G. C. SPANGLER.

CAR COUPLING.

No. 113,462. Patented Apr. 4, 1871.

Fig. 1.

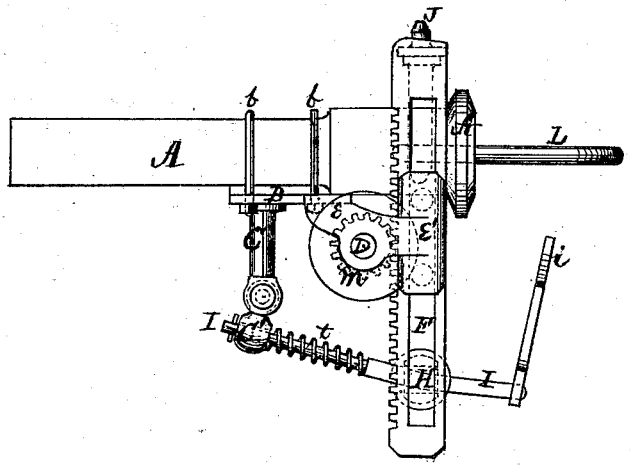
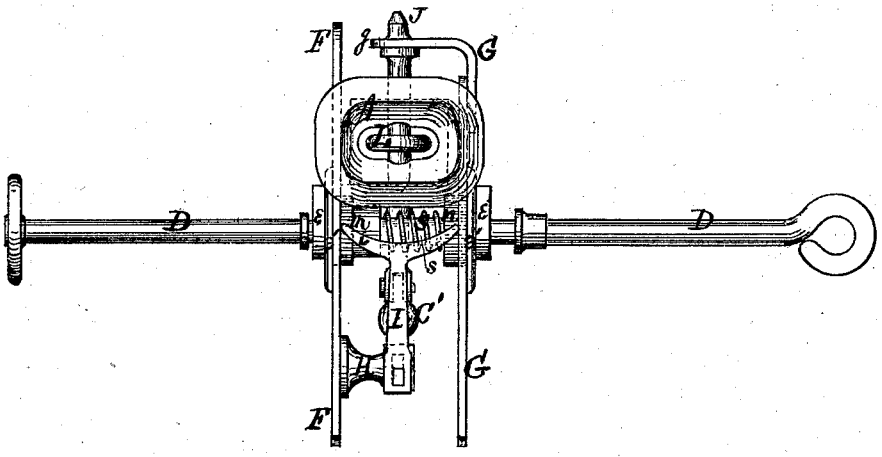


Fig. 2.



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United States Patent Office.

GEORGE C. SPANGLER, OF ALLEGHENY CITY, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND SIMPSON H. DAFT, OF SAME PLACE.

Letters Patent No. 113,462, dated April 4, 1871.

IMPROVEMENT IN CAR-COUPLINGS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE C. SPANGLER, of the city and county of Allegheny and the State of Pennsylvania, have invented an Improved Car-Coupling; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side elevation, and

Figure 2 a front elevation.

Similar letters of reference in the accompanying drawing indicate corresponding parts.

The object of this invention is to enable the attendants, without going between the cars or exposing themselves to danger, to couple or uncouple the cars, and to guide the link when coupling, so that it will properly enter the opposite draw-head.

To this end an apparatus is employed which can be readily, and at the most trifling expense, attached to any of the old-fashioned draw-heads, and used in connection with the old-fashioned link and pin; but which will enable any person standing at the side of the car to perfectly control said link and pin without incurring the slightest risk of injury.

In the drawing—

A is the old-fashioned draw-head, and

B is a plate which supports all my apparatus, and which is adapted to be attached to the draw-head by straps *b b*, or screws, or any other suitable means.

C is a short stout arm depending from the rear end of the plate B, and supporting a block, C, articulated so as to swing forward and backward, to accommodate the movement of the link-guide hereinafter described.

D is a transverse horizontal shaft, supported under the draw-head by means of lugs *e e*, on plate B, which at their forward ends are expanded to form vertical guides *e' e'*, adapted to support and regulate the movements of slotted vertical racks F G, one on one side and one on the other of the draw-head.

Attached to the inner side of the rack F is a fulcrum, H, upon which is supported a pivoted link-guide, I, the rear end of which extends loosely through the block C', its front ends bending upward, and bifurcated, as shown at *i*, to adapt it to hold and guide the movements of the coupling-link L.

The other rack, G, is bent inward at its upper end, as represented at *g*, and provided with a hole, through which extends the coupling-pin J, so that when the rack is elevated or depressed it raises or lowers the pin J and liberates or fastens the link L.

Both racks are adapted to be raised or lowered by means of pinions *m n*, on shaft D, one of said pinions being fixed to said shaft and the other, *m*, sliding upon it, but rotating with it.

The shaft is capable of sliding longitudinally in its bearings far enough to disengage the fixed pinion *n* from rack G, a spring, *s*, being employed to return the shaft to its former position and bring the pinion again into connection with its rack.

The link-guide I also slides longitudinally in both its bearings, a spring, *t*, being employed to keep it thrust forward, as seen in fig. 1, when not pushed back by some superior force.

Thus constructed, the operation of my improved device is as follows:

In coupling, one of the draw-heads will, of course, have a link and pin, and the other only a pin, and it will be necessary to guide the link of the one and raise and drop the pin of the other.

To guide the link, only the rack F need be operated, and to raise and lower the pin the rack G alone need be moved.

By sliding the shaft D along so as to ungear the pinion *n* and rack G, the rack F is left to operate alone, the pin holding the link and the arm *i* guiding it into the opposite draw-head.

In the latter, the rack G will meanwhile be left in gear with its pinion so as to raise the pin and allow the link to enter, and then to drop the pin through the link.

If the draw-head strikes the guide *i* no injury can result to the latter, as it will slide back in the sockets and out of the way.

Having thus described my invention,

What I claim as new therein, and desire to secure by Letters Patent, is—

1. The sliding-shaft D, pinions *m n*, and spring *s*, in combination with the independent racks F G, the former operating the link-guide and the latter the coupling-pin, substantially as and for the purposes set forth.

2. The apparatus herein described, consisting essentially of the shaft D, pinions *m n*, spring *s*, racks F G, link-guide I, spring *t*, and sockets C H, when supported by a single plate, B, *e e'*, whereby it can be strapped, bolted, or otherwise fastened to any of the old-fashioned draw-heads, substantially as herein set forth, for the purposes specified.

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