(Model.)

S. F. NEWLAND.

Car-Coupling.

No. 227,819. Patented May 18, 1880.

Fig. 1.

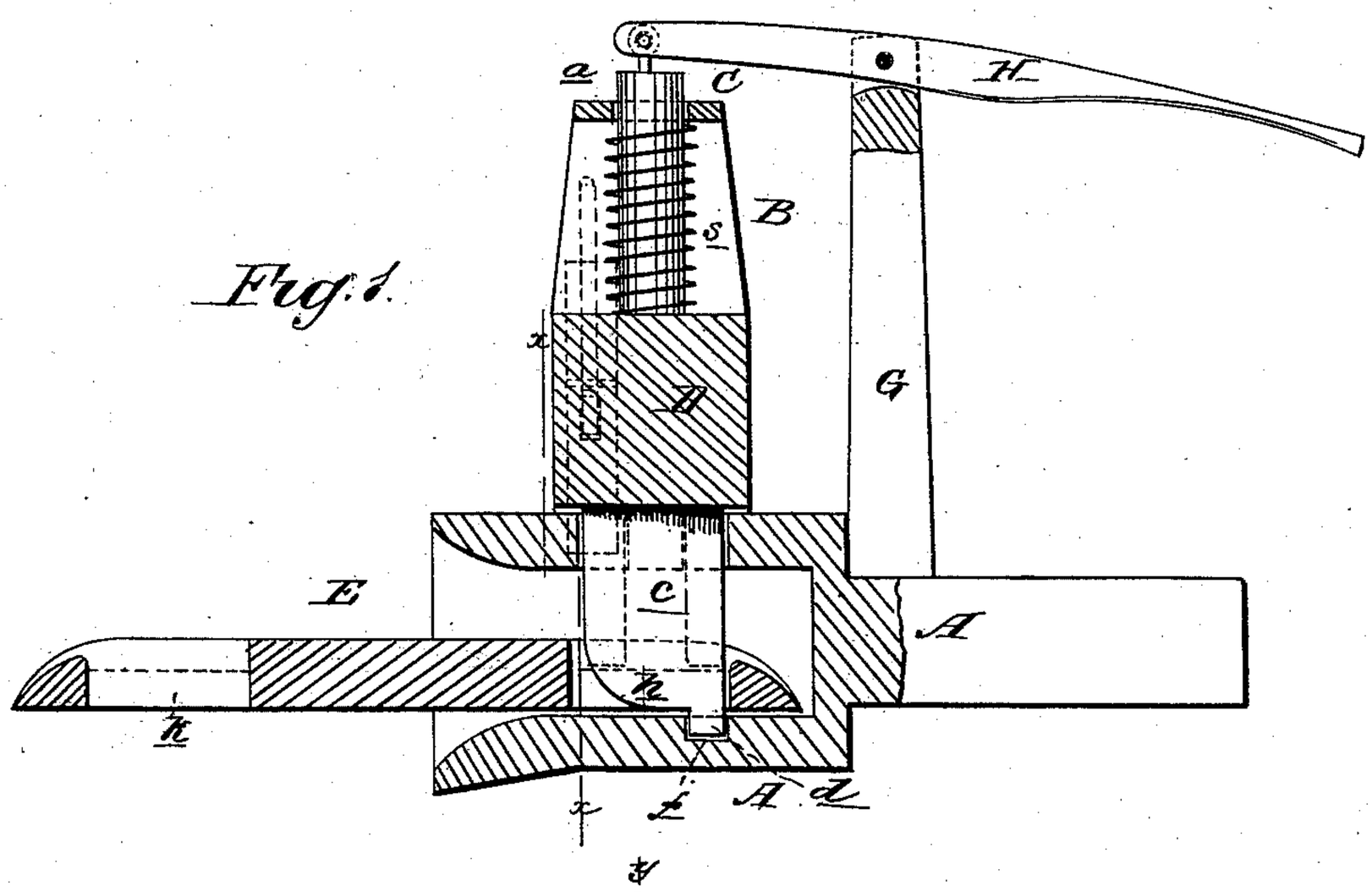


Fig. 2

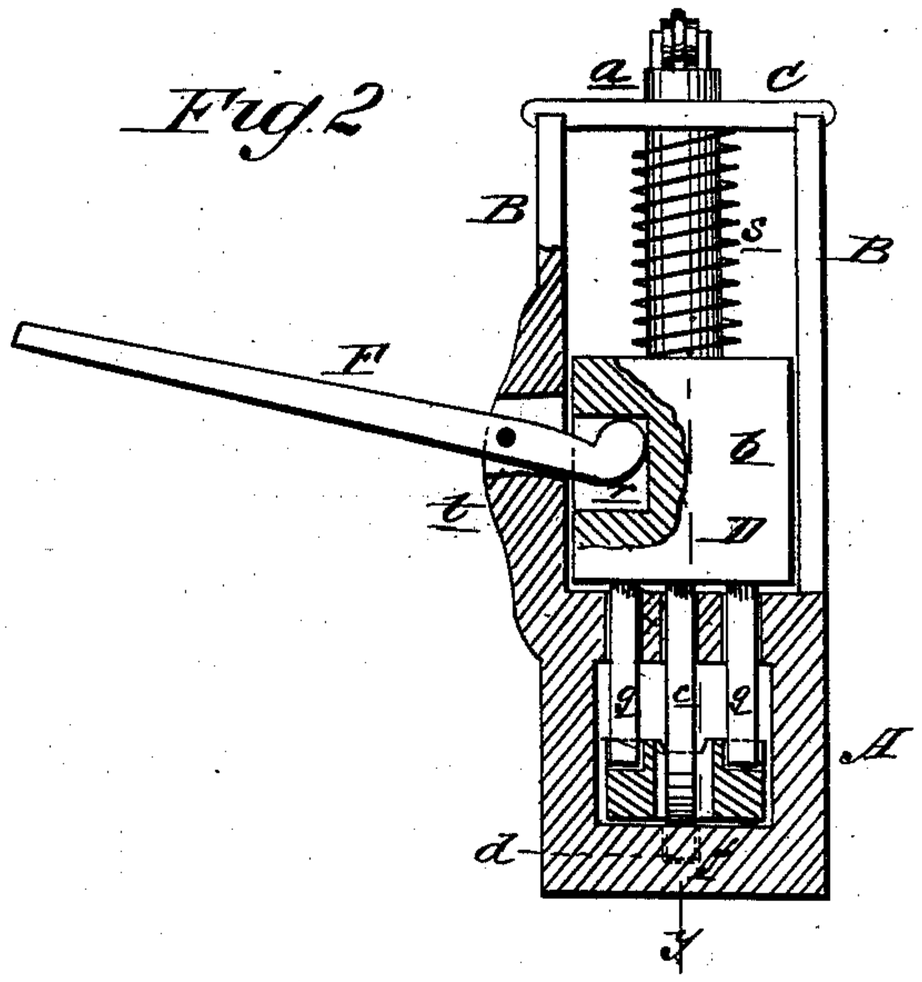


Fig. 3.

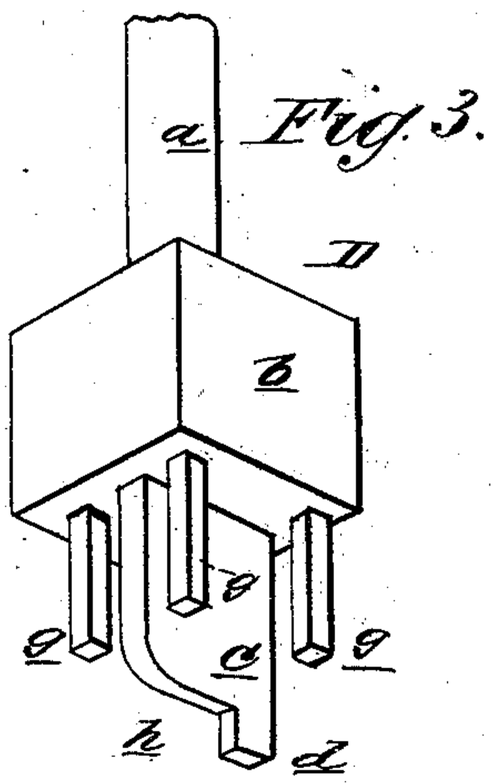
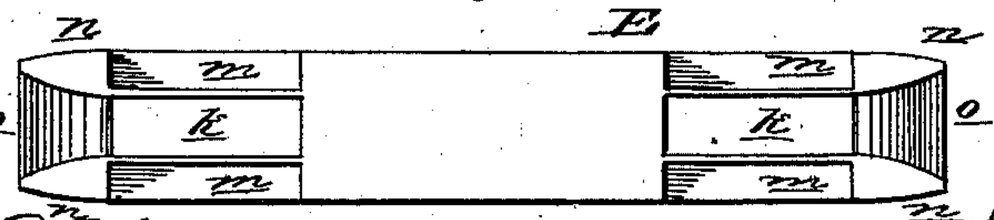


Fig. 4.



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UNITED STATES PATENT OFFICE.

SYLVESTER F. NEWLAND, OF WAYNESFIELD, OHIO, ASSIGNOR TO HIMSELF AND RUFUS I. KREBS, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 227,819, dated May 18, 1880.

Application filed March 3, 1880. (Model.)

To all whom it may concern:

Be it known that I, SYLVESTER F. NEWLAND, of Waynesfield, in the county of Auglaize and State of Ohio, have invented a new and Improved Car-Coupler, of which the following is a specification.

Figure 1 is a vertical sectional elevation of the coupler on line *y y*, Fig. 2. Fig. 2 is a vertical sectional elevation on line *x x*, Fig. 1. Fig. 3 is a perspective view of the coupling-pin. Fig. 4 is a plan of the coupling-link.

Similar letters of reference indicate corresponding parts.

This invention relates to that class of couplers called "self-couplers;" and it consists of a five-pronged spring-actuated coupling-pin, which is held and guided between two vertical standards that are fixed on top of the draw-head; and it consists, further, of a link of a peculiar construction, as will hereinafter be described.

In the drawings, A represents the draw-head. B B are the vertical standards fixed on top of the draw-head A, and united at the top by the cross-piece C. D is the coupling-pin, provided with the shank *a*, which projects upward through the center of the cross-piece C. *b* is the square shoulder of the coupling-pin D, fitting between the standards B B. *c* is the main central prong of the coupling-pin D, which prong *c* is broad and flat, and terminates in the point *d*, which enters a socket, *f*, in the bottom of the draw-head A, on the inside thereof, the front lower corner of the said prong *c* being rounded off, as shown at *h*, so that the said pin D may be readily lifted by the thrust of the beveled end of the link E. *g g* represent the four smaller prongs of the coupling-pin D, which prongs *g g* project downward from each of the four corners of the said coupling-pin D.

The coupling-link E is a flat bar of metal, having in each end an elongated rectangular opening, *k*, for the reception of the central prong, *c*, of the coupling-pin D. Said link E is flat on the under side, and on its upper face the four grooves *m m* are formed on either side of the rectangular openings *k*, said grooves *m m* being designed for the reception of the ends of the prongs *g g* of the coupling-pin D. The ends of the said coupling-link E are beveled, as shown at *n*, and centrally grooved, as shown at *o*, to facilitate the lifting of the coupling-pin D when either end of the link E enters the draw-head A of the car.

s is a spiral spring encircling the shank *a* of the pin D between the cross-piece C and the shoulder *b* of the said coupling-pin D. *r* is a socket in the side of said coupling-pin D, in which engages one end of the lever F, which is pivoted in the lugs *t*, that are attached to one of the standards B.

G represents the end of the car, on which is pivoted the lever H, one end of which lever is connected with the shank *a* of the coupling-pin D.

If the coupling-link E be thrust into the draw-head A, it comes in contact with the central prong, *c*, of the coupling-pin D and raises the said pin, and as soon as the point of the said link E has passed the point *d* of the said coupling-pin D the prong *c* of the pin D is forced into the opening *k* of the link E by the spring *s* passing through the said opening *k*, so that the point *d* shall enter the socket *f* in the draw-head A, and at the same time the prongs *g* of the coupling-pin D engage in the grooves *m* of the link E, and in this manner the cars are firmly coupled. The brakeman may uncouple the cars from the side by means of the lever F, or from the top of the car by means of the lever H.

A special advantage of this car-coupler is, that it will automatically uncouple, for it will be seen that if the coupling-link E be inclined sidewise at an angle of about forty-five degrees it will, by means of its upward pressure upon two of the prongs *g g*, lift the central prong, *c*, from out of the opening *k* of the link, so that the cars will be uncoupled at once. Hence it will be seen that if one car should be thrown from the track and tip or incline at an angle of forty-five degrees, or thereabout, said car would uncouple from the next car, and by this automatic uncoupling much loss of life and property may be saved.

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

1. A car-coupling constructed substantially

as herein shown and described, consisting of coupling-pin D, provided with five downward-projecting prongs, *c g g g g*, and a coupling-link, E, provided with openings *k*, grooves *m m*, and beveled and grooved ends, all arranged as set forth.

2. In a car-coupler, the combination, with the draw-head A and standards B B, of the coupling-pin D, provided with shank *a*, shoulder *b*, central prong, *c*, and corner prongs *g g*, substantially as herein shown and described.

3. The combination, with the five-pronged coupling-pin D, of the coupling-link E, provided with openings *k*, side grooves, *m*, beveled ends *n*, and end grooves, *o*, substantially as shown and described.

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Witnesses:
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