(No Model.)

H. A. SPRINGER.

CAR COUPLING.

No. 350,275. Patented Oct. 5, 1886.

Fig. 1.

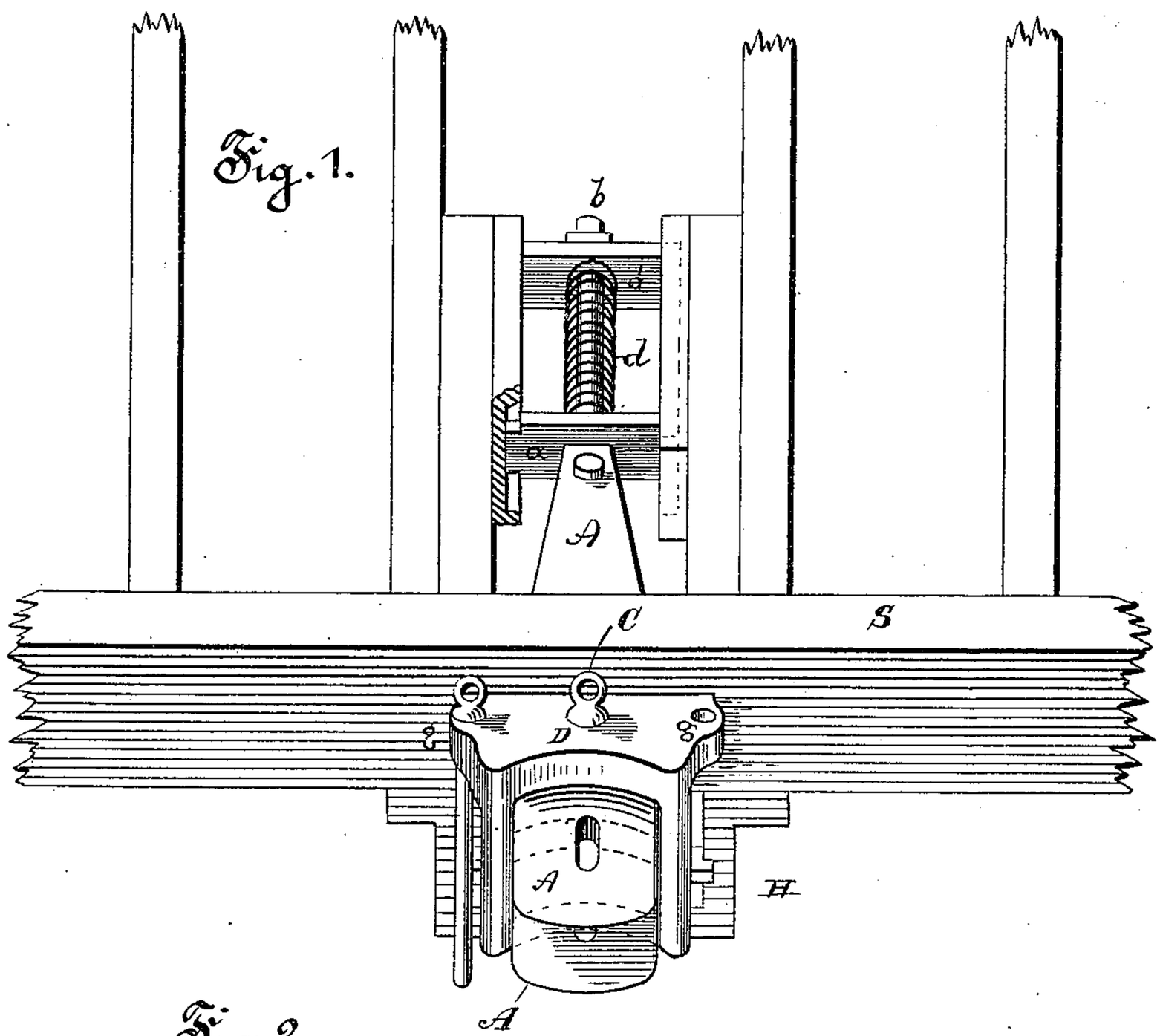


Fig. 2.

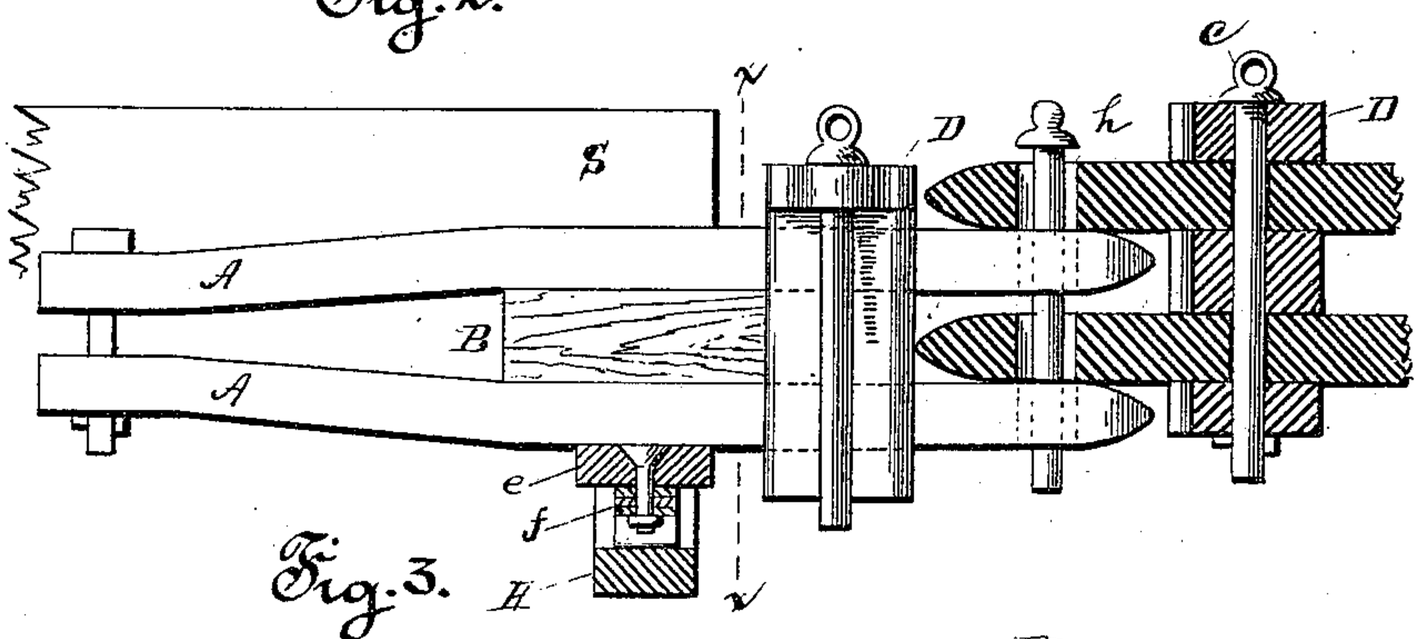
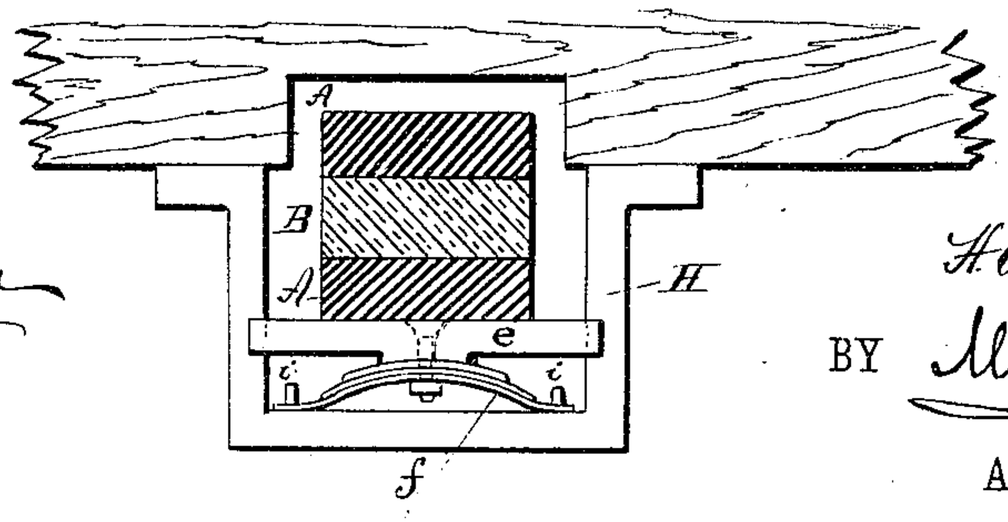


Fig. 3.



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HENRY A. SPRINGER, OF EL MORO, COLORADO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 350,275, dated October 5, 1886.

Application filed June 30, 1886. Serial No. 206,701. (No model.)

To all whom it may concern.

Be it known that I, HENRY A. SPRINGER, of El Moro, in the county of Las Animas and State of Colorado, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

My invention relates to car-couplings, and has for its object to construct a coupling that will dispense with a link, thereby obviating the dangerous operation of guiding in coupling cars.

It consists in parallel draw-bars having tapering ends extending from within a concave-faced buffer secured to the bars, and having a suitable space between to receive the bar of an opposing coupling, and in the details of construction of the buffer and draw-bars, as will be hereinafter fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my coupling; Fig. 2, a side elevation, partly in section, of two couplings united; and Fig. 3, a vertical section through line *x x* of Fig. 2.

The end sill, S, of the car is recessed to receive two draw-bars, A A, whose front ends extending out from the sill are gradually tapered off. These bars are alike in form and of the same length, extending parallel under the car, with a space between. They are held apart by means of a block, B, secured to the draw-bars by bolts, and the inner ends of the bars are bent toward each other. The two extreme ends thus brought together are pinned to one end of a draw-bolt, *b*, which carries a following plate, *a*, against which the ends of the draw-bars rest, and a second following plate, *a'*, rests against a nut upon its outer end. The plates *a* and *a'* are held apart by a strong spiral spring, *d*, encircling the draw-bolt *b*, and adapted to slide in suitable ways upon guide-pieces secured to the under timbers of the car.

A buffer-block, D, constructed with suitable mortises to receive the draw-bars A A, is slid over the outer ends of said draw-bars to a position near the end sill, S, of the car, and detachably secured thereon by a pin, C, the metal therein between the mortises acting as an additional block to hold the draw-bars apart. The face of the buffer D is concaved and the top cast with extending sides, *g*, in which apertures are formed to receive and carry extra coupling-pins. A space is left between the end sill and the buffer, so that the force of contact can be relieved by the action of the spiral spring *d* and the following plates *a a'*.

The draw-bars A A are supported in front by a carrier, *e*, formed with recessed ends adapted to slide upon the vertical sides of the yoke H, suspended from beneath the car, and this carrier *e* rides upon and is bolted to a strong leaf-spring, *f*, which bears upon the bottom of the yoke H, and is provided with slots cut in each end to receive the guide-pins *i i* in the said yoke to keep the spring in position and admit of its expansion and contraction.

Between the top of the recess formed in the end sill and the top of the draw-bars, and between their sides and the yoke, a space is provided sufficient to admit of a slight vertical and horizontal movement of said draw-bars.

This form of coupling will couple as well upon a curved as in a straight track, as the eyes *h* in the extended draw-bars will register at nearly any angle, and the tapering points of contact of the draw-bars, together with the concaved face of the buffer, admit of ready coupling in the event one car is higher than the other.

In substituting my coupling for others in the standard cars it is not necessary to change the following plates, simply the draw-bolt, and even this in many cases can be dispensed with, as many are of similar construction.

The coupling is strong, simple, and easy to handle, being especially adapted to freight-cars. In the event a draw-bar should break, the buffer can be unbolted, slipped off, and another section substituted without trouble.

The pin connecting the cars is not liable to breakage, as the strain is distributed along its entire length.

In coupling, as the cars come together, the tapering points of the draw-bars cause them to glide easily to their position one above the other, and a pin taken from one of the apertures in the top extension of the buffer is readily dropped through the eyes, which cannot fail to properly register.

Having thus fully described my invention, I

claim as new and desire to secure by Letters Patent—

1. In a car-coupling, the combination, with a detachable concave-faced buffer-block, D, of parallel bars A, attached thereto by a pin, C, provided with spaced tapering ends extending beyond the buffer-block, substantially as shown and described, and for the purpose herein set forth.

2. In a car-coupling, the combination, with two parallel bars, A, having their outer ends tapered, and provided with a rear spacing-block, B, of a detachable concave-faced buffer-block, D, provided with a central integral spacing-block, substantially as shown and described, and for the purpose herein set forth.

3. The combination, with the parallel projecting bars A, provided with a rear spacing-block, B, and a detachable concave-faced buffer-block, D, held upon said bars by a pin, C, of the supporting-yoke H, carrier *e*, spring *f*, and guide-pins *i*, substantially as shown and described, and for the purpose herein set forth.

4. In a car-coupling, the detachable concave-faced buffer-block D, provided with an upper and lower opening to receive the draw-bars A, a central integral spacing-block, and a vertical aperture to receive the pin C, together with apertured projections for extra coupling-pins, substantially as shown and described, and for the purpose herein set forth.

HENRY A. SPRINGER.

Witnesses:
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