(No Model.)

J. HARDING, Jr.

CAR COUPLING.

No. 370,476. Patented Sept. 27, 1887.

Fig. 1.

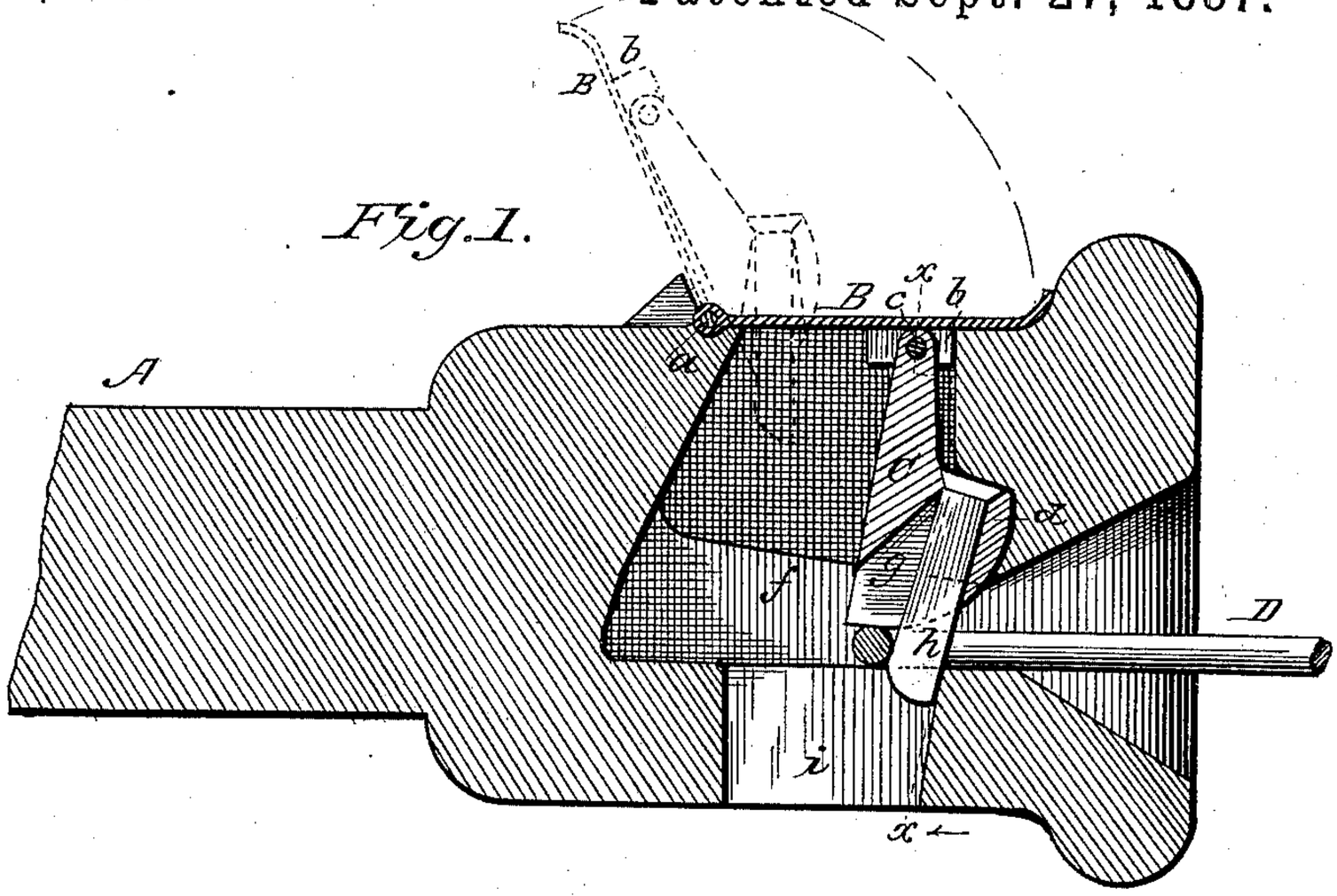
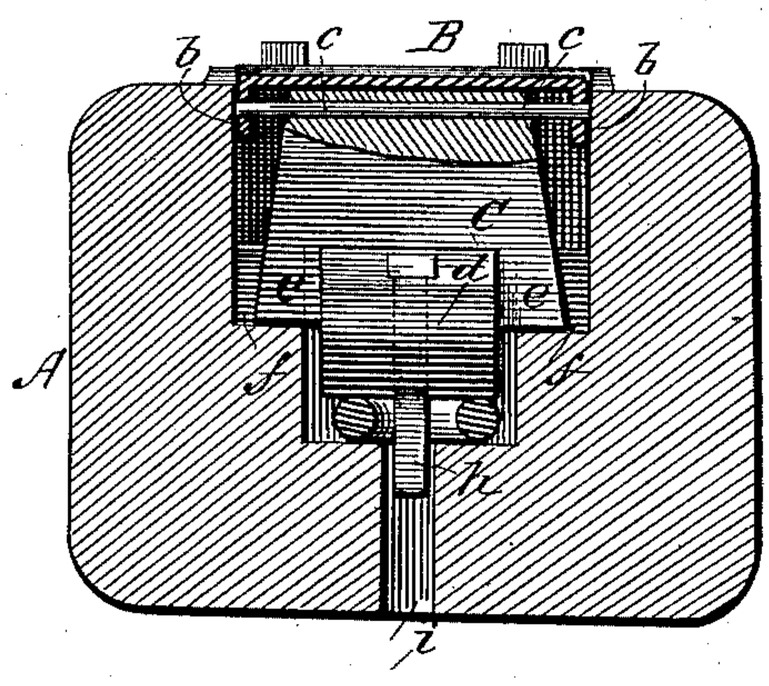


Fig. 2.



WITNESSES:

Fred G. Dieterich

Edw. C. Byrne.

INVENTOR:

John Harding Jr.

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN HARDING, JR., OF WELLINGTON, KANSAS, ASSIGNOR OF THREE-FOURTHS TO C. B. HOLMAN, ALVER ROBINSON, JAMES L. COLE, AND C. EVEREST ELLIOTT, ALL OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 370,476, dated September 27, 1887.

Application filed January 24, 1887. Serial No. 225,297. (No model.)

To all whom it may concern:

Be it known that I, JOHN HARDING, Jr., of Wellington, in the county of Sumner and State of Kansas, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

The object of my invention is to provide an automatic device for coupling cars, designed to obviate the necessity of going between the cars in coupling and thereby avoiding the danger to life and limb which frequently results therefrom.

It consists in the peculiar construction and arrangement of a hinge-plate on top of the draw-bar, and a weighted drop hinged to or near the front end of said plate and bearing a coupling-pin, all combined with the draw-bar, as hereinafter described.

Figure 1 is a vertical longitudinal section. Fig. 2 is a vertical transverse section through line *x x*.

A represents the draw-bar, which is of any ordinary or approved construction. In the top of the same is formed a slot or opening. At or near the back end of this slot and on top of the draw-bar is hinged, at *a*, the metal plate B, which covers said slot. Said plate has at its side edges, near the front end, downwardly-projecting flanges or lugs *b*, in which is fixed a rod or bolt, *c*, which forms an axis or point of articulation for the hinged drop C. This drop is constructed as a weight, with a projection, *d*, on its front side beveled or inclined to the rear on its front and bottom side, and on each side of this projection there is formed on the hinged drop a shoulder, *e e*, which rest upon ledges *f f*, formed in the draw-bar on each side of the link-channel. Through the projection *d* of the drop is formed a pin-hole, *g*, which is larger at the bottom than it is at the top, so as to allow some play of the pin, and which hole is adapted to receive a flat or rectangular pin, *h*, whose greatest transverse dimension is in the direction of the draft strain, or longitudinal to the draw-bar.

D is the link, which fits in the link-channel in the draw-bar, in the bottom of which link-channel is formed a slot, *i*, extending through the draw-bar to receive the lower end of the pin.

In making use of my invention for automatic coupling, the top plate, B, is down and entirely covering the hole in the draw-bar and protecting the same from snow and rain. The hinged drop also has its side shoulders, *e e*, resting on the ledges *f f* of the draw-bar throat, while the lower end of the pin is in the central slot. As a car approaches and its link enters the throat of this draw-bar, said link strikes the curved or beveled face of the projection *d* of the drop, pushing the latter on its hinges backward until the link passes the pin, at which moment the drop falls back to position and the pin passes through the link, thereby automatically coupling the cars. When the cars are thus coupled and the draft of the link is exerted upon the pin, the top of the projection *d* of the drop abuts against a beveled face of the draw-bar and furnishes a bearing for the draft strain, and also prevents the pin from rising or becoming uncoupled.

To uncouple the cars, the hinged plate B is raised, either by the train-man below or by means of a chain running to the top of the car, and when uncoupled from the top of the car the top plate, B, is thrown back till its center of gravity is just back of its axis, so that it stands in this position against a support in the rear and in a position that allows the other car to pull out its link without requiring the brakeman to hold it open. When left standing in this position, as shown in dotted lines, the impact of another car in coupling throws it down again into its normal position.

Having thus described my invention, what I claim as new, is—

1. The combination, with a draw-bar having a slot in its upper side, of a metal plate, B, hinged at or near its rear end above said slot, and a weighted drop, C, hinged near the front end of said plate and provided with a coupling-pin, substantially as and for the purpose described.

2. The combination, with a draw-bar having a slot in its upper side, of a metal plate, B, hinged at or near its rear end above said

slot, a weighted drop, C, hinged near the front end of said plate and provided with a projection, *d*, having a beveled front and lower face, and a coupling-pin passing through it, substantially as and for the purpose described.

3. The combination of a draw-bar having a slot in the upper side and a link-throat with ledges *f f* and central slot, a metal plate, B, hinged at or near its rear end on top of said draw-bar, a weighted drop, C, hinged near the front end of said plate and provided with shoulders *e e* on the sides and a projection, *d*, between, having a curved or inclined front and bottom side, and a pin passing through the same, substantially as shown and described.

4. The combination, with the draw-bar, of a hinged drop, C, having a projection, *d*, with a beveled face on its under side, and a pin passing through said projection, the said projection being arranged to abut against the draw-bar when the draft strain is exerted and lock the pin against rising, substantially as shown and described.

JOHN HARDING, JR.

Witnesses:
SOLON C. KEMON,
EDWD. W. BYRN.