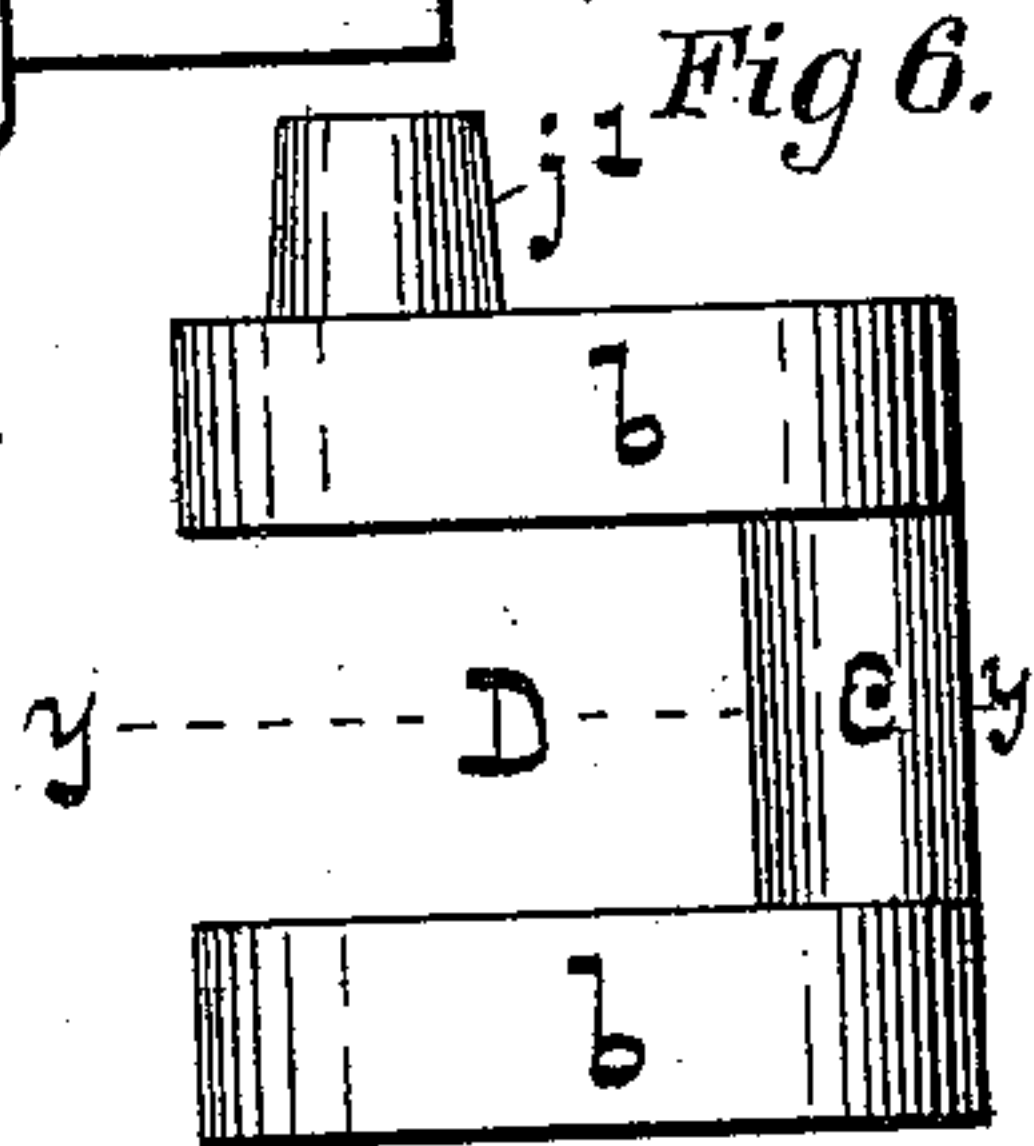


Fig 5.

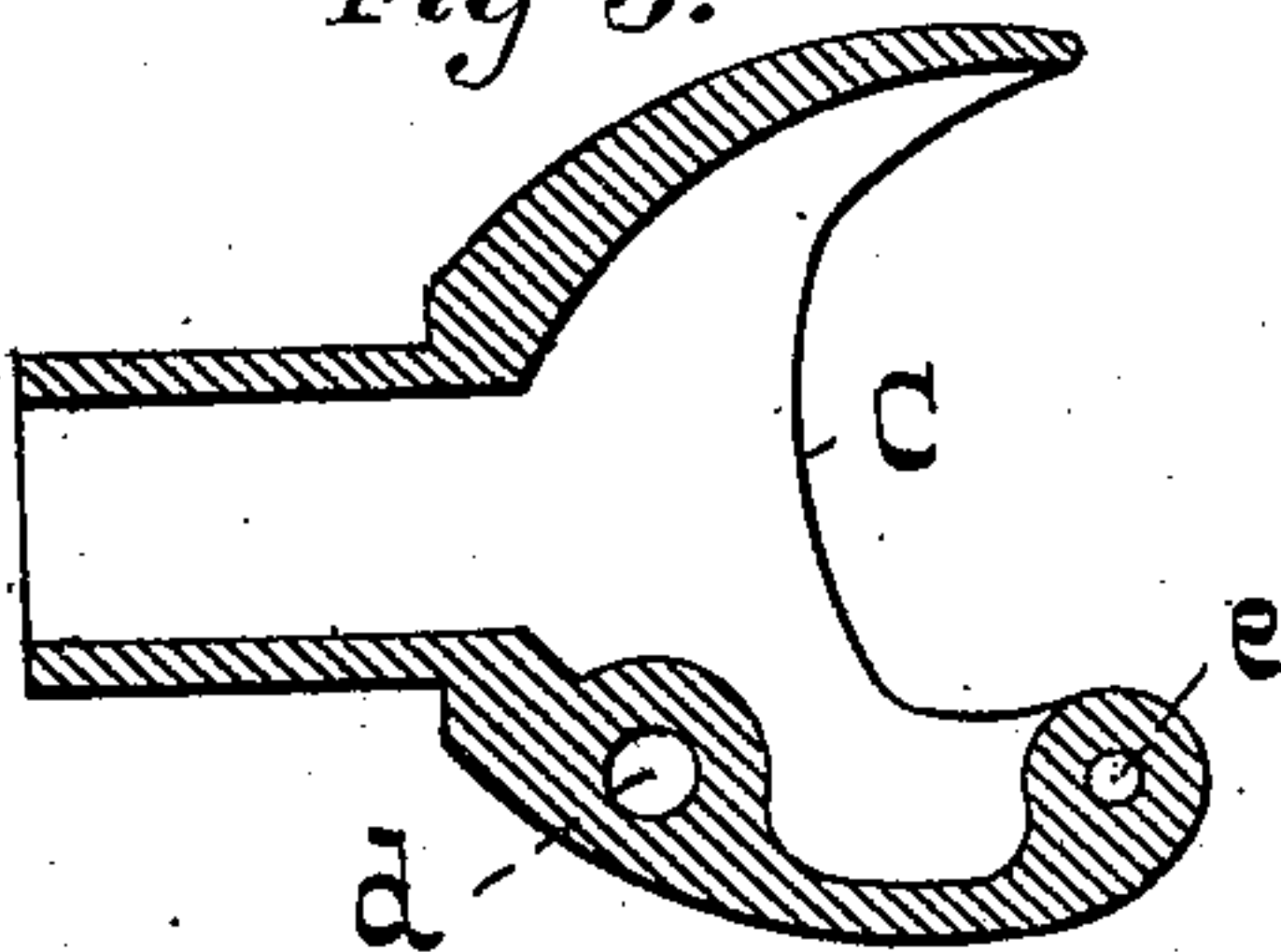


Fig 8.

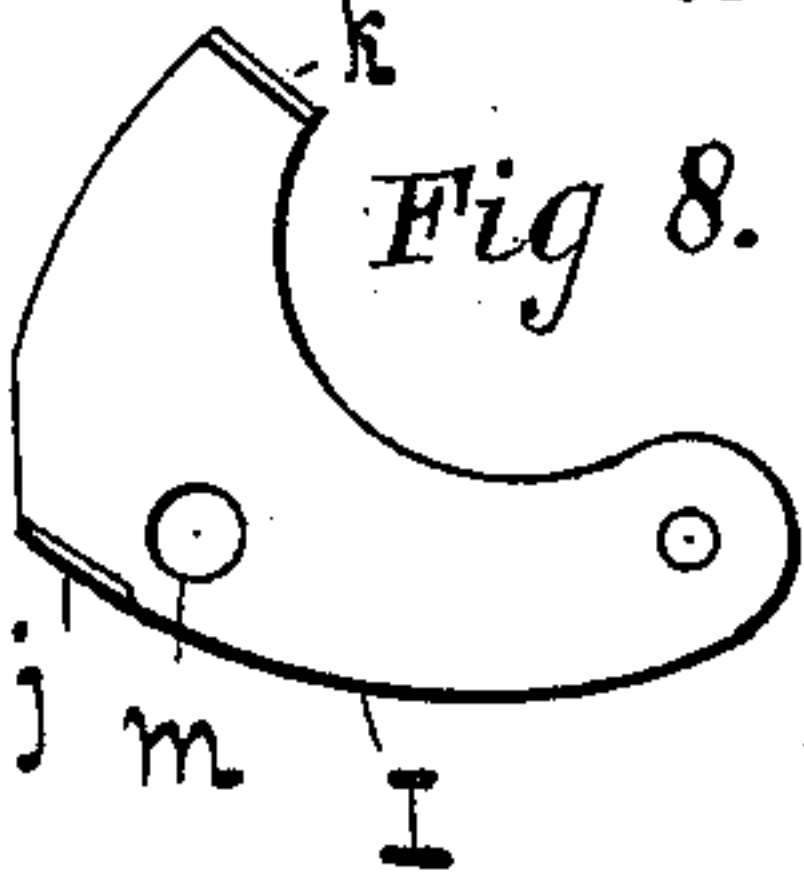
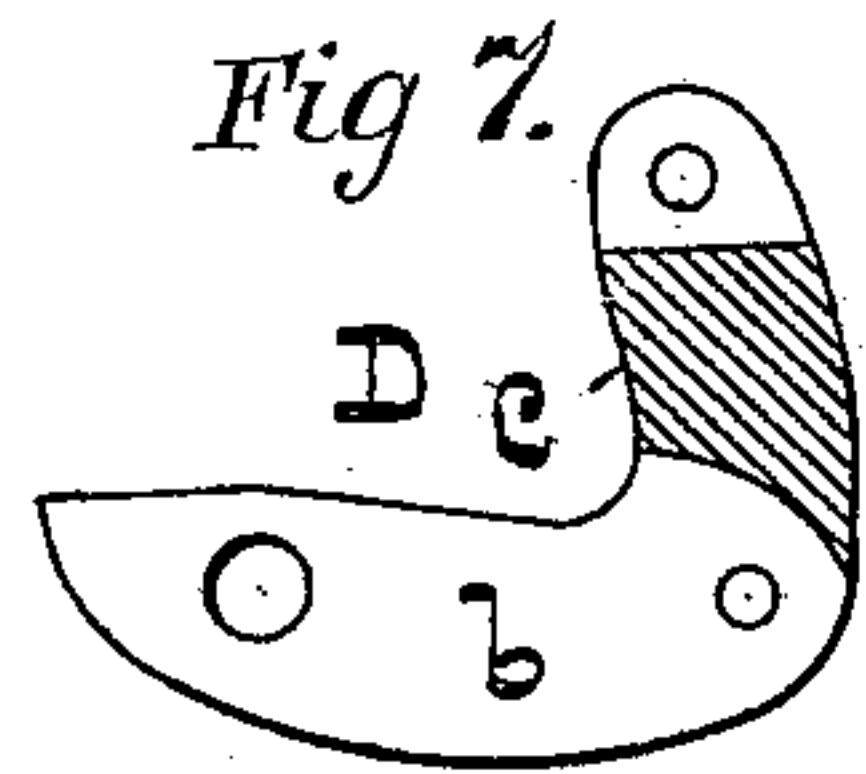


Fig 9.



Fig 7.



-WITNESSES-

Dan'l Fisher  
Harry Constantine

-INVENTOR-

John R. Hare,  
by W. H. J. Howard,  
att.

# UNITED STATES PATENT OFFICE.

JOHN R. HARE, OF BALTIMORE, MARYLAND.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 577,298, dated February 16, 1897.

Application filed November 19, 1896. Serial No. 612,721. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN R. HARE, of the city of Baltimore and State of Maryland, have invented certain Improvements in Car-  
5 Couplers, of which the following is a specification.

This invention relates to certain improvements in that class of car-couplers in which are employed jaws which move in a horizontal direction and interlock in the coupling operation, as will hereinafter fully appear.

In the description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof,  
15 and in which—

Figure 1 is a view, on a small scale, of one end of a car to which the improved coupler is applied. Fig. 2 is a top view of the two members of the coupler as they appear when  
20 brought together and immediately before they are locked. Fig. 3 is a view similar to Fig. 2 except that the two members of the coupler are shown as locked and the coupling operation completed. Figs. 4 to 9, inclusive,  
25 are details of the coupler, as hereinafter described.

Referring now to the drawings, A (shown only in Fig. 1) is the platform of a car, and B the body.

30 C C are the coupler-heads, having the sockets *a*, adapted, as is common, for the reception of the draw-bars, which are not shown.

It will be understood that the coupler consists of two complete members, one on each  
35 adjoining end of a car, the two members being identical in construction except that the arrangement of the elements thereof is reversed. Consequently the description of one member will apply to the other.

40 The shape and construction of the head are well shown in Figs. 4 and 5, the latter being a section of the former taken on the dotted line *x x*.

It will be seen that the head at the outer  
45 face is curved, as seen, from either the top or bottom, and at one side is thickened up at two points to give sufficient metal around the holes *d* and *e*, which pass entirely through it.

50 D is a jaw consisting of two horizontally-placed flat bars *b*, connected by the cross-piece *c*, (see Fig. 6,) which is an exterior side

view of the jaw. The jaw D is connected to the head by a hinge-pin *h*, which passes through the jaw and the hole *e* in the head. (See Figs. 2 and 3.)

Near the inner end of the jaw is a boss *j'*,  
55 arranged for the reception of the coupling-pin E, which pin, when the coupler is in use, passes through it into the hole *d* in the head.

The coupling-pin E is removable—that is  
60 to say, it may be elevated, so as to be clear of the head, by means of a lever F, a chain G, and a swivel H on the head of the pin, as shown in Fig. 1.

I is a curved plate interposed between the  
65 upper bar of the jaw and the top side of the head and pivoted to both by the hinge-pin *h*. It has stops *j* and *k* at its edges, and the distance between the stops is such that the plate is susceptible of considerable swinging move-  
70 ment independently of the jaw. The stops are shown as formed by turning up the edges of the plate, but they may be constructed in a variety of other ways and have the effect hereinafter described.

75 The plate I has a hole *m*, which will register with the one *d* in the head when the plate is placed in the position shown in Fig. 3, and when so placed the pin may be inserted through the jaw, the plate, and the head, as  
80 shown in that figure.

To arrange the two parts or members of the coupler to admit of the coupling operation, the coupling-pins are raised out of the heads and the outer ends of the jaws moved out-  
85 ward, as shown in Fig. 2, which brings the inner ends of the jaws in contact with the stops *k* and carries the plates into the positions shown in Fig. 2. When the parts are thus arranged, the coupling-pins rest on a  
90 blank part of the plates.

In the coupling operation the jaws of the two members of the coupler come together, and the plates I are moved with the jaws until the jaw of one member slips past the  
95 stop of the plate of the other, when the jaws move independently of the plates until they come into contact with the other stops, when they both move together, the coupling-pins passing through the holes *m* in the plates and  
100 resting on the upper surface of the heads. As soon as the jaws and plates reach the po-



sitions indicated in Fig. 3 the coupling-pins drop into the holes *d* in the heads, and the jaws are thereby locked.

By having the jaws placed exterior of the head, as described, instead of being inserted in slots in the head the coupler may be made much lighter, with an increased bearing-surface for the locked ends of the jaws, and the strength of the coupler increased, and should breakage occur it would be the jaws instead of the head that would have to be renewed, and the substitution of a new jaw could be made with little cost and without affecting the heads.

In the improved construction as described the major part of the strain in drawing the car is thrown on the coupling-pin, which may be made as large as desired, the hinge-pin receiving only a slight strain.

While I have shown the plates I as swinging about the hinge-pins it is evident that

they could be pivoted at some other point and effect the result described equally as well.

I claim as my invention—

In a car-coupler of the type described, the combination of a head, a locking-jaw within which the head is inserted and pivoted, a coupling-pin adapted to pass through the inner end of the locking-jaw and the head, and a pivoted plate interposed between the head and one side of the jaw provided with stops whereby the independent swinging movement of the plate is limited, and having a hole which will register with the coupling-pin holes in the head and jaw when the said jaw is in its locked position, substantially as specified.

JOHN R. HARE.

Witnesses:

WM. T. HOWARD,  
GEO. E. TAYLOR.