(No Model.)

J. W. PEMBERTON.

CAR COUPLING.

No. 407,446. Patented July 23, 1889.

Fig. 1.

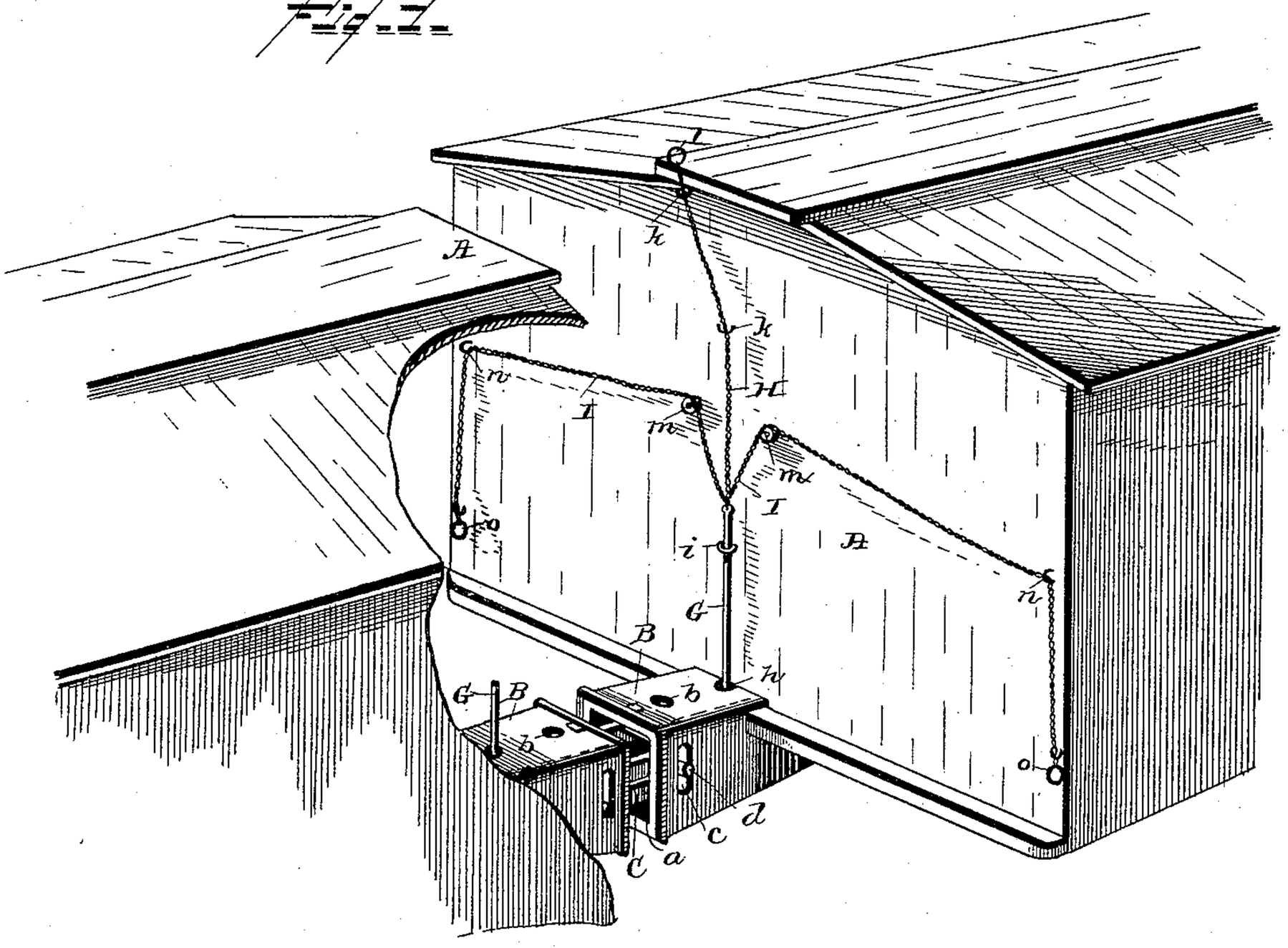


Fig. 2.

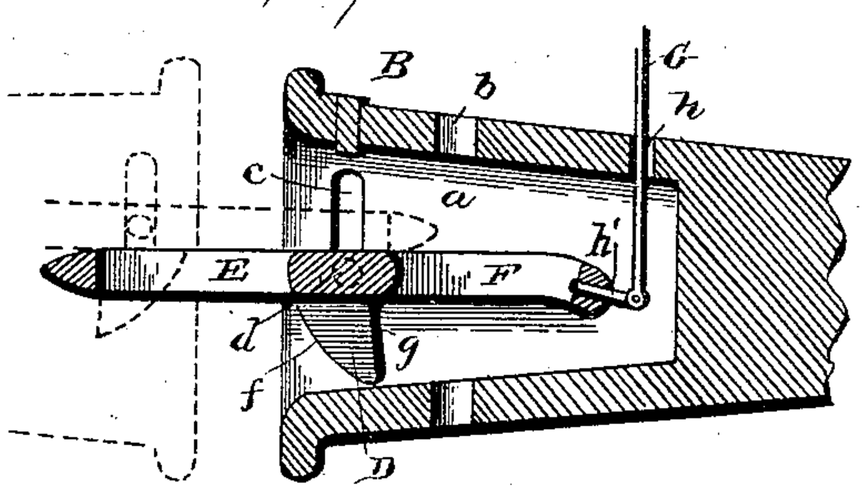
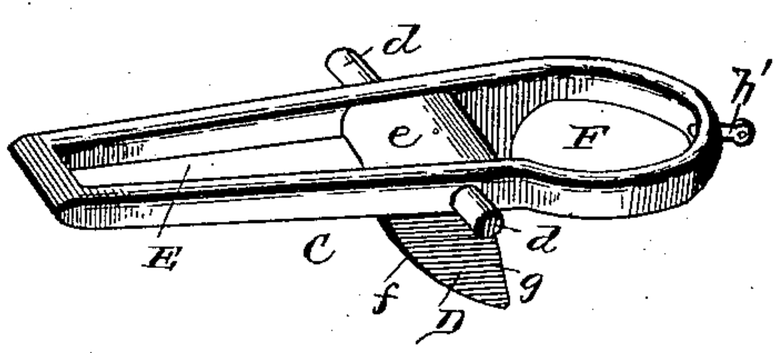


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES W. PEMBERTON, OF PROVIDENCE, RHODE ISLAND.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 407,446, dated July 23, 1889.

Application filed May 4, 1889. Serial No. 309,590. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. PEMBERTON, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in car-couplings; and the novelty in the present instance resides in the peculiar combinations and in the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings; and then specifically defined in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of the adjacent ends of two cars coupled together with my improved couplers, portions being broken away in order to better disclose the other parts. Fig. 2 is a longitudinal section through one of the couplers. Fig. 3 is a perspective view of one of the links removed.

Reference now being had to the details of the drawings by letter, A A designate the adjacent ends of two cars of known construction, and B B the draw-heads. These draw-heads are chambered, as at *a*, and are provided with the vertical opening or passage-way *b*, to receive the coupling-pin when necessary.

The side walls of the draw-head are formed with vertical slots *c*, in which work loosely the trunnions *d* of the coupling-link C. This link constitutes the coupler and comprises in a single piece the oblong bar formed with transverse thickened portion or arm *e*, from which the trunnions *d* project, and upon the under side of the transverse thickened portion is the lug D, the forward face of which is inclined, as shown at *f*, and its rear face terminates in a vertical shoulder *g*.

Forward of the lug D is a loop or link E, and to the rear of said lug is an elongated loop or link F, the rear end of which is weighted or made thicker, and consequently heavier, so as to always normally remain in the bottom of the chamber.

In the operation of coupling, as the two cars come together the loops E E enter the opposing draw-head chambers and the under loop of the two slides over the inclined face of the lug D on the other or upper link until it passes said incline, when the upper link falls and the said lng enters the loop E of the lower link, when the straight shoulder of the lug is held by the straight side of the forward end of the loop E of the lower link and the cars are coupled.

The coupling-links being free to play vertically in the draw-heads provides for the ready coupling of cars of varying heights and allows of vertical play in the movement of the cars.

To provide for uncoupling either from the top or sides of the car, I have devised the following means: The rear top wall of the draw-head is formed with an opening or notch *h*, through which passes the rod G, the lower end of which is pivotally secured to the arm *h'*, projecting from the rear end of the link C. The upper end of this rod or chain passes through a suitable guide or keeper *i* on the end of the car, and has connected therewith a rod or chain H, which passes through suitable guides or keepers *k* on the end of the car, and at the top of the car provided with a suitable handle or ring *l*.

I I are cords or chains connected at one end to the chain G, and after passing over suitable pulleys *m* and through keepers or guides *u* on the end of the car extend down the end of the car and are provided with rings or handles *o*. It will thus be seen that by pulling either of the cords or chains the cars may be uncoupled from either the top or side of the car. The rigid rod G and the arm *h'* are

considered important, for the reason that they render the device more positive in their action than a chain.

What I claim to be new is—

The combination, with the car and the vertically-movable link in the draw-head, of the arm *h'*, connected to the rear end of the link, the stiff rod G, pivotally connected at its lower end to said arm and passed through a guide on the end of the car, and the chains or cords connected to the upper end of said rod G, and extending to the top and sides of the car, substantially as shown and described, and for the purpose specified.

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

JAMES W. PEMBERTON.

Witnesses:

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DENNIS T. KELLY.