H. A. SHARP.

Car-Coupling.

No. 162,772. Patented May 4, 1875.

Fig. 1.

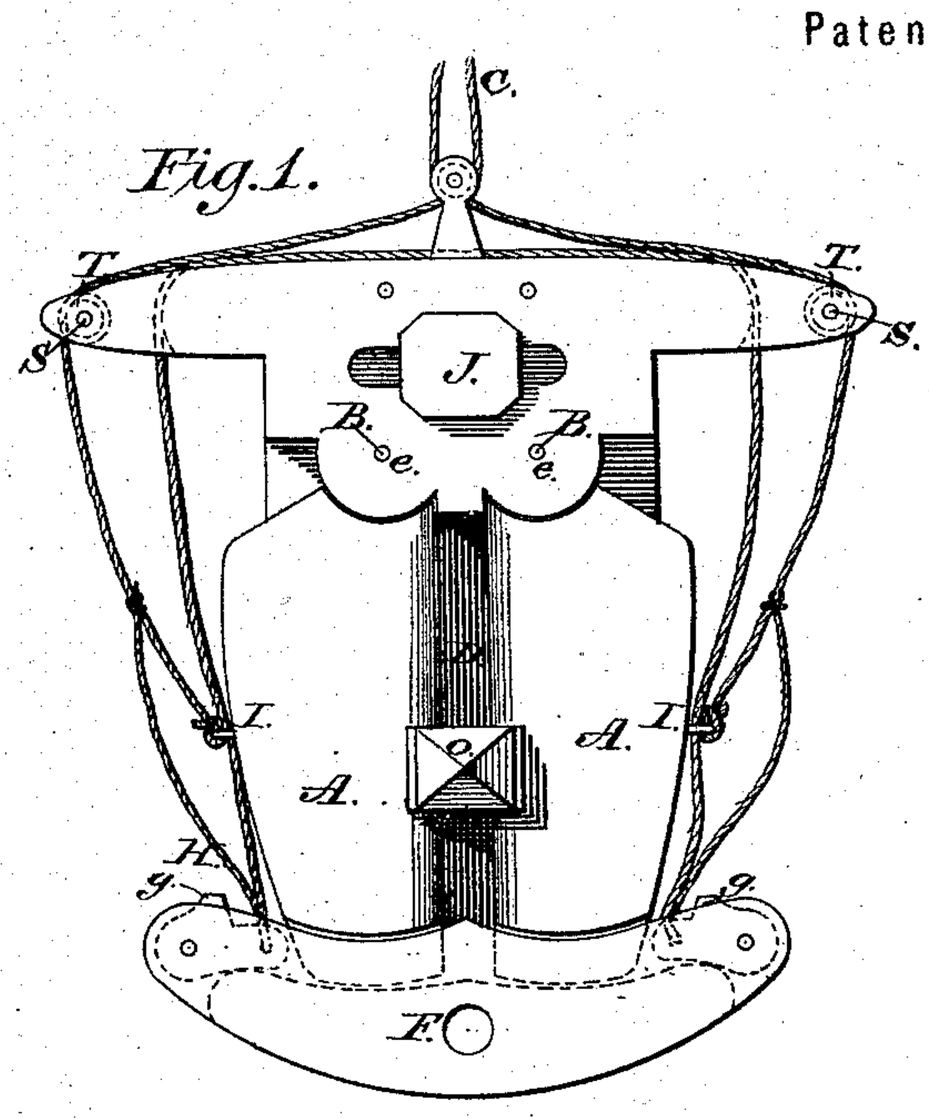


Fig. 2.

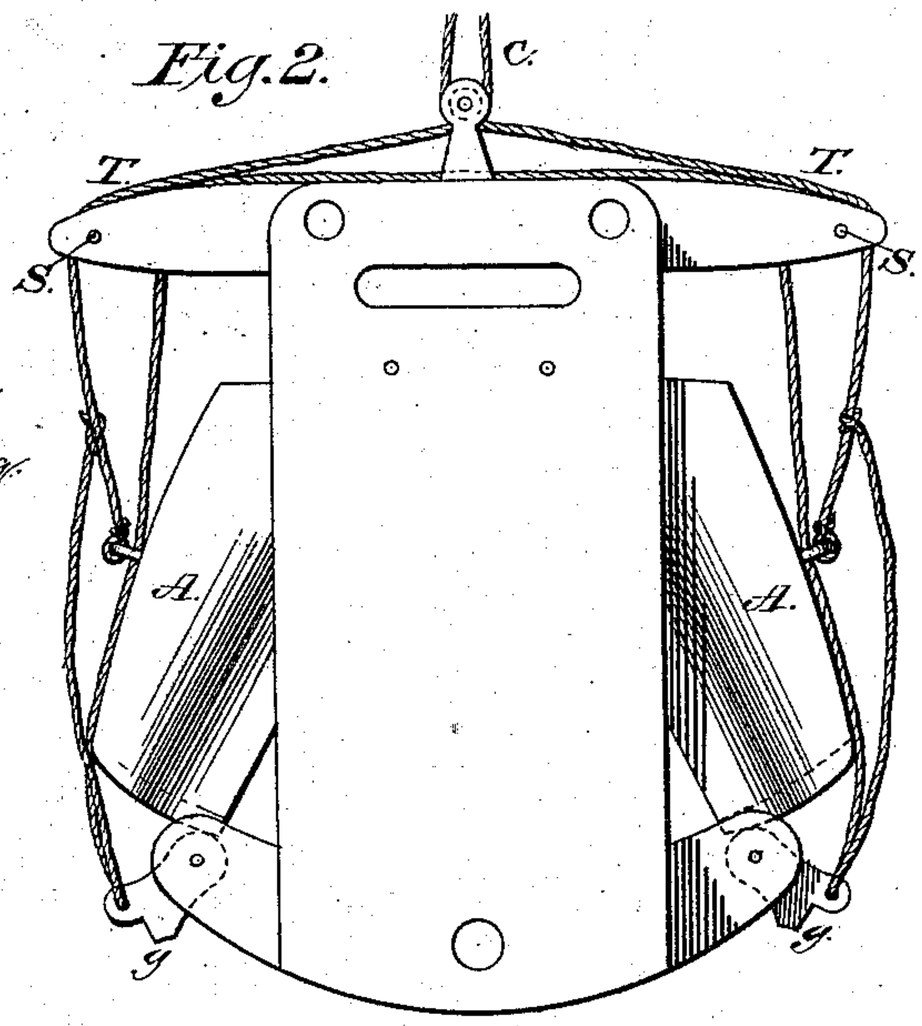


Fig. 4.

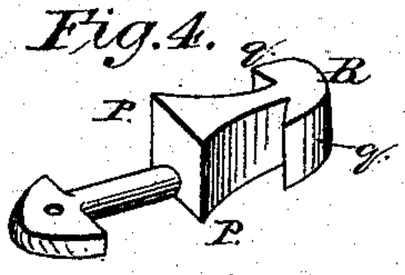


Fig. 5.

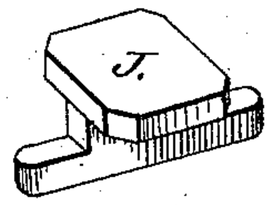
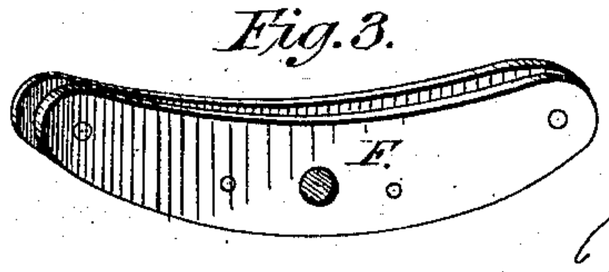


Fig. 3.



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UNITED STATES PATENT OFFICE.

HIRAM A. SHARP, OF JACKSON COUNTY, MISSOURI.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **162,772**, dated May 4, 1875; application filed February 10, 1875.

To all whom it may concern:

Be it known that I, HIRAM A. SHARP, of the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Car-Couplers for Railroads; and do hereby declare that the following is a full and complete description thereof, reference being had to the accompanying drawings, forming part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 represents a front view of the car-coupler. Fig. 2 is intended to represent a back view of the same; Figs. 3, 4, and 5 represent various portions, in detail, of the coupler.

This invention relates to the means of coupling and uncoupling cars; and it consists in the novel construction and peculiar arrangement of the devices, combined and shaped as hereinafter described, and mentioned in the accompanying drawing.

Fig. 1 is a front view of my improved coupler, consisting of the two jaws A A, suspended by the bolts B B in such a manner as to open when the rope C is pulled. When the rope C is slack the jaws A A will, of their own weight, swing together again. The back and inside walls of the jaws A A are straight; they are also grooved near their inner edge, thus forming a ridge to fill the grooves in the link. The front walls are rounded in such a manner as to receive the point of the link in the opening thus formed at D. The ends at top of Fig. 1, near B B, have each one-half their front removed and circled in such a manner as to fit similar circles at E E, thus forming a complete hinge that can be easily moved by means of the rope C. The lower portions of the jaws A A have each one-half their front taken off, and are circled in such a manner as to fit on the circle and in the groove of piece F. There must be enough space between the braces *g g*, when they are closed, and the jaws A A to allow sufficient play to turn curves. They are easily opened by means of the rope C, opening at same time as the jaws A A, by means of a small rope attached to the point I, and also to the rope C, leaving as much slack of rope C as brace *g* would require to make space between brace *g* and jaw A, when pulled apart or uncoupled, and will fall down, as shown in Fig. 2, to be replaced by the hand. Fig. 5 is a bumper, as shown at I in Fig. 1. This bumper consists of a cap or plate, with shoulder attached, forming one and the same solid piece. The shoulder is intended to rest against a piece of rubber or spring at the back framed in the frame of the car for that purpose, thus breaking the force of the blow when two cars come together. The link is barbed in a manner similar to a fish-hook, in order that it may catch against the jaws A A. Having once passed between them the jaws A A are rounding in front, that they may more easily receive the point of the link when pressed against them. The link is longer from shoulder to point at one end than the other. This is to force it to strike the rear of the inside of the coupler, thus retaining it in its proper place. From the shoulder of the short end to the center shoulder is rounded, so that in case one of the cars upsets the link would pull out and not throw but the one car off the track. It also has a hole in short end, so as to hitch to other cars not provided with my coupler. The head of the link O, commencing at P P, embracing the offset *q q*, is square, in order to keep it from turning and work at ease in opening D. After passing jaws A A, from *q q* to R is beveled to a round point, and brace against the front part of back in opening D at the time of coupling. The short end will not touch the rear side when the couplers come together. There are two arms at right angles, grooved at S S for the reception of the pulleys T T, on which the rope C passes, being first attached to the brace *g*, and then to point I. In the jaw A there is a similar one attached on the opposite side, both passing through a ring on top and center of the arms in Fig. 1.

My coupler can be made to couple cars of any variation in height as close and as good as though they did not vary in the least, without any extra strain on either link or jaws; it will act substantially as a self-coupler. When the link is pressed against the

jaws A A, the jaws, swinging right and left when thus pressed against, close immediately on the link, (the circled sides of the jaws being heaviest,) passing to their rear, thus retaining until otherwise removed by hand or operating upon rope C.

I claim—

The hinge-jaws A A, the pivoted braces *g g*, and the link O, in combination with the bumper I, to act substantially as described.

HIRAM A. SHARP.

Witnesses:

BEN. B. BROWN,

HENRY E. ROCKEY.