

(No Model.)

E. S. GRAVER.

CAR COUPLING.

No. 272,680.

Patented Feb. 20, 1883.

fig 1.

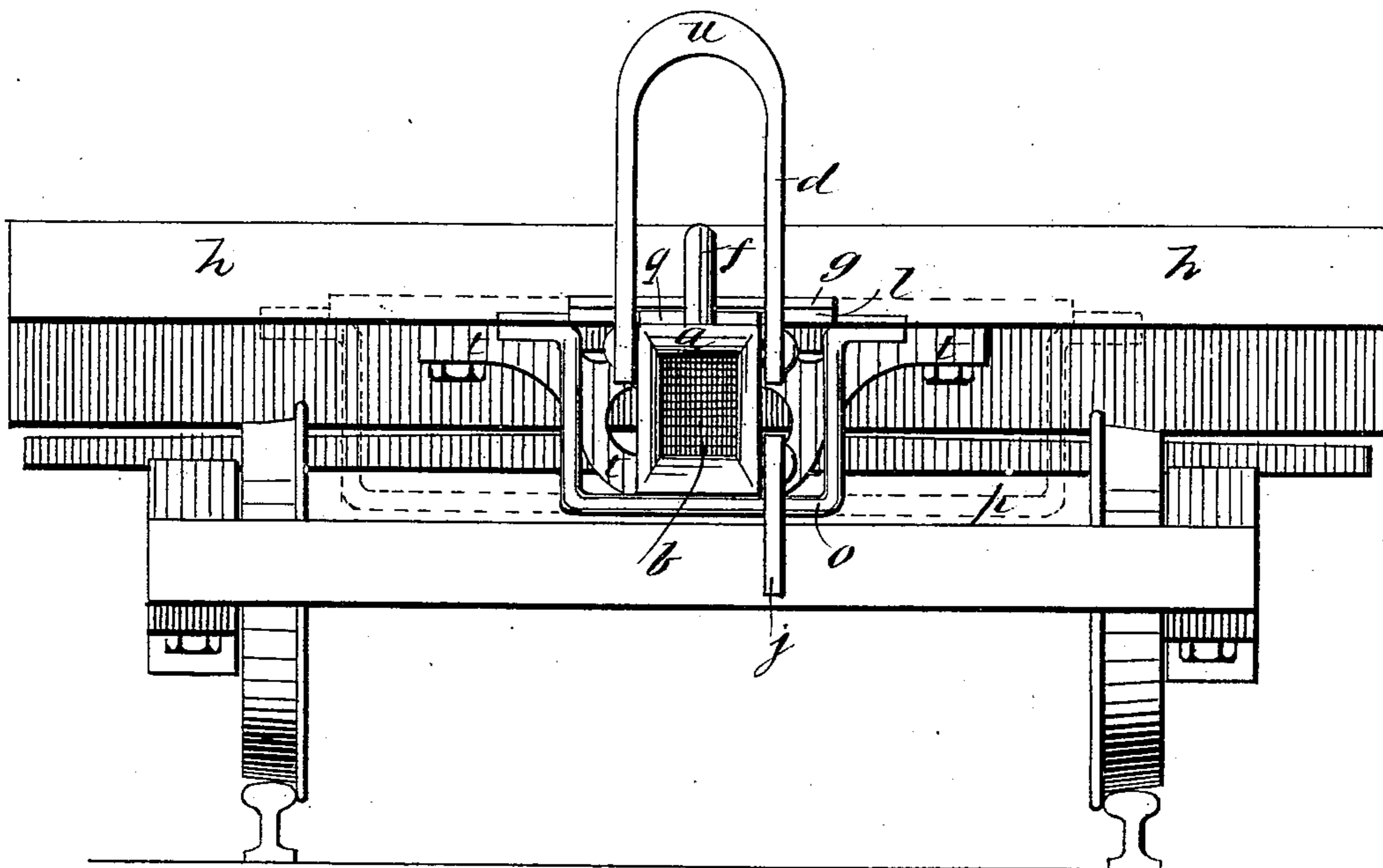
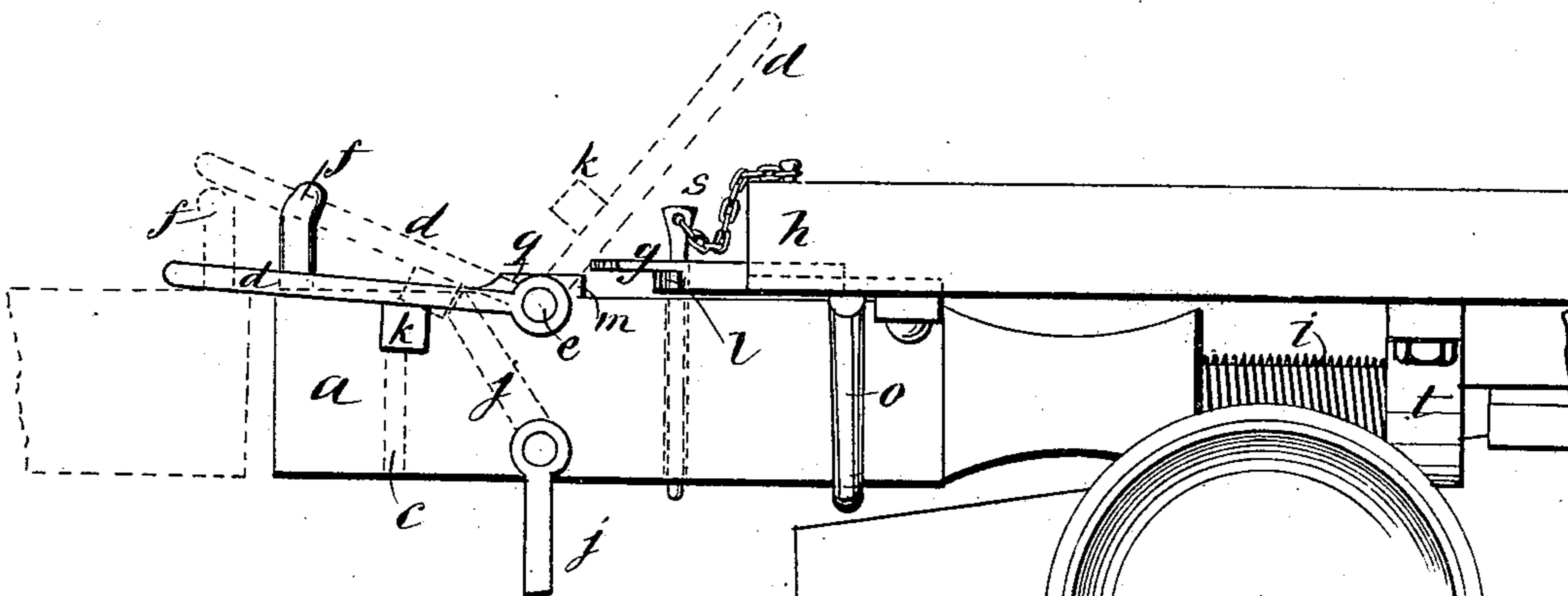


fig 2



WITNESSES:

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 272,680, dated February 20, 1883.

Application filed December 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, ERWIN S. GRAVER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

My improvement in car-couplings consists, essentially, of a loop or U-shaped link pivoted to one draw-bar, in combination with a horn on the other draw-bar, with which said link engages by swinging down over the horn, together with a latch device for holding up the link when uncoupling, and a device for lodging the link on preparatory to coupling and throwing it down over the horn and coupling by the recoil of the draw-bar when the cars run together, the said improvement being a simple and efficient device that may be used, together with the ordinary coupling link and pin, on cars of any kind and of different heights, and by which the dangerous practice of going between the cars to couple them may be avoided, all as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a front elevation of a platform-car with my improved car-coupling applied, and Fig. 2 is a side elevation.

I use a draw-bar, *a*, of the common form and arrangement, and having a socket, *b*, and pin-hole *c*, for the use of the common link and pin when required, and connect the loop or U-shaped link *d* to it on a raised portion, *g*, a suitable distance back of the end, by a pivot-bolt, *e*, passing horizontally through the two ends of the link and the bar, and being headed at each end, said link being of suitable length to swing forward of the end of the draw-bar sufficiently to drop over a horn, *f*, projecting up from the end of the draw-bar of the car to be coupled on, each draw-bar being provided with a link and a horn, so that when both links are coupled the couplings will be double.

To couple the cars self-actingly with this form of coupling, I provide a plate, *g*, on the bed or platform *h* of the car, and projecting

forward over the draw-bar in suitable relation to the link to allow it to be swung over and rested against said plate, as indicated by dotted lines of Fig. 2, for setting the link preparatory to coupling, which plate will thrust the link forward and cause it to fall down and couple the horn of another car when two cars run together and the draw-bars are forced back against the buffer-springs *i*.

To hold the link up sufficiently for uncoupling, I arrange a latch, *j*, on one side of the draw-bar, to be swung up and set under a stud, *k*, of the link, as shown by dotted lines in Fig. 2, to hold the link until the cars are drawn apart, when the link may be allowed to swing down and hang from the pivot-bolt till required to couple again, and being set up against the plate *g* for the purpose.

I propose to avail myself of the plate *g* to serve as a stop by means of a shoulder, *l*, on it, and a shoulder, *m*, which the raised portion *g* of the draw-bar enables me to provide in suitable relation to the shoulder *l* for arresting the back-thrust of the draw-bar for the protection of the buffer-spring from overcompression.

It will be seen that by the wide space between the two bars of the link, required by the manner of applying it to the draw-bar, the coupling has considerable range for lateral deviation of the draw-bars from the centers, and the links will draw properly in going around curves; but to enable the coupling to connect on any curves, no matter how short, I propose to arrange the draw-bars to swing laterally, when required, by arranging them in a supporting-hanger, *o*, extended, as indicated by the dotted lines *p*, Fig. 1, and by suitably pivoting them at the back connection, *t*, and in such case will employ a pin, *s*, to connect them with the plate *g* when they are not required to swing for such purpose. This pin may in such case sustain the draft through the medium of the plate *g*; or, if desired, the draw-bar or said plate may have a slotted hole for it. The link *d* will be made thicker and stronger in the bow *u*, Fig. 1, than elsewhere, to resist the tendency of the strain to bend it thereat.

It will be seen that by attaching a chain to the link on the tender and suitably leading it

into the cab of the engine the engineer can uncouple and couple his engine at any time from his place in the cab.

Having thus described my invention, I claim
5 as new and desire to secure by Letters Patent—

1. The combination of a plate, *g*, attached to the car-body, with a link, *d*, pivoted to the draw-bar, substantially as described.

2. In a car-coupling having a link, *d*, piv-
10 oted to the draw-bar, as set forth, the shoulder *m* on said draw-bar, in combination with the

shoulder *l* of the plate *g*, attached to the car-body, substantially as described.

3. In a car-coupling, the combination, with the draw-bar *a*, having the pivoted propping- 15 latch *j*, of the link *d*, pivoted to the draw-bar and provided on its under side with the stud *k*, substantially as and for the purpose set forth.

ERWIN S. GRAVER.

Witnesses:

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J. P. SCHELLY.