(No Model.) 3 Sheets—Sheet 1.

T. BREEN.

CAR COUPLING.

No. 259,999. Patented June 27, 1882.

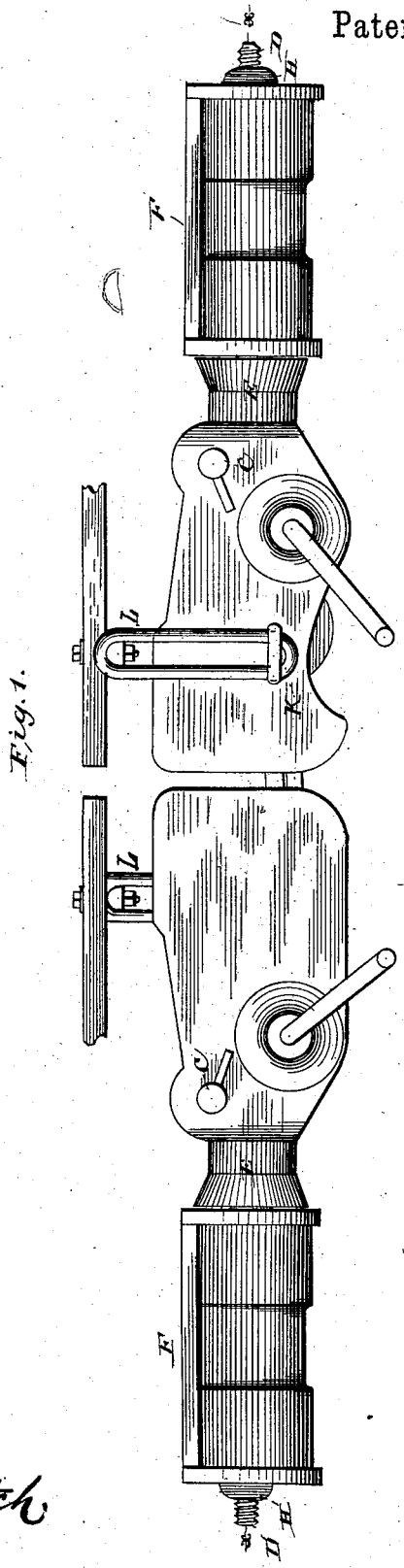

Fig. 1.

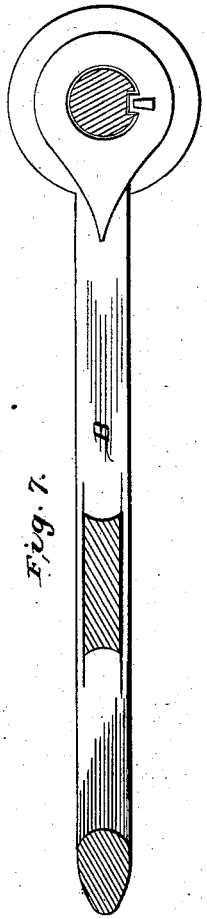

Fig. 2.

WITNESSES:

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(No Model.)

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T. BREEN.

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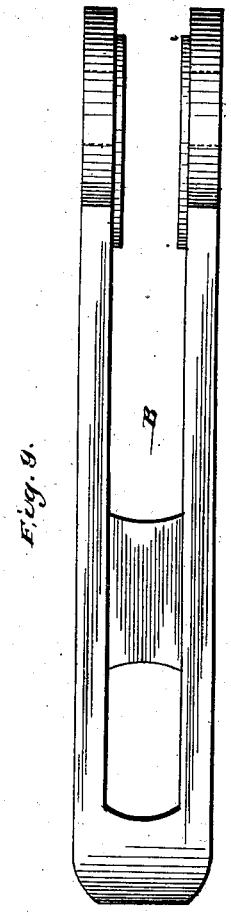

Fig. 9.

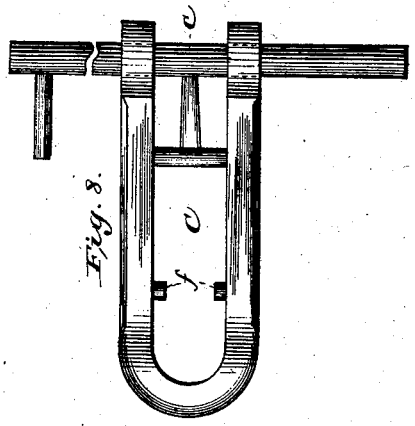

Fig. 8.

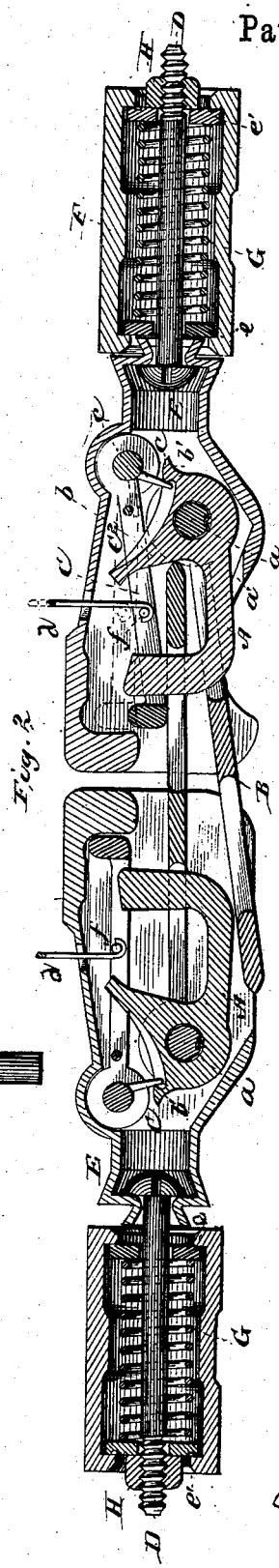

Fig. 2.

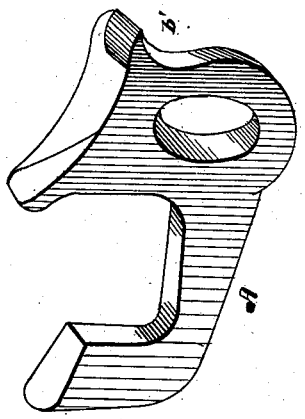

Fig. 6.

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(No Model.) 3 Sheets—Sheet 3.

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CAR COUPLING.

No. 259,999. Patented June 27, 1882.

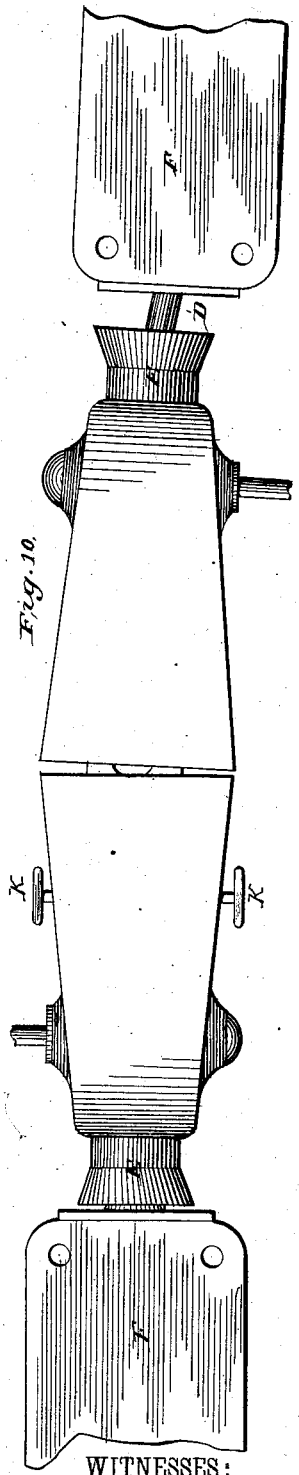

Fig. 10.

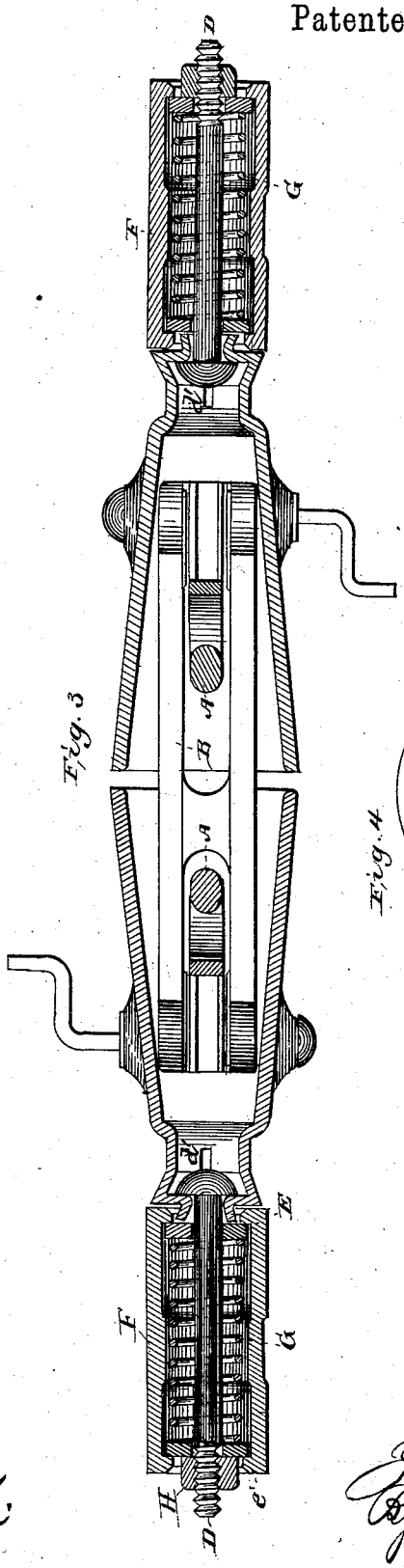

Fig. 3

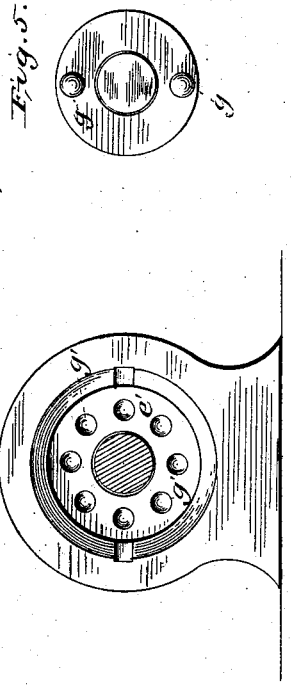

Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

THOMAS BREEN, OF KNOWLTON, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 259,999, dated June 27, 1882.

Application filed April 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BREEN, a citizen of the United States, residing at Knowlton, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved car-coupling. Fig. 2 is a vertical longitudinal section, and Fig. 3 is a horizontal section, of the same. Figs. 4, 5, 6, 7, 8, and 9 are details thereof, and Fig. 10 is a plan view of the coupling on a curve.

This invention pertains to improvements in car-couplings, having for its object to effect the automatic coupling of the cars, as also their ready uncoupling, to permit the draw-heads to readily adjust themselves to the position required to turn curves, and to provide effectually against the accidental unscrewing of the nut on the spring-coiled bolt or rod connecting the draw-head to an appendage secured to the car; and the nature of this invention consists in the employment of devices substantially as hereinafter more fully set forth and claimed.

In carrying out my invention I employ a hook, A, keyed to turn with an axis or shaft, *a*, bearing in apertures in the sides of the draw-head, and capable of dropping through a slot, *a'*, in the bottom of the draw-head below the plane of the incoming link of the approaching car. Keyed also to the same shaft having the hook A is an idle-link, B, so arranged as to also extend below the plane of the incoming link of the opposite or meeting draw-head, as seen in Fig. 2. The inner end of the hook A has a shoulder, *b*, against which the incoming link strikes to operate or elevate it into the link. The rear end of the shoulder has a cam, *b'*, while its upper surface may be recessed in front of said cam, as shown in Fig. 2.

C is a preferably link form of lever, adapted to turn freely upon the shaft *c*, bearing in apertures in the sides of the draw-head. Its purpose is, as seen by reference to Fig. 2, to prevent the accidental disengagement or liberation of the link from the hook. The shaft *c* has a pin, *c'*, which rests against the cam *b'* of the hook A, and the lever C has a cross-bar, c^2, against which the pin *c'* strikes.

It will be seen that as the lever C is lifted, when it is desired to uncouple the cars, the hook A will drop, bringing its cam *b* against the pin *c'* of the shaft *c*, carrying it against the cross-bar c^2 of the lever, and thus hold the lever in its elevated position to permit the incoming link of the approaching car to strike the shoulder of the hook when it is desired to effect the coupling of the cars.

The elevation of the lever C is effected by pulling upward on the bail or handle *d*, having its lower ends formed into hooks, which take hold of a cross-bar, *f*, in the lever, and passing through apertures in the top of the draw-head.

The idle-link is for use in the event of the breaking of a link, as by raising its keyed position to a horizontal one it will be adapted to take the place of the defective link and operate upon the shoulder of and be caught by the hook of the opposite draw-head. The shafts of the hook and the lever may have cranks or handles for operating them by hand when desired.

From the foregoing it will be observed that the coupling operation is effected automatically, while the uncoupling operation is readily effected by hand.

To permit the draw-head to readily accommodate itself to the direction required in turning curves, I provide the below-described mechanism.

D is a rod or draw-bar headed on the inside of a sleeve or nozzle, E, of the draw-head. It is prevented from turning therein, and still capable of being withdrawn, by means of keys or projections *d'*, made on the sleeve and entering slots d^2 in the head of the rod or bar. This draw-bar extends through a cushion-box, F, suitably secured to the car. Coiled within this box, and having the bar D passing through it, is a spring, G, bearing at its ends against two cross-heads or washers, *e e'*, one keyed in a fixed position as against turning or in any suitable way. This arrangement permits the draw-bar D to have a limited endwise movement, and consequently its attached draw-

head more or less movement out of a straight line to enable it to conform to the play required in turning a curve.

H is a nut fitted upon the screw-threaded end of the draw-bar D, and for the purpose of holding that end and the spring in position in the cushion-box. The nut H has a number of round-faced projections or studs, *g*, and the washer or cross-head *e'* has a circular arrangement of concavities, *g'*, to receive the round-faced projections of the nut. As the nut is screwed home its projections will successively enter the concavities of the cross-head *e'*, and thus effect the locking of the nut as against accidental unscrewing.

K K represent lugs rigidly secured to the draw-head, which serve as bearings for the hangers L and supports for the draw-head, and the hangers may be secured to the car, as shown, or by ordinary mechanical expedient.

I claim and desire to secure by Letters Patent—

1. In a car-coupling, the combination, with the draw-head apertured in its bottom, of the hook capable of movement, and having a shoulder and cam at its inner or pivoted end, the link-form lever, and its axis, having the short arm bearing on the cam of the link, substantially as and for the purpose specified.

2. The combination of the rod or draw-bar D, cushion-box F, nozzle E, spring G, cross-heads or washers *e* and *e'*, and nut H, substantially as shown, and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS BREEN.

Witnesses:
WM. HELMICK,
C. A. MCEWEN.