(No Model.)

K. S. BLANCHARD.

CAR COUPLING.

No. 265,011. Patented Sept. 26, 1882.

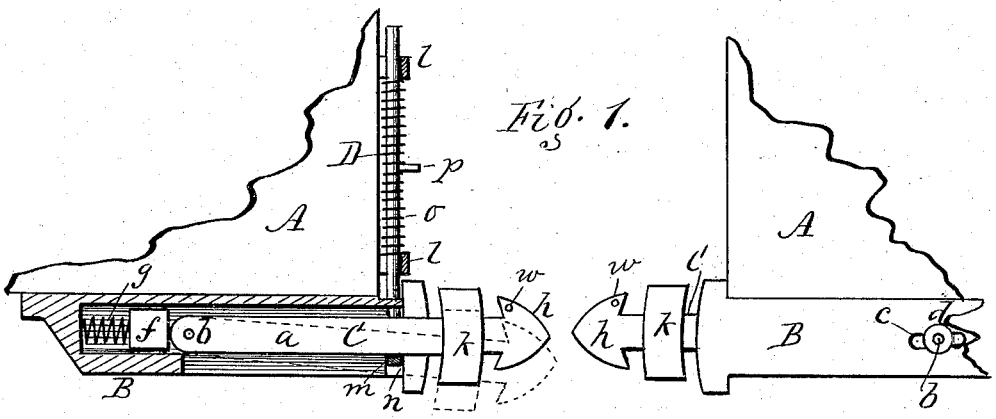


Fig. 1.

Fig. 2.

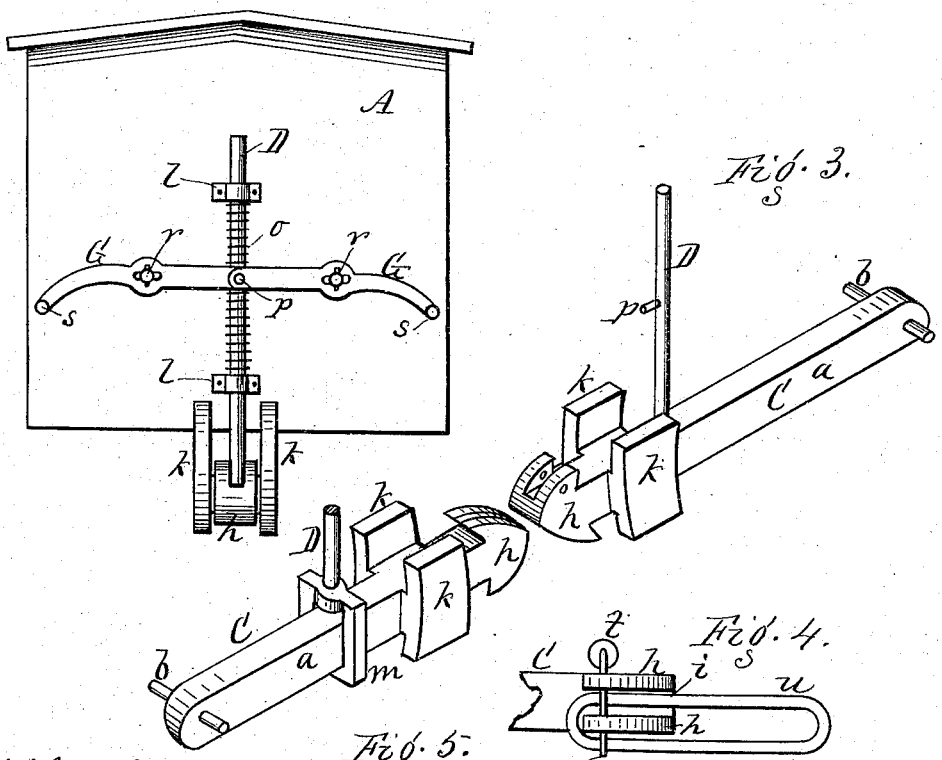
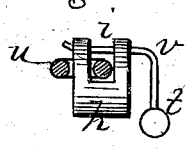


Fig. 3.

Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

KIRK S. BLANCHARD, OF CLARENDON, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 265,011, dated September 26, 1882.

Application filed May 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, KIRK S. BLANCHARD, of Clarendon, Orleans county, New York, have invented a certain new and useful Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional side elevation of the coupling attached to two cars. Fig. 2 is a front elevation of a car with the coupling attached. Fig. 3 is a perspective view of the two draw-bars removed from place. Fig. 4 is a plan of one end of the draw-bar with the common coupling-link attached. Fig. 5 is an end view of Fig. 4.

My improvement relates to couplings in which the draw-bars are provided with hook-heads that engage together and are operated by lever-work attached to the end of the car.

The invention consists in the construction and arrangement of parts hereinafter more fully described.

In the drawings, A A show two cars which are approaching each other to be coupled.

B B are bearings for the draw-bars, consisting of castings bolted to the under side of the cars, and made hollow and open on their under side.

C C are draw-bars, which rest in the bearings. Each of the draw-bars consists of a bar or shank, *a*, which has a pivot, *b*, passing out through a slot, *c*, in the bearing, on which is a washer, *d*, and behind the bar is a sliding block or follower, *f*, pressed forward by a coiled spring, *g*. This allows the draw-bar to yield, while at the same time it can turn up or down on the pivot.

h is a double hook-head on the front end of the draw-bar, the end being pointed or rounded.

A central longitudinal groove, *i*, is made in the top of the hook-head, so that the top is really divided into two hooks for the purpose of receiving the common coupling-link, when it is desired to use the same, as will presently be described.

k k are two vertical lugs just back of the hook-heads, one on each side, and cast on the bar. These lugs project above and below and leave an inclosed space between them. The front end of the bearing B and the rear edges of the lugs *k k* are curved and concentric with the pivot of the draw-bar, and in its natural position, when no strain is applied, these parts are separated some distance apart.

D is a vertical shaft, resting in boxes or bearings *l l* on the front end of the car, and having a free end movement.

m is a square loop or stirrup, which embraces the draw-bar back of the lugs, and is attached to the lower end of the shaft. The loop moves up and down in slots or grooves *n n* in the sides of the bearing B, by which it is kept in place.

o is a coiled spring around the shaft D, resting at top and bottom against the boxes *l l* or other stops.

p is a pin attached to the shaft, and passing out between the coils of the spring.

G G are two levers, pivoted at *r r* to the end of the car, the inner ends of the levers being pivoted to the pin *p*, the outer ends being carried out nearly to the sides of the car, and having handles *s s*, by which they are operated. By throwing the levers up or down the draw-bar will be correspondingly thrown up or down through the medium of the shaft D and loop or stirrup *m*, thus adapting the draw-bars to different heights of cars.

The coiled spring *o*, by reacting upon the pin *p*, tends at all times to keep the draw-bar centered, so that it matters not which side the hook-heads strike together, the spring will yield in either direction, allowing the hook-heads to engage, and when engaged the spring will hold them with the necessary tension. This form of the spring is specially adapted to allow action in both directions, by which means if one car is higher or lower than the other its draw-head can pass either under or over the other draw-head.

When the hooks are engaged the point of one hook projects over and rests between the lugs *k k* of the other draw-bar, one on the upper side and the other on the lower side, so that both hooks are inclosed and cannot slip out of engagement sidewise by the rocking of the cars or from other causes. Sufficient play, however, is given to the hooks between the lugs to allow ease of motion, and to allow the turning of curves in the road.

In case it is desired to connect two cars one of which has my improved coupling and the

other the common link-coupling, the coupling-link *u* is placed with one side in the slot or groove *i*, the other outside the hook, as shown in Figs. 4 and 5, and a pin, *v*, is passed through holes *w w* in the hook-head above the link, by which the link is securely held, and in a horizontal position. The pin has a counter-weight, *t*, by which it is held against slipping out. The link thus extended can be guided into the open draw-head of the other car by simply raising or lowering the draw-head C, as the case may require. The slot *i* in the hook is necessary to accommodate the coupling-link, since the link is too narrow to embrace the whole width of the hook.

In this invention the cars can be coupled and uncoupled without going between them.

Having thus described my invention, I claim—

1. In a car-coupling, the combination of the pivoted draw-bar C, the bearing B, the loop or stirrup *m*, embracing the draw-bar, and resting in grooves of the bearing, the vertical shaft D, attached to the loop, the coiled spring *o*, resting around the shaft, the pin *p*, attached to the shaft and projecting through the spring, and the pivoted levers G G, connected with the pin, as shown and described, and for the purpose specified.

2. In a car-coupling, the combination, with the draw-bar C and levers G G, of the vertical shaft D, connected with the draw-bar by a stirrup, *m*, and the spring *o* on the shaft, extending above and below the levers, and serving to center the draw-bar and levers by acting in both directions, as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

KIRK S. BLANCHARD.

Witnesses:
R. F. OSGOOD,
WM. J. MCPHERSON.