

(No Model.)

C. W. DIEDERICH.
CAR COUPLING.

No. 487,916.

Patented Dec. 13, 1892.

Fig. 1.

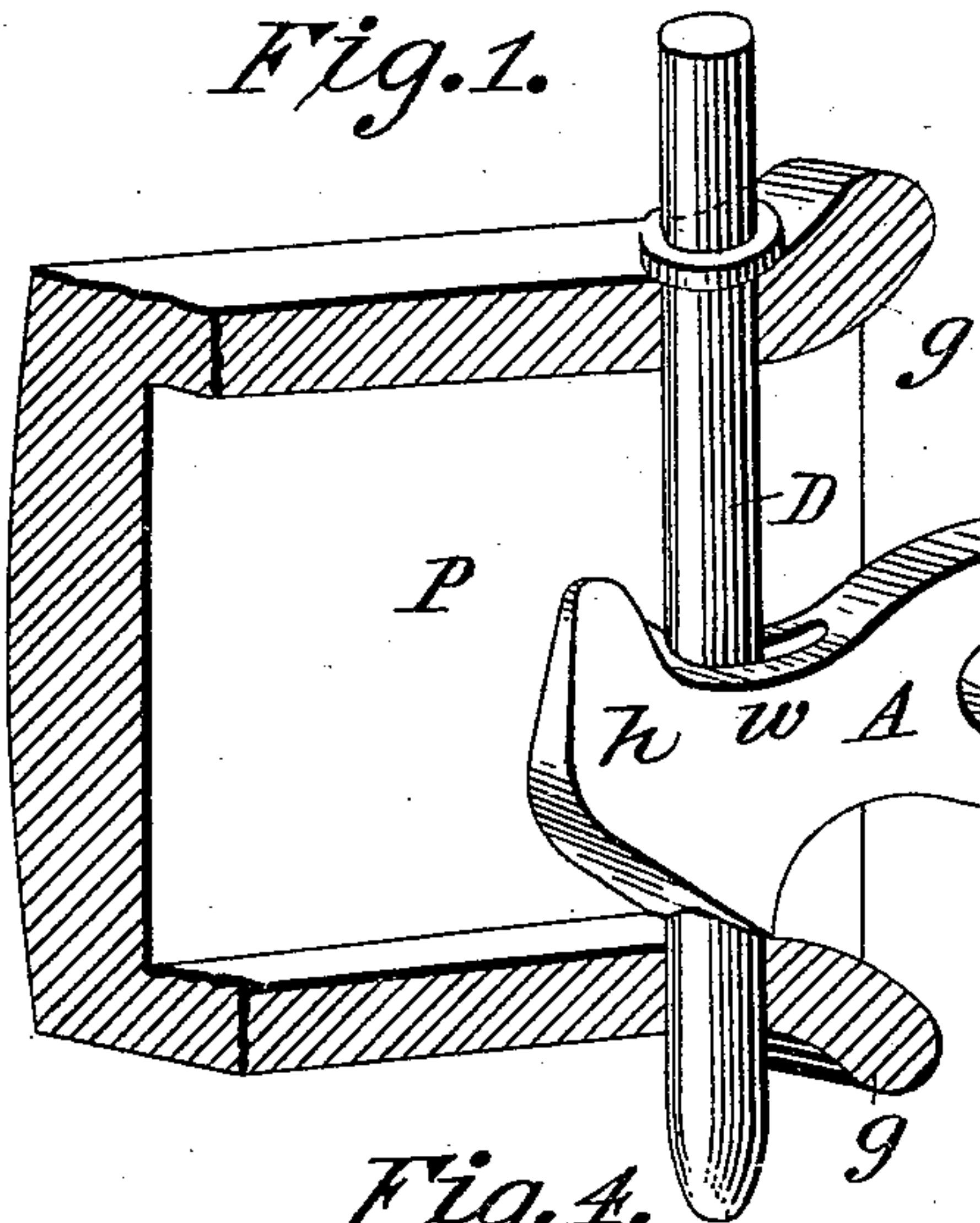


Fig. 2.

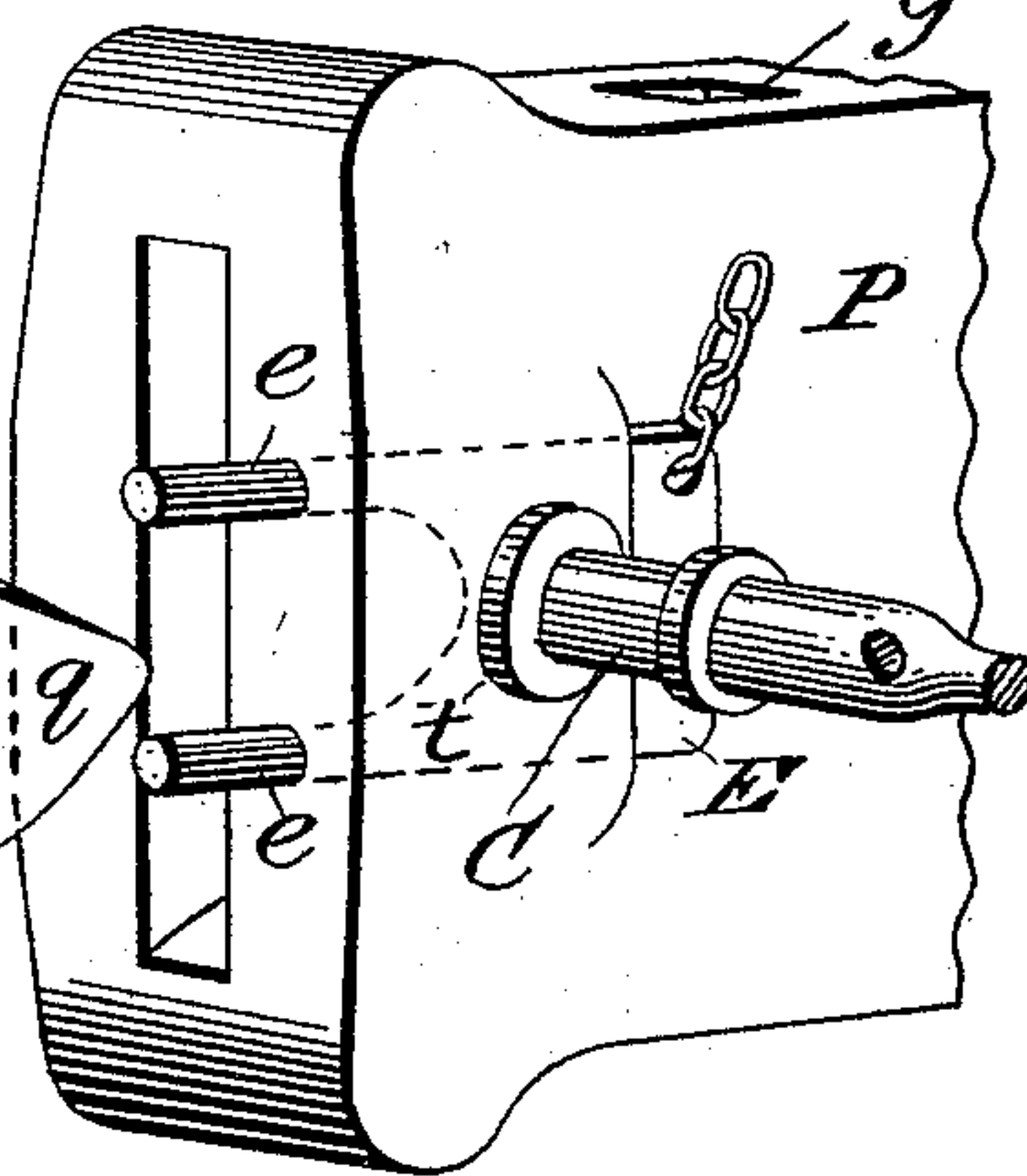


Fig. 4.

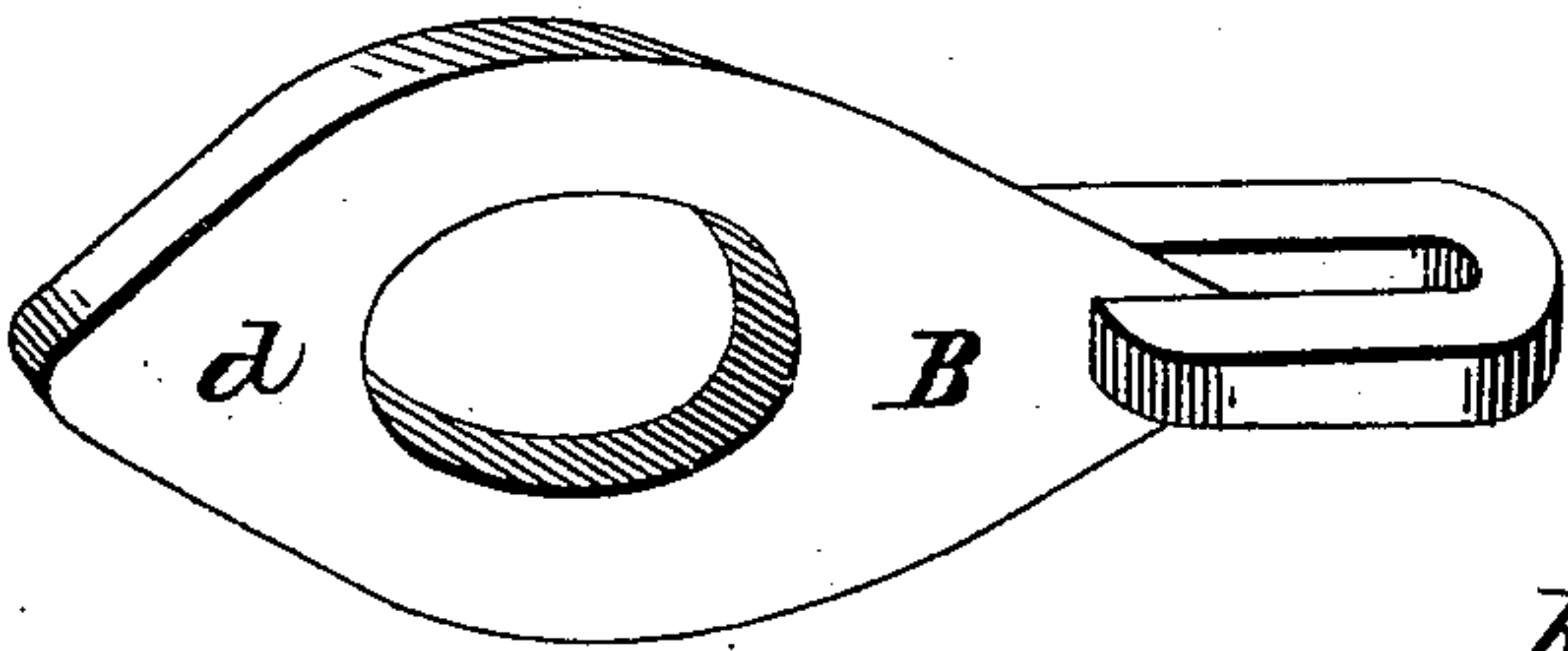


Fig. 6.

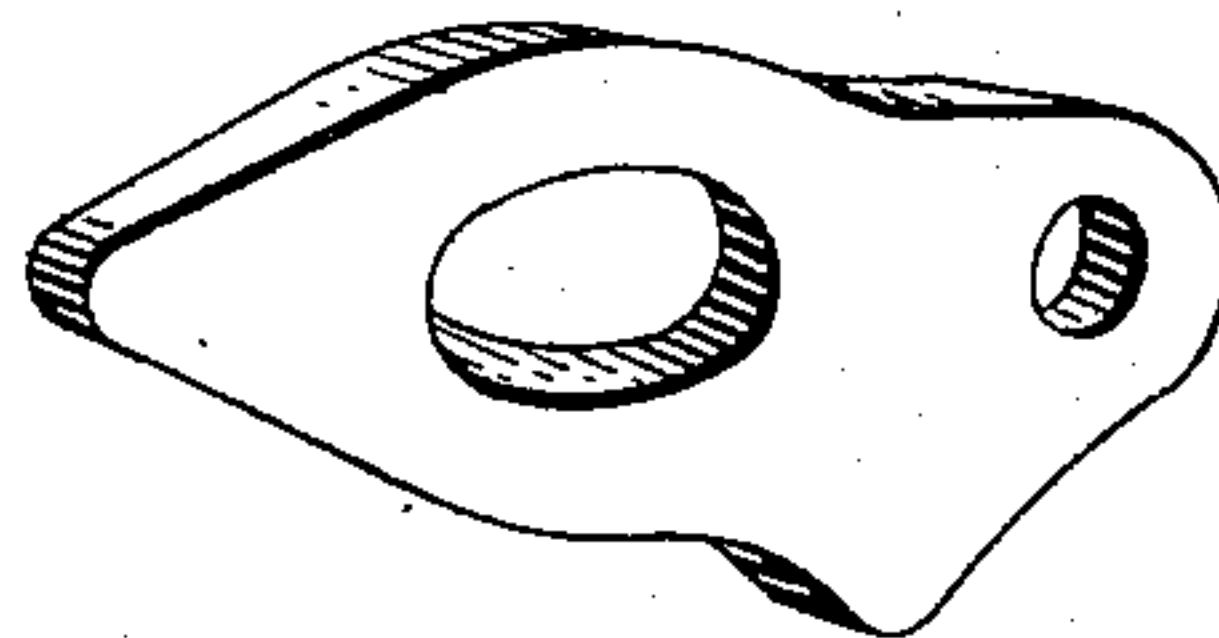


Fig. 3.

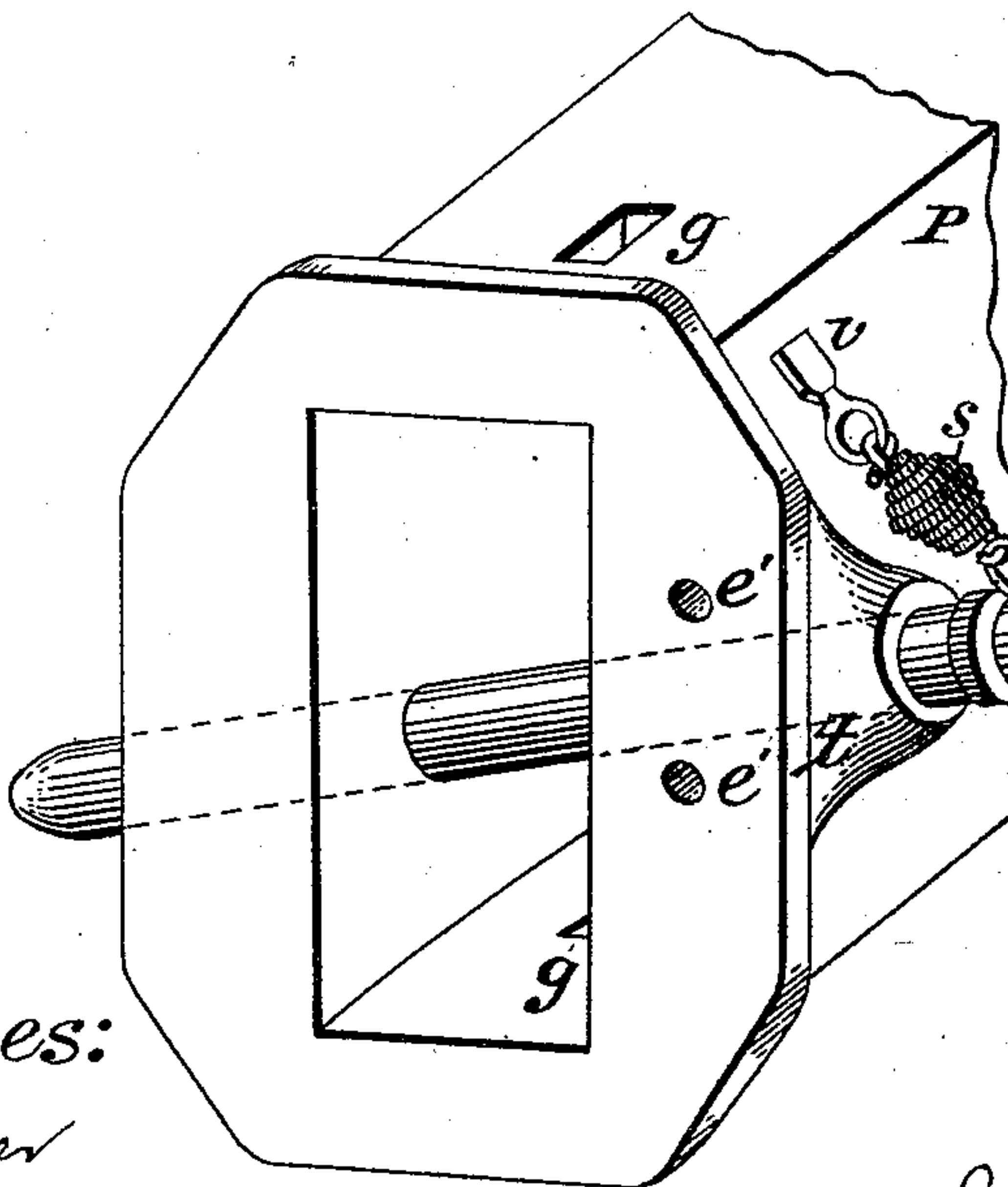
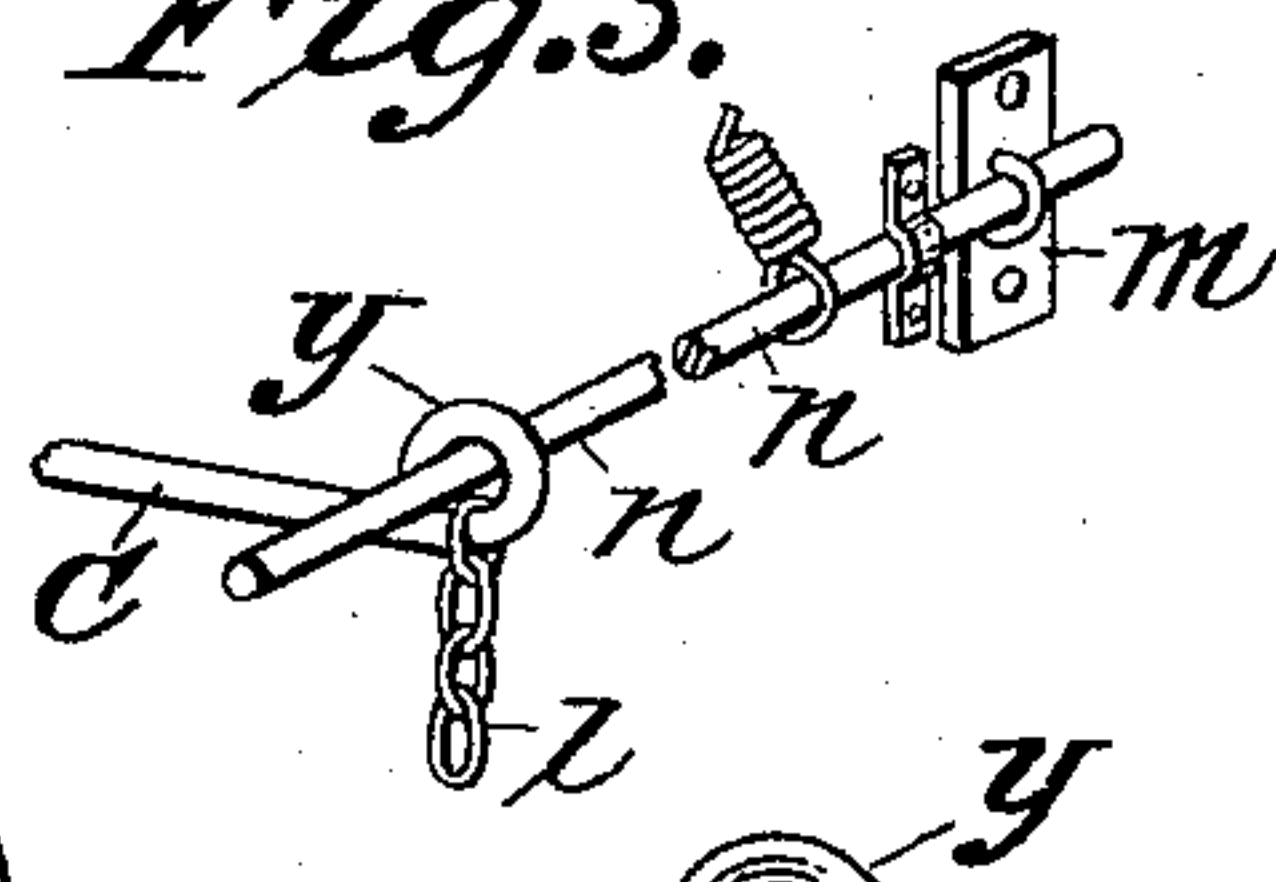


Fig. 5.



Witnesses:
Wm. R. Walker
Geob. Roy.

Inventor:
Charles W. Diederich

UNITED STATES PATENT OFFICE.

CHARLES W. DIEDERICH, OF CONCORD, NEW HAMPSHIRE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 487,916, dated December 13, 1892.

Application filed October 31, 1891. Serial No. 410,549. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. DIEDERICH, a citizen of the United States, residing at Concord, in the county of Merrimac and State of New Hampshire, have invented an Improvement in Car-Couplers, of which the following is a specification.

The object of the invention is to simplify the construction of car-couplers in which the coupling-pin is laterally inserted in the draw-head and at the same time to increase their security and efficiency and to adapt them for coupling draw-heads of different heights and of various forms; and it consists in the construction hereinafter described and pointed out.

In the accompanying drawings, Figure 1 is a partial vertical section. Fig. 2 is an isometric view, and Fig. 3 an enlarged isometric view, of draw-head, the coupling-pin being shown in the first figure under the more common arrangement thereof and the coupling-link omitted in each of the latter figures. Fig. 4 is an isometric view of a coupling-link adapted to be used both with a vertically and a laterally disposed pin. Fig. 5 is a modified detail, and Fig. 6 is a link adapted to be used with two approximately-horizontal pins.

Reference letter P denotes a draw-head having a mouth or slot with its largest dimension in a vertical plane, being by preference eight inches by four.

g denotes openings for a coupling-pin, situated as is customary.

The link A has an oblong slot *w* and a rounded end *h*, whereby it is adapted to be tilted vertically. A vertically-arranged pin D, passing through an oblong slot, is shown. The horizontal opening in the link is also made oblong and the end *q* of the link is made pointed or rounded to guide it up the rounded bottom of the draw-head mouth.

C is a coupling-pin having an opening to receive a suspending chain and having, also, a handle or extension of comparatively-small dimension and provided with an eye or opening *y*. (See Fig. 3.) This pin is in use entered in suitable openings through the sides of the draw-head.

t represents a boss surrounding one of these openings for the purpose of supporting the pin in position to be entered in a link and

passed therethrough and through the opposite side of the draw-head.

e e denote legs or pins of a stop-plate E, situated in an extension at the side of the draw-head and projecting through said extension and provided with an operating-chain, as indicated.

e' e' in Fig. 3 denote the passages to receive the legs *e* of the stop-plate. The purpose of this plate is to prevent the pin from entering the draw-head too far before the link is in situation to receive it. The plate is automatically moved out of the way when the link is presented by the automatic action of the opposing draw-head upon the pins or legs *e*. A spring adapted to draw the pin into coupling position is denoted by *s* and represented as supported by a bracket or stud *v*. Said spring is adapted to hold the pin in the draw-head when coupled. The openings for the pin are by preference downwardly inclined and situated one in higher plane than the other to further guard against accidental removal.

In Fig. 5 is shown a modified construction in which *m* denotes a bracket which will be fixed to the car or car-platform at any suitable point.

n denotes a spring-rod of any sufficient length. The free end of the rod is adapted to enter the opening *y* in the pin or it may be arranged to enter any of the links of a chain *l*. The purpose of spring-rod *n* is similar to that of spring *s*, and either may be used to hold the pin against the stop-plate and to force it through the draw-head when such plate is moved out of the way and subsequently to hold the coupling-pin in operative position. The boss *t* prevents the pin when its end is held against the stop-plate from being knocked or jarred out of the draw-head.

Other arrangements of the spring and various modifications of details may be made, provided substantially the same principles of construction and operation are preserved. For instance, the stop-plate could be operated automatically by a single pin *e*, and the hole *y* could be formed without bending the pin extension.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The coupling-link having a rounded part

h, an oblong slot *w*, and a pointed end *q*, substantially as set forth.

2. The coupling-link having a rounded part *h*, an oblong slot *w*, and a pointed end *q*, in combination with draw-heads, one of which has an oblong mouth with its longest dimension in the vertical plane, substantially as set forth.

3. A draw-head having an enlargement on its side, provided with a receptacle for a pin-stopping plate and having openings for a leg or pin extending through the face of the draw-head, in combination with a stop-plate having an operating-pin and with a coupling-pin, substantially as set forth.

4. A draw-head having an enlargement on its side, provided with a receptacle for a pin-stopping plate and having openings for a leg

or pin extending through the face of the draw-head, in combination with a stop-plate having an operating-pin and with a coupling-pin, said draw-head having a boss or extension about its pin operating to receive and support the pin, substantially as set forth.

5. A draw-head having downwardly-inclined lateral openings for a coupling-pin, substantially as set forth.

6. A draw-head having downwardly-inclined lateral openings for a coupling-pin, in combination with a spring normally tending to force the pin into said openings, substantially as set forth.

CHARLES W. DIEDERICH.

Witnesses:

WILLIAM R. WALKER,
GEO. C. ROY.