(No Model.) 2 Sheets—Sheet 1.

F. J. CASE & G. T. CHALLISS.

CAR COUPLING.

No. 485,452. Patented Nov. 1, 1892.

Fig. 1.

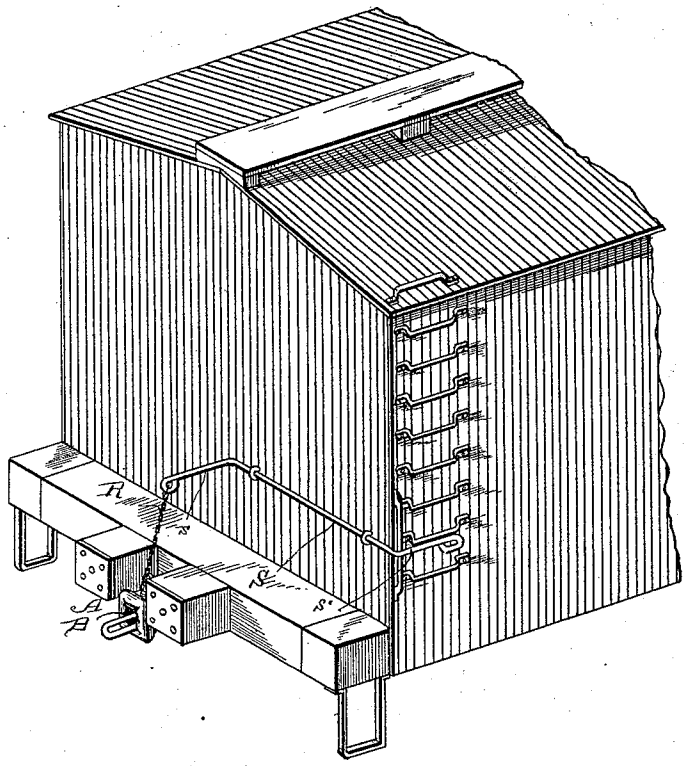


Fig. 2.

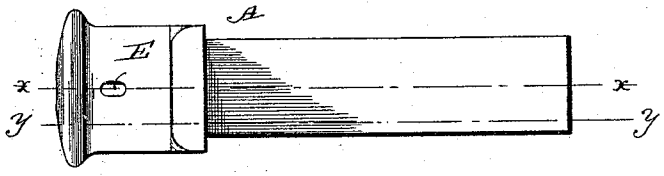
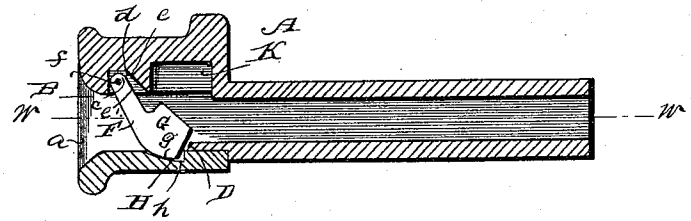


Fig. 3.



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by E. W. Anderson
their Attorney.

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(No Model.) 2 Sheets—Sheet 2.

F. J. CASE & G. T. CHALLISS.

CAR COUPLING.

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Fig. 4.

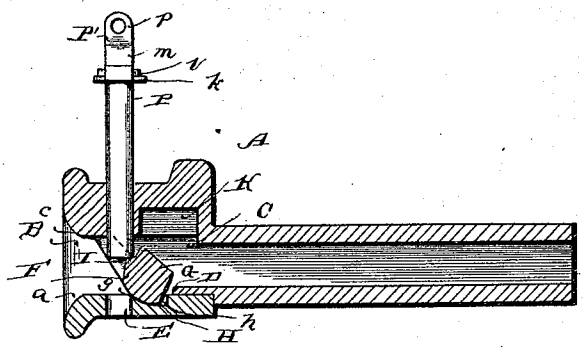


Fig. 5.

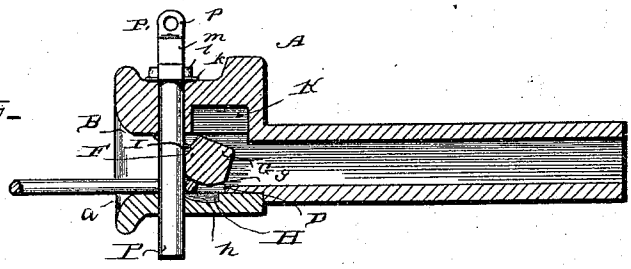


Fig. 6.

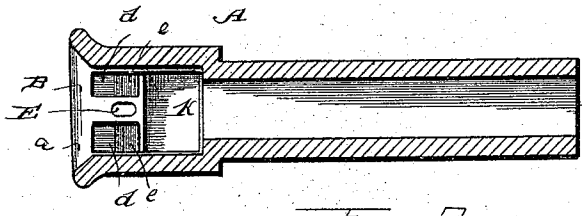


Fig. 9.

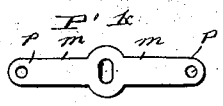


Fig. 8.

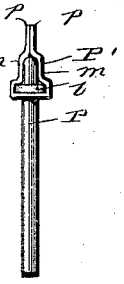
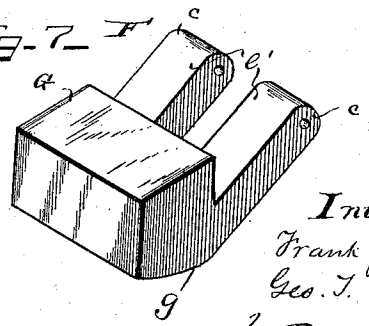


Fig. 7.



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their Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANK J. CASE AND GEORGE T. CHALLISS, OF ATCHISON, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 485,452, dated November 1, 1892.

Application filed May 17, 1892. Serial No. 433,351. (No model.)

To all whom it may concern:

Be it known that we, FRANK J. CASE and GEORGE T. CHALLISS, citizens of the United States, and residents of Atchison, in the county of Atchison and State of Kansas, have invented certain new and useful Improvements in Car-Couplings; and we 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a perspective view. Fig. 2 is a top plan view of draw-head. Fig. 3 is a vertical section on line *y y*, Fig. 2. Figs. 4 and 5 are sections on line *x x*. Fig. 6 is a horizontal section of draw-head; and Figs. 7, 8, and 9 are detail views.

This invention has relation to certain new and useful improvements in car-couplings; and it consists in the novel construction and combination of parts, all as hereinafter specified.

In the accompanying drawings, the letter A designates the draw-head, having therein a link-receiving cavity or chamber B, the mouth of which is of flaring or concave form, as indicated at *a*, in order to facilitate the entrance of the link, which is thereby guided to the center, no matter at what angle said link may be set.

C is the rear wall of the chamber or cavity A, having at its lower portion a buffer-block D, concaved on its face and serving to receive and take up the shock of concussion when a coupling is effected.

E is the vertical pin-aperture through the forward portion of the draw-head and intersecting the chamber B.

F is a swinging pin-support and link-holder, which is of peculiar construction, as will now be described. Said support and holder consists of a block of suitable material, slotted or cut away at its upper central portion to permit the passage therethrough of the coupling-pin, said slot or cut-away portion forming the arms *c c*, which project obliquely, upwardly, and forwardly and are received at their upper ends in recesses or seats *d d* in the upper wall of the chamber B, one on each side of the pin-aperture E. The rear walls of said recesses are cut obliquely, as shown at *e e*, to receive the oblique rear faces *e' e'* of the arms *c c*, the upper ends of said arms being preferably somewhat convex or rounded and fitting loosely the said recesses, in which they are held by the transverse pivot pin or pins *f*. The lower front portion of the body of the block is somewhat rounded or convex and is inclined backward, as shown at *g*. The upper rear portion G of the block is of angular form. Said block under the influence of gravity normally lies obliquely across the chamber B, its forward swing being limited by the front wall *h* of a recess H, cut in the bottom wall of said chamber. On the front portion of the block, to the rear of and between the arms *c c*, is a cut-away portion forming a shoulder or seat I, which when the block is in the position just above described lies under the pin-aperture E and forms a support for the pin in its uncoupled position. When, however, the link of an approaching car enters the chamber A, it strikes against said block, throwing it backwardly and upwardly, releasing the pin, which drops between the arms *c c* and through the link. In the upper wall of the chamber B, back of the pin-aperture and the recesses *d d*, is an angular recess K, which is designed to receive the angular upper rear portion G of the block. It will be observed that when in coupled position the block rests upon the upper face of the link holding it in place and that, owing to the provision of the recess K and the peculiar form of the recesses *d d*, said block is permitted to regulate itself to the link when the cars are going over an uneven track or when cars of different heights are coupled together.

P designates the coupling-pin, and P' an attachment on the upper end thereof for the connection of the chain of the uncoupling-lever. This attachment comprises a piece of material having a body portion *k*, perforated to receive the pin and fitting against the under surface of the shoulder *l* on said pin. Integral with said body portion are the side portions *m m*, bent up around the opposite sides of the heel or pin and terminating above the upper end thereof in the contiguous parallel portions *p p*, perforated for the connection with the lifting-chain R. This attachment

may be applied to the common form of pin now in use.

S is a rock-lever loosely supported in suitable position on the end of the car and having at one end a crank *s*, to which the upper end of the lifting-chain is connected, and at the other end a crank *s'*, projecting to the side of the car in position for operation.

It will be apparent from the foregoing that the action of coupling is entirely automatic and that by means of the uncoupling-lever described all necessity for going between the cars is obviated.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

1. In a car-coupling, the combination, with the draw-head having therein the link-receiving cavity or chamber B and the intersecting pin-aperture E, of the swinging pin-support and link-holder comprising a block slotted or cut away at its upper central portion, forming the arms *c*, which project obliquely, upwardly, and forwardly and are pivoted in recesses in the upper wall of said chamber one on each side of the pin-aperture, said recesses having their rear walls cut obliquely, the lower front body of the block being somewhat rounded or convex and inclined backward and the upper rear portion of angular form, a shoulder or seat I on said block forming a support for the pin, an angular recess K in the upper wall of the chamber to receive said block, and a stop on the lower wall to limit its forward movement, substantially as specified.

2. In a car-coupling, the combination, with a coupling-pin, of an attachment for the head thereof, said attachment comprising a plate or body portion perforated to receive the pin and fitting against the under surface of the shoulder on the head thereof, and the side flanges bent around the head of the pin, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK J. CASE.
GEORGE T. CHALLISS.

Witnesses:
ELLSWORTH INGALLS,
FRED SCAMELL.