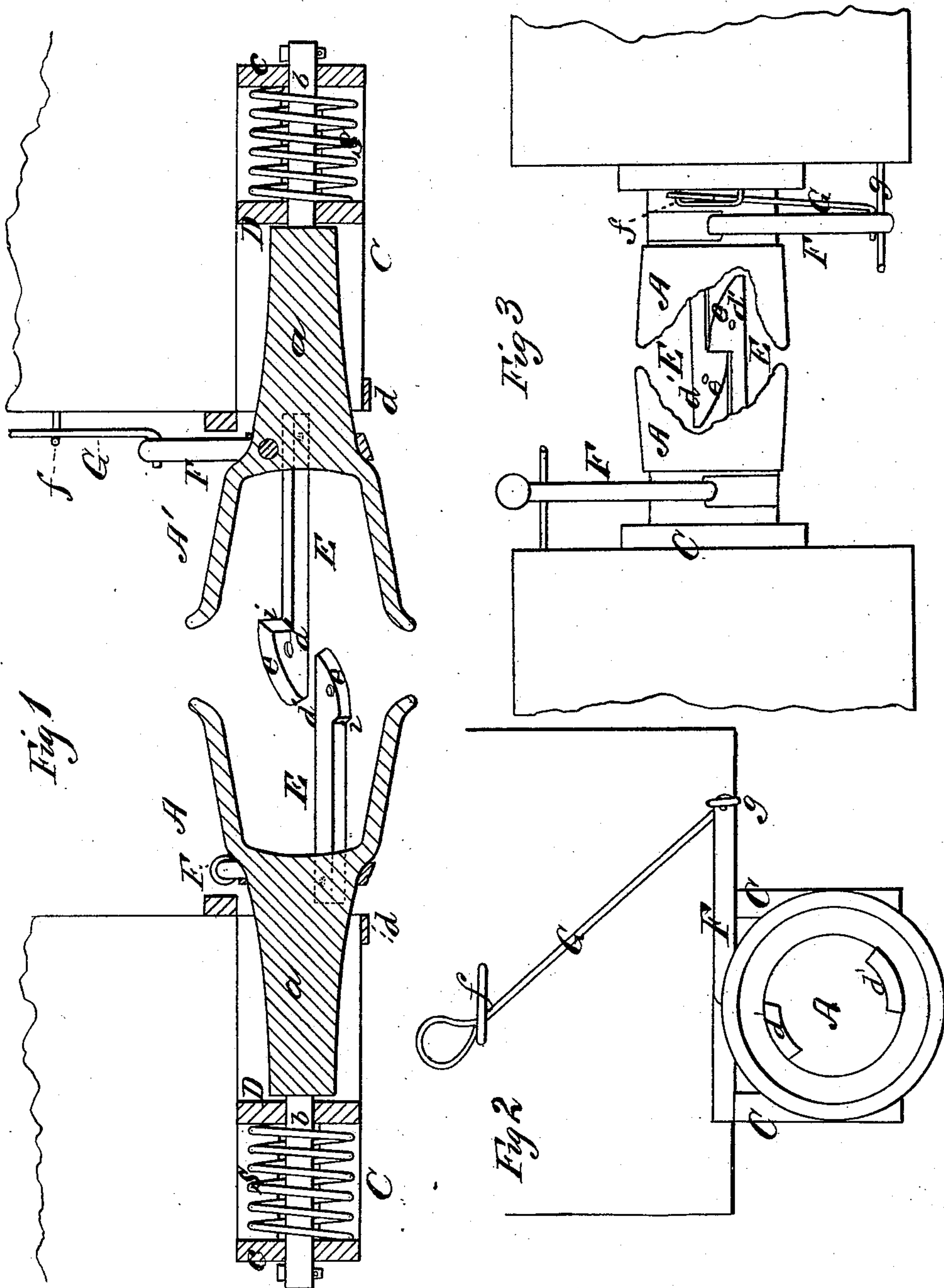


J. HARRIS.
Car-Coupling.

No. 169,169.

Patented Oct. 26, 1875.



WITNESSES

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JOSEPH HARRIS, OF PAOLA, KANSAS.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **169,169**, dated October 26, 1875; application filed February 6, 1875.

To all whom it may concern:

Be it known that I, JOSEPH HARRIS, of Paola, in the county of Miami and State of Kansas, have invented a new and valuable Improvement in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a longitudinal vertical section of my car-coupling. Fig. 2 is an end view, and Fig. 3 is a side view, of the same.

This invention has relation to improvements in automatic car-couplings, as will be hereinafter more fully set forth.

In the annexed drawings, A A' designate hollow bell or cup shaped draw-bars, having in rear of the said cup a solid extension, *a*, terminating in a cylindrical part, *b*, as shown in Fig. 1. Part *b* is in the nature of a journal, and has its rear bearings in a block, *c*, in a rectangular box, C, rigidly secured to the bottom of the car, its front bearing being on a suitable metallic strip, *d*, rigidly secured across the front end of the said box. Draw-bars A A' are thus capable of an axial rotation, for a purpose hereinafter explained. D represents a block, arranged within box C, and having lateral movement in guides upon the sides of the said box. This block compresses a spring, S, arranged upon the cylindrical part *b* of the draw-bars, and is designed to lessen the shock of the cars to be coupled, after the usual well-known manner of a bunter-spring. E designates coupling-arms, rigidly secured in the hollow of draw-bars A, and having barbs *d'* upon their free projecting ends. These bars are of angular form, and, in cross-section, are convex upon one side, and concave upon the other. They are also provided with beveled inner front edges *e* of curved form, and with a rectilinear rear edge, forming a rectangular shoulder, *i*, with the shank of the arms, as shown in Fig. 1.

When two cars, provided as above described, are brought together to be coupled, the beveled edges *e* of the barbed coupling-arms coming in contact will cause the draw-

bars to rotate in opposite directions until the barbs pass each other, when the said draw-bars, being relieved of the restraint of the said barbs, and acting under the influence of a weighted lever, F, will return to their former position, causing the coupling-arms to interlock, as shown in Fig. 3, thus effecting a coupling.

Levers F are rigidly, but removably, secured to draw-bars A A', and are designed as well to be used for uncoupling the cars as for causing the draw-bars to be returned to their position after rotating in effecting a coupling. They also extend a suitable distance out from the draw-bars within reach of the train-hand, who may either operate them in uncoupling by hand while standing at the side of the cars, or by means of a rod, G, pivoted to the end of levers F, and extending through a staple, *f*, to the top of the cars.

With a view to holding the draw-bar against undue rotation under the influence of weighted lever F, a stop, *g*, preferably of metal, is rigidly secured to the end of a car, so that when levers F come in contact with the said stop, as shown in Fig. 3, they will be rigidly held against farther downward gravitation, and, being rigidly secured to draw-bar A, the latter will be effectually checked in its rotation.

I am aware that interlocking or hooked turning and sliding draw-bars have heretofore been employed, as seen in the patent of Joseph Miller, dated January 29, 1867; and I, therefore, lay no claim to such invention.

What I claim as new, and desire to secure by Letters Patent, is—

The rotating draw-bars A A', having journals *b*, and coupling-arms E E', with angular barbed heads *d'*, convex on one side and concave on the other, in combination with lever F, rod G, box C, sliding block D, and spring S, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH HARRIS.

Witnesses:

W. R. WAGSTAFF,
J. H. PRATT.