

(No Model.)

A. C. HOWES.
CAR COUPLING.

No. 393,370.

Patented Nov. 27, 1888.

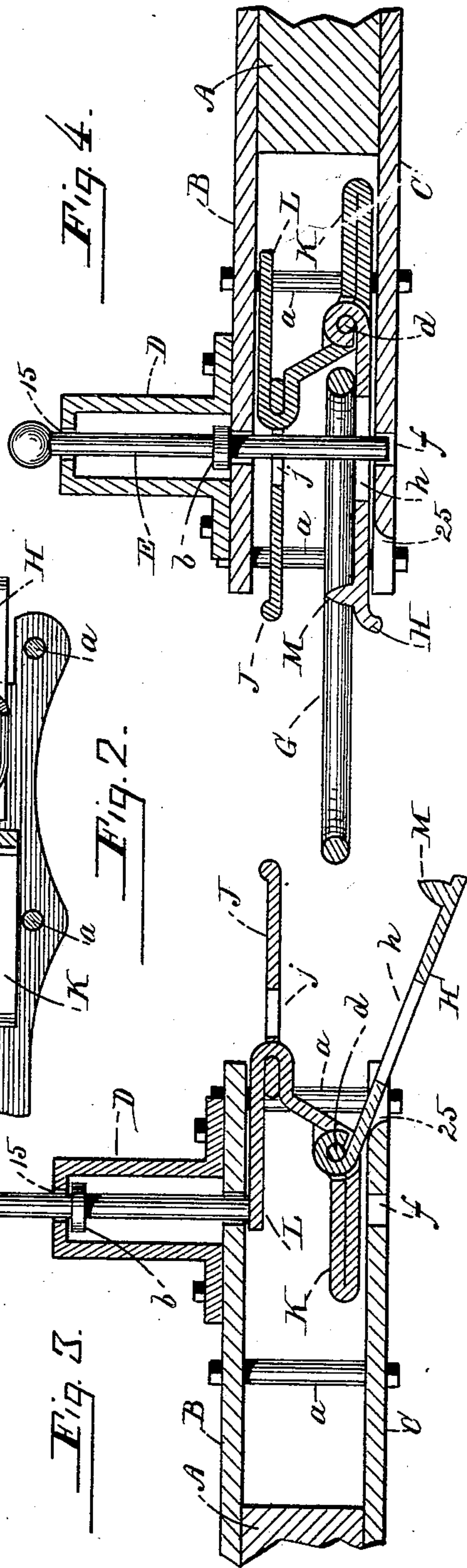
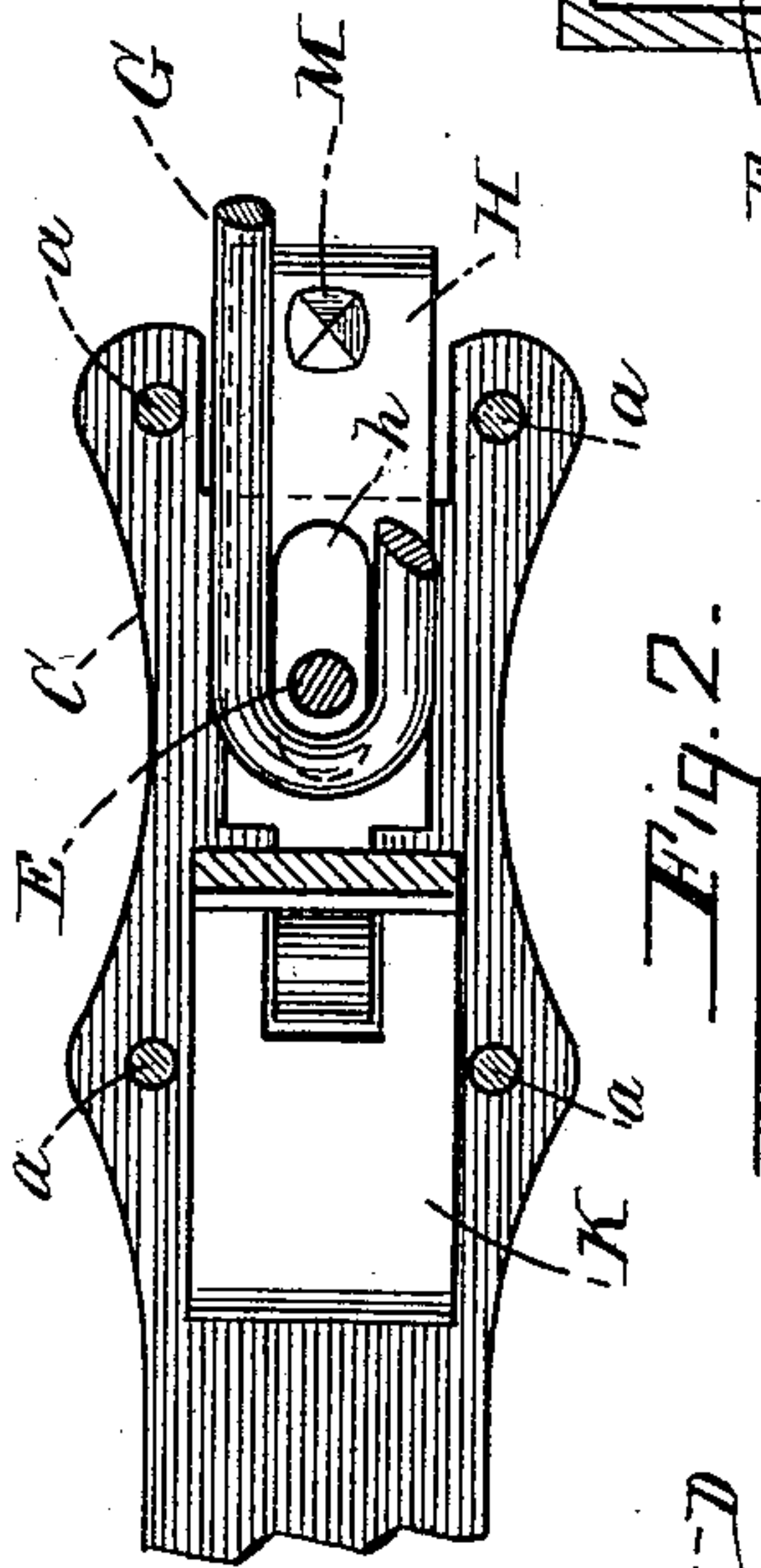
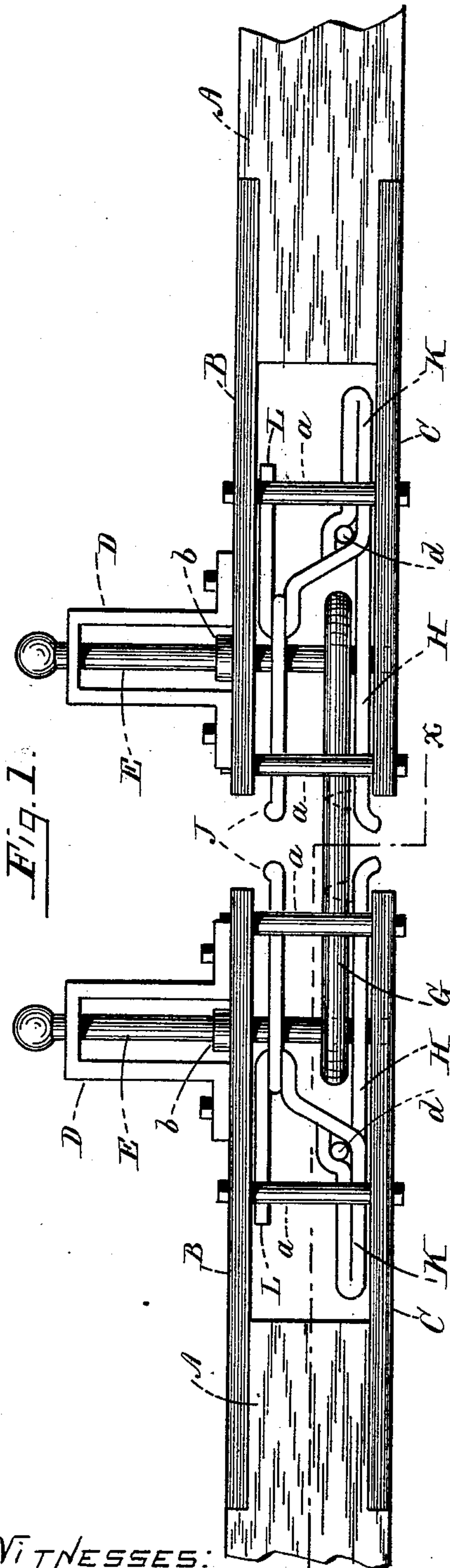


Fig. 4.

WITNESSES:
J. D. Matthews.
E. M. Sperry.

INVENTOR:
Alvin C. Howes,
PER C. A. Shaw & Co.
ATTYS.

UNITED STATES PATENT OFFICE.

ALVIN C. HOWES, OF MIDDLEBOROUGH, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 393,370, dated November 27, 1888.

Application filed July 16, 1888. Serial No. 280,112. (No model.)

To all whom it may concern:

Be it known that I, ALVIN C. HOWES, of Middleborough, in the county of Plymouth, State of Massachusetts, have invented a certain new and useful Improvement in Car-Couplers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is side elevation of my improved coupler in use, the draw-bar heads being shown as broken off; Fig. 2, a horizontal section taken on line *xx* in Fig. 1; and Figs. 3 and 4 a central vertical transverse section of the parts shown in Fig. 1, the draw-bar heads being represented as disconnected.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of car-couplers which are automatic in their action and designed especially to obviate the necessity of going between the cars to couple and uncouple the same; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a simpler and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following description:

In the drawings, *A A* represent the draw-bar heads, *G* the link, and *E* the coupling-pins.

A longitudinally-arranged metallic plate, *B*, is secured by one end to the upper side of the head *A*, and a corresponding plate, *C*, to the under side of said head, said plates being connected by vertical pillars *a*. The plates *B C* are provided, respectively, with holes *f*, in which the pin *E* is fitted to work vertically, said pin also passing through a hole, 15, in a bracket, *D*, secured to the top of the plate *B*, and being provided with an annular flange, *b*, to prevent it from being withdrawn from said bracket or falling too far through the holes *f*.

A metallic carriage, *K*, is fitted to slide horizontally in the plates *B C* between the pillars *a*, and is provided in its upper portion with a

table, *L*, adapted to sustain the pin *E* when said pin is elevated and the carriage drawn forward, as shown in Fig. 3. Secured to the forward end of said table is an outwardly-projecting arm, *J*, provided with a slot, *j*, adapted to register with the hole *f* and to receive the pin *E*.

An outwardly-projecting tongue, *H*, is pivoted by means of a transversely-arranged pin, *d*, to the forward portion of the carriage *K*, and provided with a slot, *h*, which is in alignment with the slot *j* in the arm *J*, and on its outer end with an upwardly-projecting tooth or stud, *M*. The pivot-pin *d* is extended so that its ends will engage the vertical pillars *a*, or equivalent stops, and prevent the carriage from being drawn out or pushed inward too far.

The outer end of the plate *C* is slotted and beveled at 25, so that the tongue *H* will fall somewhat when the carriage *K* is drawn forward, as shown in Fig. 3.

The heads of the coupling-pins *E* are connected by chains (not shown) with any convenient portion of the cars to prevent them from being misplaced or lost.

In the use of my improvement, if it is desired to uncouple the cars, the parts being in the position shown in Fig. 1, a coupling-pin *E* is withdrawn from the sockets *f*. As the car moves, the link *G* is withdrawn gradually from between the arm *J* and tongue *H* until it engages the stud *M* on said tongue, and thus draws forward with it the carriage *K*, the table *L* of which passes under the pin *E* and prevents it from falling. At the same time the tongue *H* falls over the beveled slot 25, as shown in Fig. 3, the link *G* meanwhile remaining in the opposite draw-bar head and secured by its pin *E*. When the cars are run together to be coupled, the forward end of the link (see Fig. 4) enters the opposite coupler (see Fig. 3) between the arm *J* and tongue *H* and strikes the carriage *K*, thereby forcing it backward until the slots *j h* in the arm *J* and tongue *H* register with the sockets *f*, and permit the pin to fall through the link into said sockets, thus securely coupling the cars together.

It will be seen that the carriage in one draw-bar head is always drawn forward into position to receive the link on the opposite car every time the cars are uncoupled, thus obviating the necessity of going between the cars

to adjust the parts when it is desired to couple them again.

It will also be seen that the carriage K can be readily adjusted to slide in draw-bars of the form and construction in ordinary use upon cars.

Having thus explained my invention, what I claim is—

1. The combination, with a draw-bar, of a sliding carriage therein, said carriage being provided with a table for supporting the coupling-pin in uncoupled position, and with a forwardly-projecting slotted arm, a forwardly-projecting slotted tongue hinged to the lower part of said carriage and provided with a stud near its outer end, the slots of said arm and tongue being adapted to register with the pin-holes of the draw-bar when in coupled position, substantially as described.

2. In a car-coupler, the combination of a draw-bar provided with holes for the coupling-pin and with interior stops, a sliding carriage within said draw-bar provided with a table adapted to support the coupling-pin, and with a forwardly-projecting slotted arm, a forwardly-projecting slotted tongue hinged to the lower part of said carriage and provided with a stud near its outer end, the pivot of said

tongue being adapted to engage the stops within the draw-bar for arresting the movement of the carriage, substantially as described. 30

3. In a car-coupler, the combination of the draw-bar A, provided with the plates B C, connected by pillars *a*, and provided with holes *f*, the pin E, provided with the flange *b* and fitted to slide in the holes *f*, and a bracket, D, secured to the plate B, the carriage K, fitted to slide between said plates and provided with the table L, the arm J, secured to said carriage and having the slot *j*, adapted to register with the sockets *f*, the tongue H, having the stud M and slot *h* in alignment with the slot *j*, said tongue being pivoted on a pin, *d*, in said carriage, adapted to engage the pillars *a*, and the link G, all being constructed and arranged to operate substantially as described. 35 40 45

4. The carriage K, having the table L for sustaining the coupling-pin and provided with the fixed arm J, and pivoted tongue H, having the stud M, said arm and stud being provided, respectively, with the slots *h j*, substantially as and for the purpose set forth. 50

ALVIN C. HOWES.

Witnesses:

CHAS. W. TURNER,
CHARLES A. HOWES.