(No Model.) 2 Sheets—Sheet 1.

L. HATFIELD.

CAR COUPLING.

No. 272,135. Patented Feb. 13, 1883.

Fig. 1.

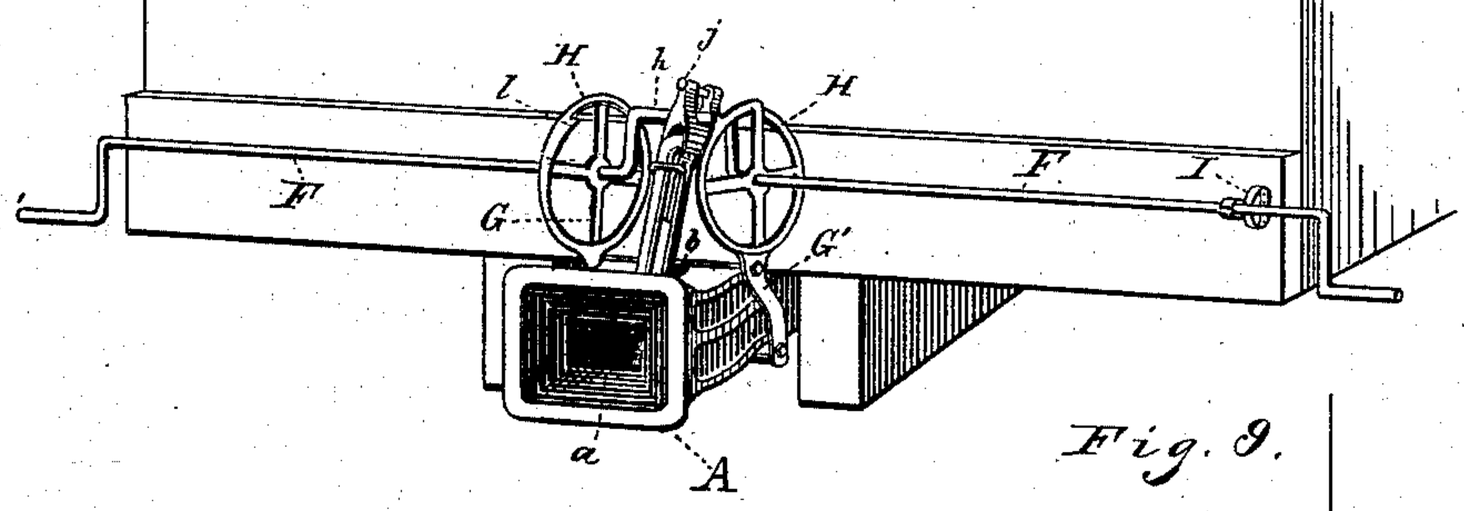

Fig. 2.

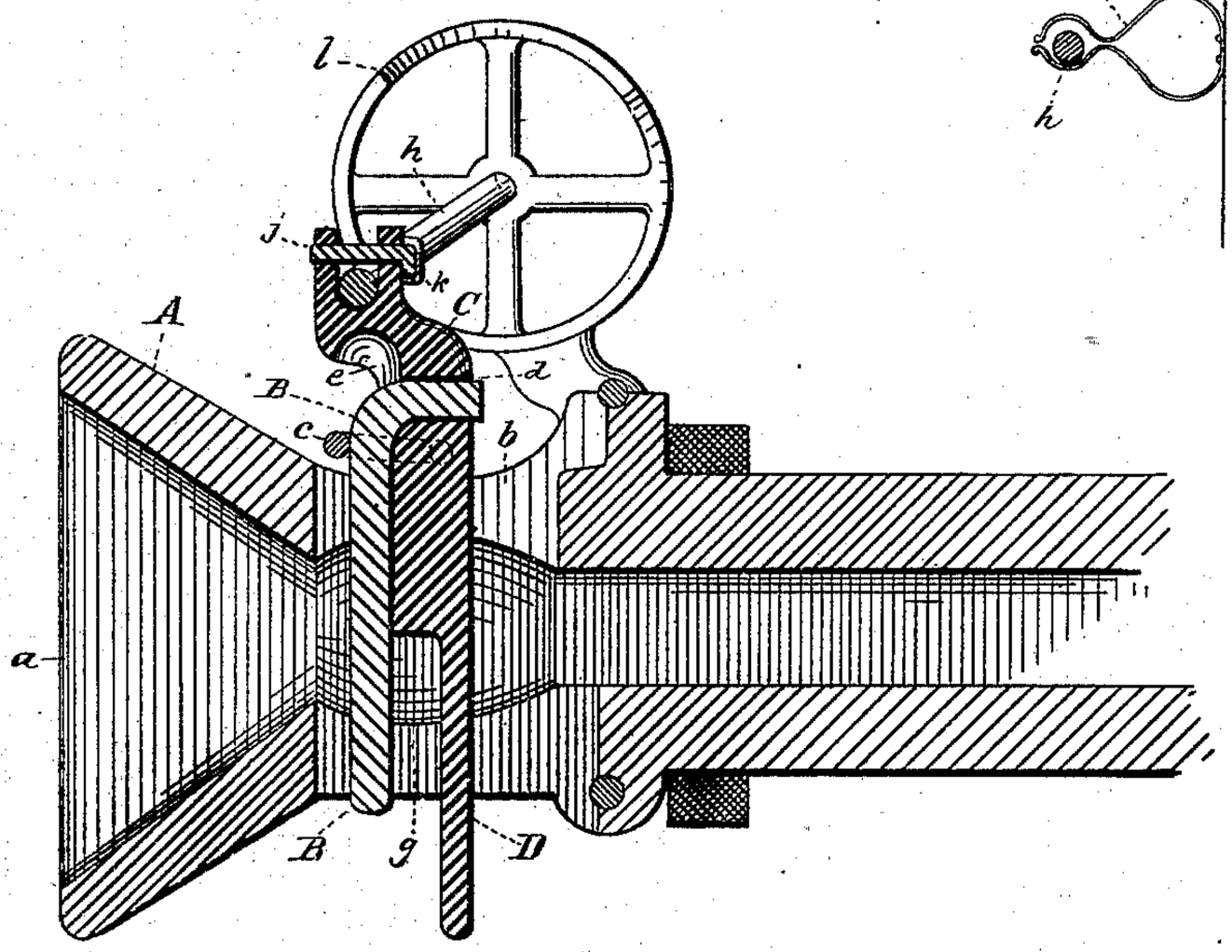

Fig. 3.

WITNESSES

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

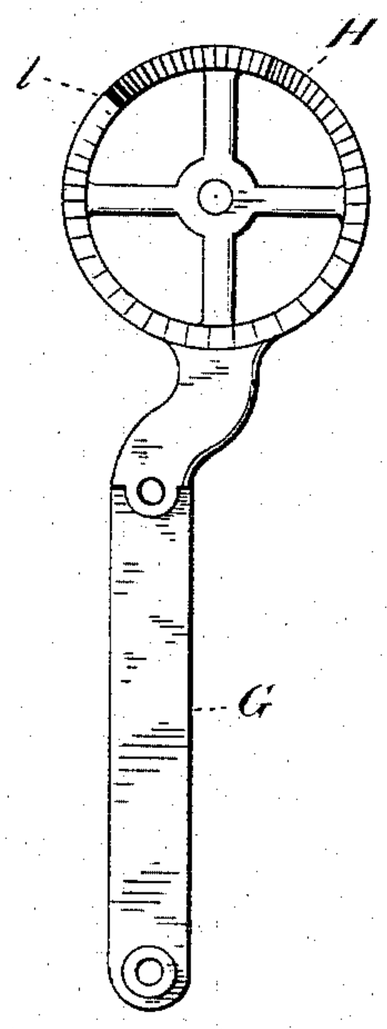


Fig. 4.

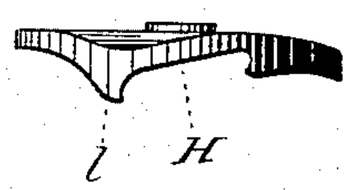


Fig. 5.

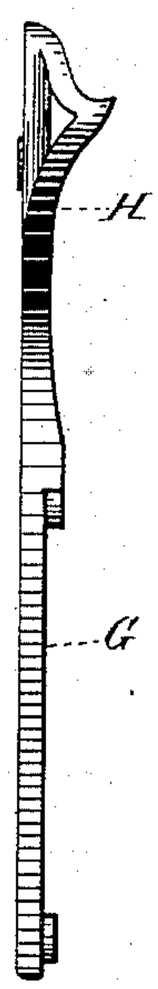


Fig. 6.

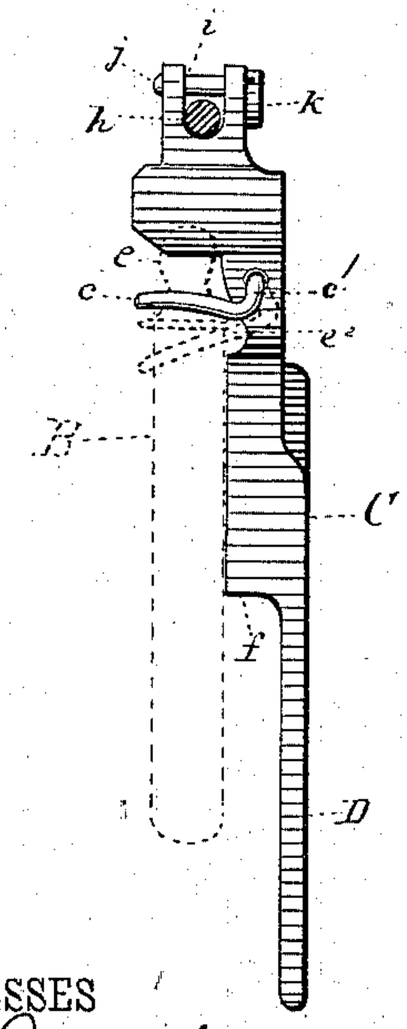


Fig. 8

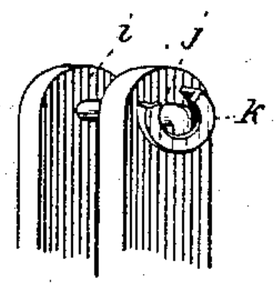
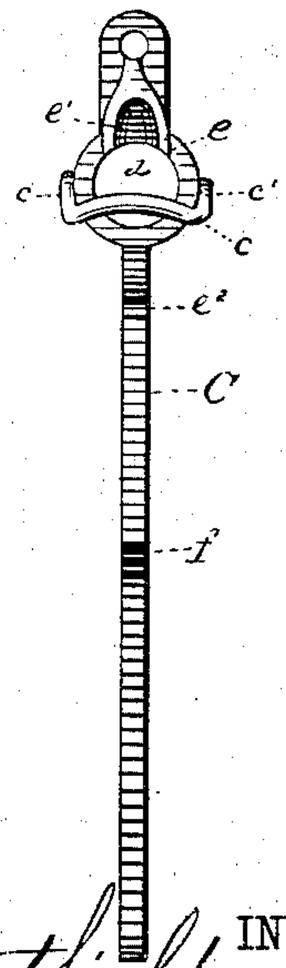


Fig. 7.



WITNESSES

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Seyman Hatfield INVENTOR

By Seggett & Seggett ATTORNEYS

UNITED STATES PATENT OFFICE.

LYMAN HATFIELD, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO HENRY C. RANNEY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 272,135, dated February 13, 1883.

Application filed October 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, LYMAN HATFIELD, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Car-Couplers; and I do hereby 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 pertains to make and use the same.

My invention relates to car-couplers; and it consists in the parts and combination of parts, as will be hereinafter fully set forth and claimed.

In the drawings, Figure 1 is an isometric view representing one end of a box-car with my coupler attached. Fig. 2 is a longitudinal vertical section taken through my coupler, showing more clearly its internal construction. Fig. 3 is a view in side elevation of one of the arms extending upward from the draw-head in which the crank-rod is journaled. Fig. 4 is a view looking down on the top of the arm, and Fig. 5 is a view in front elevation of the same. Figs. 6 and 7 are respectively views in side and front elevation of my coupling-pin carrier, and Fig. 8 is an isometric view of a portion of the upper end of the pin-carrier, showing the manner of securing the said carrier to the crank-rod. Fig. 9 is a side view of a crank-rod support for supporting the end of the crank-rod.

This invention is an improvement on a patent granted to me June 13, 1882, and numbered 259,307.

A is a draw-head, of suitable construction, which is provided with a socket, *a*, for the reception of the link. In the rear of the socket *a*, I provide an oblong slot, *b*, which extends vertically through the draw-head A.

B is a coupling-pin, which I secure at its upper end to what I call a "carrier," C. This carrier C is so constructed (see Figs. 2, 6, and 7) as to be adapted to retain pins of different makes or forms, viz:

Near the upper end of the carrier C, I provide a D-shaped clamp, *c*, which is pivoted at both sides of the carrier. This clamp *c* is so formed and secured to the carrier C as to extend out forward of the said carrier and be adapted to receive the pin B and hug it tight against the carrier.

When the coupling-pin is of the shape shown in Fig. 2—viz., with its head extending at a right angle to the shank—then the head is received in a hole, *d*, as shown in Fig. 2; but when the pin is a plain cylinder, or a cylinder with a collar, or with a collar and head, or of any like construction, then the upper end of the pin is set up to the shoulder *e*, formed on the carrier, which acts to prevent any upward motion of the said pin. This shoulder *e* is preferably provided with a recess, *e'*, into which the pointed or conical-shaped upper end of the headed pin fits. (See Figs. 6 and 7.)

I also provide a notch, e^2, in the carrier, into which the shoulder engages, as shown in Fig. 6.

I prefer to form the clamp *c* with an offset at *c'*, (see Figs. 6 and 7,) so as to make its clamping action be more directly toward the carrier C or in a horizontal direction.

The carrier C is provided with a shank, D, which is formed somewhat longer than the coupling-pin used, and also provided with a shoulder which rests on the end of the coupling-link, acts to hold the said link in a horizontal position, and thus guide the link in the socket of the opposite draw-head. By lifting the carrier C, and thus raising the shoulder *f*, it allows the outer end of the link to fall, as shown in the drawings of my former patent hereinbefore mentioned, Fig. 2, and thus where the opposite draw-head is lower the link is guided thereto in this manner. When it is desired to raise the outer end of the link E the carrier is forced downward, and the shoulder *f* is thus caused to press on the inner end of the link, and forces said end down into a depression, *g*, formed in the lower face of the socket *a* (see Fig. 4) of my former patent.

F is a crank-rod, which extends the whole width of the end of the car. This crank-rod is provided on both ends with a means for operating it, and provided at that part which is above the draw-head with a crank, *h*, which engages with the upper end of the pin-carrier C, and acts to operate said pin-carrier.

My pin-carrier is secured to the crank *h* by forming a vertical slot or opening, *i*, in the upper end of the pin-carrier, (see Figs. 6 and 8,) into which the crank *h* fits, and then securing the crank in the said slot by means of a bolt, *j*. The bolt *j* is in turn secured by pro-

viding it with a head, which is set at a right angle to its shank, said head fitting in a recess, *k*, formed on the rear of the carrier. (See Figs. 2 and 8.)

At each side of the crank *h*, I provide bearings G G′ for the crank-rod F, the said bearing being connected at its lower end to the sides of the draw-head, as shown in Figs. 1 and 2. One or both of the bearings G G′ are provided with peculiarly-constructed face-cams H. (See Figs. 1, 2, 3, 4, and 5.) These cams act to retain the crank in the desired position either when the same is set for coupling or when it is so set that it will not couple, as will be hereinafter fully explained.

I represents a support, which is secured near the ends of the crank-rod F. It will be noticed that this support is formed in such a manner that should the draw-head be pulled out to any great extent, as sometimes happens, it will release its hold on the rod F and prevent the said rod from becoming bent or broken, as would be the case if the rod was so secured that it could not be released.

The operation of my device is similar to that of the device shown and described in my prior patent, hereinbefore mentioned, with the exception of the manner of holding the pin up when it is desired that the cars should not be coupled, as is the case in "backing off" cars when switching. This is done by turning the rod F in such a manner as to raise the carrier C, but not far enough to give it an incline, and then either pulling or pushing the rod, which will cause the side of the crank to engage with the hook or projection *l* on the face of the cam H. This will act to prevent the carrier from falling. When it is desired to couple, it is only necessary to turn the rod F so as to give the pin-carrier an incline. (See Fig. 1.)

What I claim is—

1. In a car-coupler, a pin-carrier, said pin-carrier being provided with a clamp so constructed and secured to the said pin-carrier as to be adapted to hug or clamp the pin, substantially as and for the purpose shown and described.

2. In a car-coupler, a pin-carrier, said pin-carrier being provided with a recess or recesses for the reception of the heads and collars of pins of different construction, said recess preventing the upward movement of the pin, and a clamp, said clamp being adapted to hug or clamp the pin to the carrier, substantially as specified and described.

3. In a car-coupler, the combination, with a pin-carrier and crank, of a bolt formed with its head at a right angle to its shank, said head resting in a recess formed on the said carrier, whereby it is prevented from becoming displaced, substantially as shown and described.

4. In a car-coupler, the combination, with a crank adapted to operate the pin-carrier, of a retaining device adapted by engaging with the said crank to prevent the coupler from acting, substantially as shown and described.

5. In a car-coupler, the combination, with a crank-rod, of a supporting device secured to the car near its outer end or ends, said supporting device being adapted to release its hold on the crank when necessary, substantially as specified and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LYMAN HATFIELD.

Witnesses:
JNO. CROWELL, Jr.,
W. E. DONNELLY.