(No Model.)

C. THAYER.

CAR COUPLING.

No. 347,660. Patented Aug. 17, 1886.

Fig. 1.

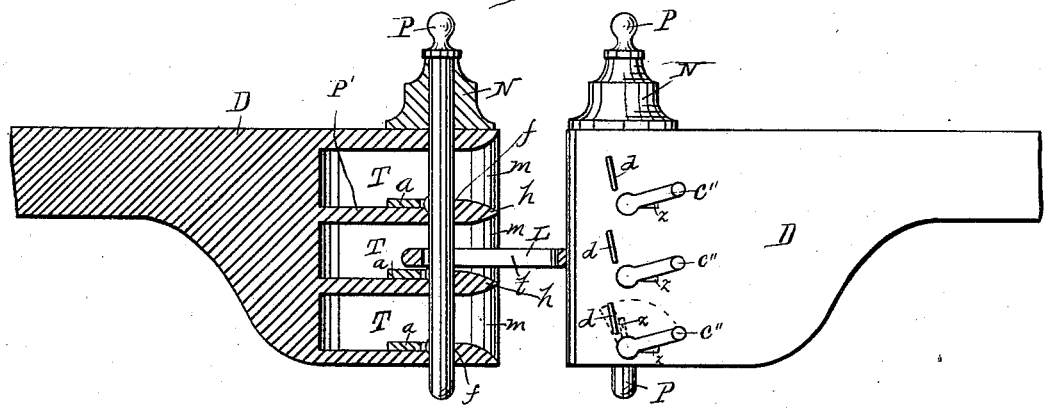


Fig. 2.

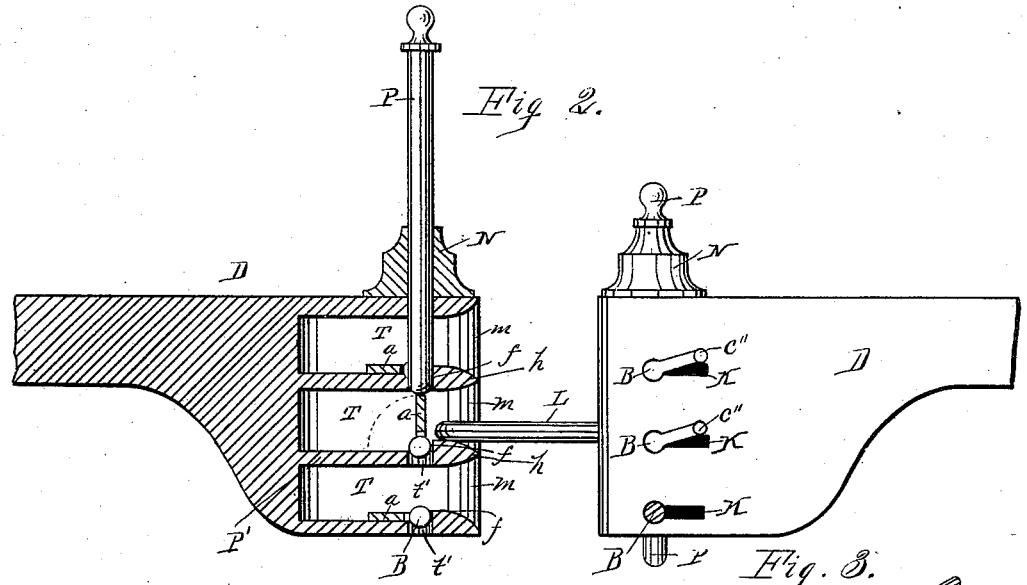


Fig. 3.

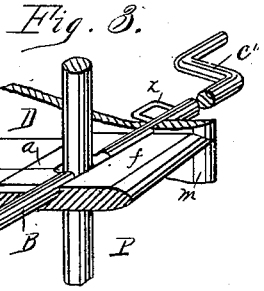


Fig. 4.

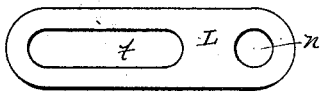
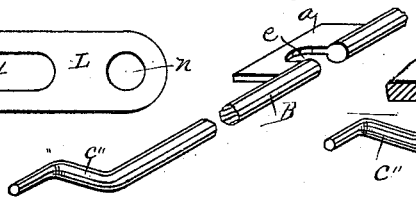


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES THAYER, OF ANN ARBOR, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 347,660, dated August 17, 1886.

Application filed May 3, 1886. Serial No. 200,942. (No model.)

To all whom it may concern:

Be it known that I, CHARLES THAYER, a citizen of the United States, residing at Ann Arbor, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Car-Couplings; 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.

My invention in car-couplers relates to that class using the common link and pin.

In my invention the means employed for holding or setting the pin is such that as the draw-heads meet the link will be caused to enter one of the heads, and coming against the pin-supporting wing of the crank-rods said wing is swung from under the pin, causing the pin to drop as the link passes under it, thus making a coupling, and avoiding the necessity of the brakeman going between the cars while making a coupling, as is common.

I have shown in the drawings a series of pockets or link-compartments in each draw-head. This is to enable the ready coupling of cars whose height may vary on account of one car being heavily loaded and the other empty, or on account of the varying heights of cars as built. The series of link-compartments I do not claim, broadly, as I am aware such have heretofore been in common use.

My invention consists in the general arrangement of parts, as hereinafter fully set forth, and pointed out particularly in the claims.

In the drawings forming a part of this specification, Figure 1 is a side elevation, with a part in section, showing parts coupled. Fig. 2 is an opposite side view of same, also partly in section, showing the parts as set ready to couple. Fig. 3 is an enlarged detail having parts broken away. Fig. 4 is a top plan of the coupling-link. Fig. 5 is a perspective of the pin supporting and releasing device.

In the drawings, D D represent the draw-heads. Each head is provided with a series of link pockets or compartments, T, and P′ are horizontal partitions or dividing-walls, each terminating with a tapering nose, *h*, at the mouth *m* of the draw-head. Mounted on each draw-head at the end is a pin-supporting cap or bracket, N, having a hole through it, which also passes vertically through the partitions P′, as shown at *t′*. Said holes are made sufficiently large to receive freely the coupling-pin P, as shown at the left of Figs. 1 and 2. Passing through each draw-head horizontally, and just above each partition and directly over the pin-holes *t′*, is a horizontal rod, B. Each rod is provided with a central wing, *a*, having in its lower edge a cut-away portion or opening, *e*, which is made sufficiently large to allow the coupling-pin to pass through when said wing *a* is tilted or turned down to the horizontal position shown in Figs. 1 and 3. The opening *e* of each wing *a* is made to register with the coupling-pin hole *t′*, passing through the horizontal wall P′ below.

I provide each rod B with a crank, *c″*, at each end. The rod should be sufficiently long to enable the operator's reaching the cranks to turn the rod without going between the cars.

I form in one face or side of each draw-head a series of key-hole shaped openings, K, which are made sufficiently large to allow the insertion of the rods B, and to allow the wings *a* to also pass through said opening into the draw-heads, as shown at the right of Fig. 2. As soon as a crank-rod B has been inserted, I firmly attach to each rod, and at an angle of about twenty degrees to the cranks *c″ c″*, a stop pin or loop, Z, which prevents the rods from working endwise, and also acts as a stop to limit the turning of the rods when raising the wings *a* from a horizontal to the vertical position shown at the left of Fig. 2, for the purpose of supporting the pin P preparatory to making a coupling. When so turning a rod B, the lug or loop Z will strike one of the stops *d*, attached to the face of the draw-head, as shown by dotted lines of Fig. 1. The placing of the loop Z on an angle of about twenty degrees to the cranks *c″* of the shafts B causes the cranks to stand forward of the vertical center when the wings *a* are in a vertical position supporting the pin, and thereby the wings are prevented from dropping down by the motion or vibration of the car. The mouths of the draw-heads are of the usual

bell shape, and that portion of each partition in advance of the transverse crank-shafts B at *f* is made higher than the portion at the rear of each crank-shaft, as clearly shown in Figs. 1, 2, and 3. The object of the raised portion *f* is to enable the link L, when passing over it, to strike the upturned wing *a* of the shaft B, so as to cause said wing to rock back from under the pin, so as to allow the supported pin to drop through the link, thus coupling the parts, as shown in Figs. 1 and 2, and also to allow the link as it is forced into the draw-head to pass freely in and lie over the wing *a* when said wing is turned down, as shown at the left of Fig. 1, the parts being coupled.

The ordinary link now in use may be used; but in Fig. 4 I show a link that I prefer to use. At one end I provide a pin-hole, *n*, and at the other an oblong opening, *t*.

In making a coupling the parts are operated as follows: The brakeman or operator first places the link L into the mouth of the draw-head, passing a pin, P, through the hole *n* of the link, which holds the link in a projected position. He then raises the pin of the opposite draw-head, and turning the shaft B, by means of the crank *c''*, until the lug Z of said shaft strikes a stop, *d*, upon the draw-head, when a wing, *a*, will stand in a vertical position below the pin P, as shown at the left of Fig. 2, the pin being dropped onto said wing, and as the draw-heads approach the link enters the opposite draw-head, and, striking against the wing *a*, it is caused to careen over or swing down, and as it falls the pin P rides over its upper face until the wing reaches its horizontal position, when the opening *e* of the wing will register with the pin-opening *t'* of the draw-head, when the pin will drop through, coupling the parts; and to uncouple the parts the operator simply draws out the coupling-pin.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupler, the combination of the draw-heads, each having a link-compartment with raised portion *f*, the crank-shaft having the wing *a*, with opening *e*, to register with the pin-hole of the draw-head, said wing being housed within the draw-heads, the lug mounted on the crank-shafts, and stops *d* on the draw-head, with links and pins, as and for the purposes specified.

2. In a car-coupler, the combination of the draw-heads having a link-compartment with raised portion *f*, the transverse crank-shaft having the wing *a*, with opening *e*, said wing being housed within the link-compartment, the mechanism for limiting the movement of the rock-shaft, and the coupling-pin, the link having the hole *n* at one end and an oblong opening, *t*, at the other, substantially as and for the purposes set forth.

CHARLES THAYER.

Witnesses:
J. B. DAVIS,
J. J. ROBISON.