

S. N. KEITH.
Car-Coupling.

No. 198,746.

Patented Jan. 1, 1878.

Fig. 1.

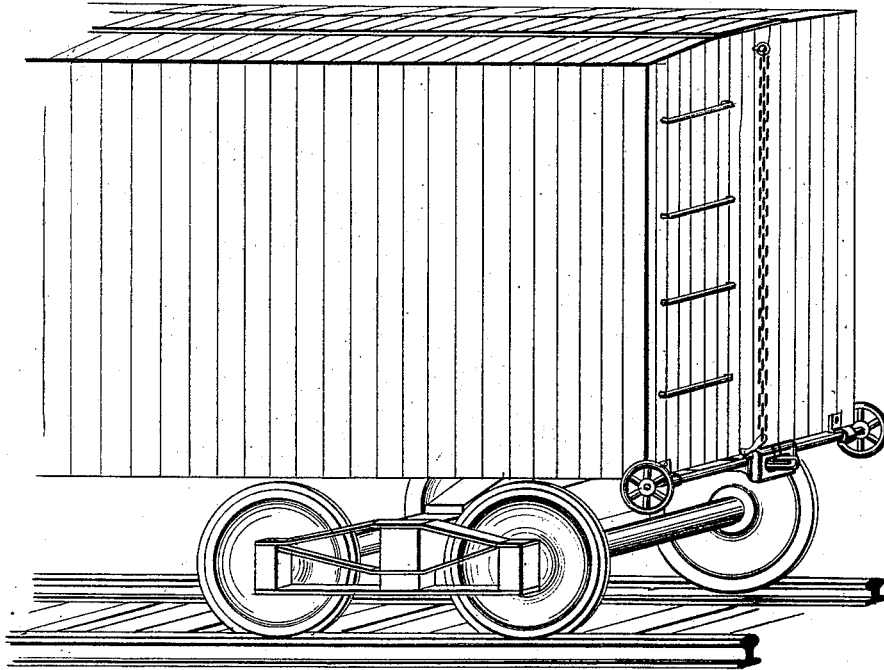
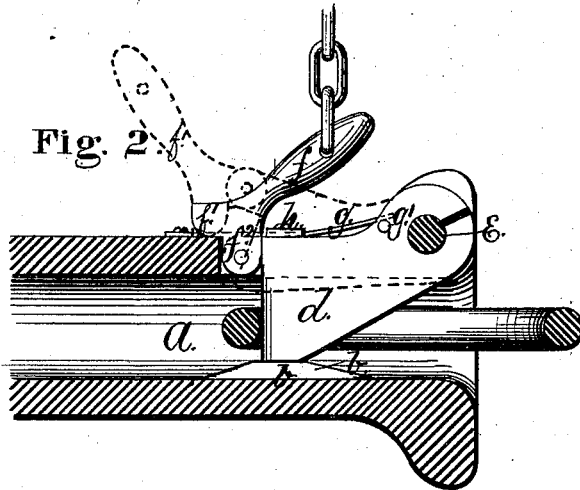


Fig. 2.



WITNESSES.

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IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **198,746**, dated January 1, 1878; application filed October 4, 1877.

To all whom it may concern:

Be it known that I, SAMUEL N. KEITH, of the city and county of Providence, State of Rhode Island, have invented certain new and useful Improvements in Car-Couplings; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification.

Figure 1 is a perspective view, showing the application of the improved coupling to a box or freight car. Fig. 2 is a vertical section through the draw-head, showing the locking device in solid lines when coupled, and in broken lines when uncoupled.

The object of the invention is to use with the ordinary link a device which, when set, will couple two cars together automatically, and which can be uncoupled from the top or sides of the car, which will be simple in construction and durable, and by which a car with the old link and draw-head can be coupled with the present improved coupling.

The invention consists in the combination, with the draw-head and link, of a hinged stop, a raised wedge-shaped projection on which the stop rests, and a peculiar cam-lever, as will be more fully set forth hereinafter, and pointed out in the claims.

In the drawing, *a* represents the usual draw-head, with this difference, that a raised wedge-shaped projection, *b*, is cast in the lower part of the draw-head, by which the link, on entering, is raised. This raised wedge may be made of more thickness than shown, and forms a rest for the stop *d*. The stop may, therefore, be made of less depth, and, as the link is raised when draft is exerted on the pin, is nearer on a line with the pin *E*, cast in the draw-head, and forming the abutment against which the strain is exerted, so that the line of the strain and the line of resistance form a smaller angle.

d represents a hinged stop or latch. It is hinged on the pin *E*, which is cast in one piece with the draw-head, so that the same may be placed as near as possible to the forward edge of the draw-head. The stop *d*, particularly the portion surrounding the pin *E*, should be made of malleable metal, so that it can be closed around the pin *E*.

f represents a lever-cam, hinged at *f*² to the stop *d*, and resting on the draw-head by the cam projection *f*¹. The handle is shown in solid lines in position when the link is secured, and in broken lines when the stop is raised. A chain or line is connected to the lever *f*, so that the stop may be raised from the top of the car, and a light shaft is shown as connected with the same near the cam *f*¹, and provided with a hand-wheel at the side of the car in Fig. 1.

g is a spring secured to the draw-head, its loose end resting on the pin *g*¹, secured to the stop *d*, so as to exert a pressure on the same.

The stop *d* may be made so as not to rest on the raised wedge *b*, and only extend low enough to hold the link securely. When so arranged, a stop, *h*, is placed on the stop *d*, so that the same is kept from passing too low into the draw-head by the stop *h* resting on each side of the slot in which the stop *d* moves.

The arrangement of all the parts is such as to secure the greatest possible strength and reliability of action; and if, by exposure to dust, rain, or frost, the hinged stop should not readily enter the link, the lever *f*, by coming in contact with the car by the receding of the draw-head when two cars are brought together, would push the stop down, and so under all possible emergencies secure the prompt action of the coupler.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the draw-head *a*, provided with a slit, and the pin *E*, cast in one piece with the same, of the wedge *b* and detent *d*, arranged and operated substantially as and for the purpose described.

2. The combination, with the draw-head *a*, provided with the wedge *b*, pin *E*, and detent *d*, of the lever-cam *f* *f*¹ and hinge *f*², and the spring *g*, arranged and operating substantially as specified.

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