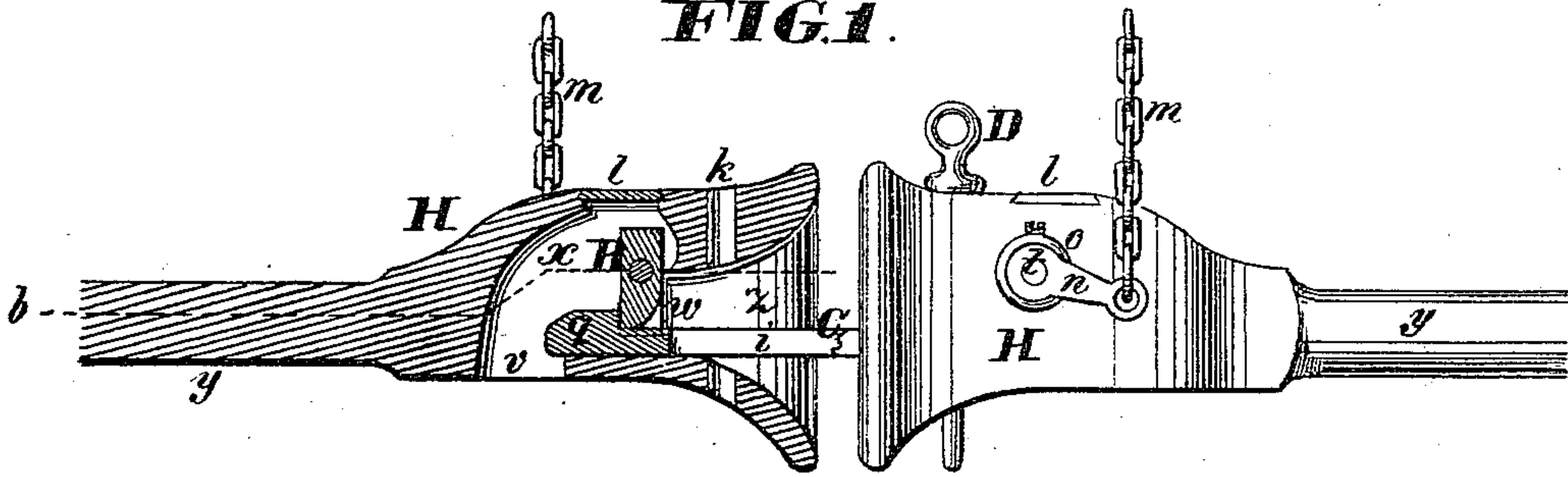


## Car-Couplings.

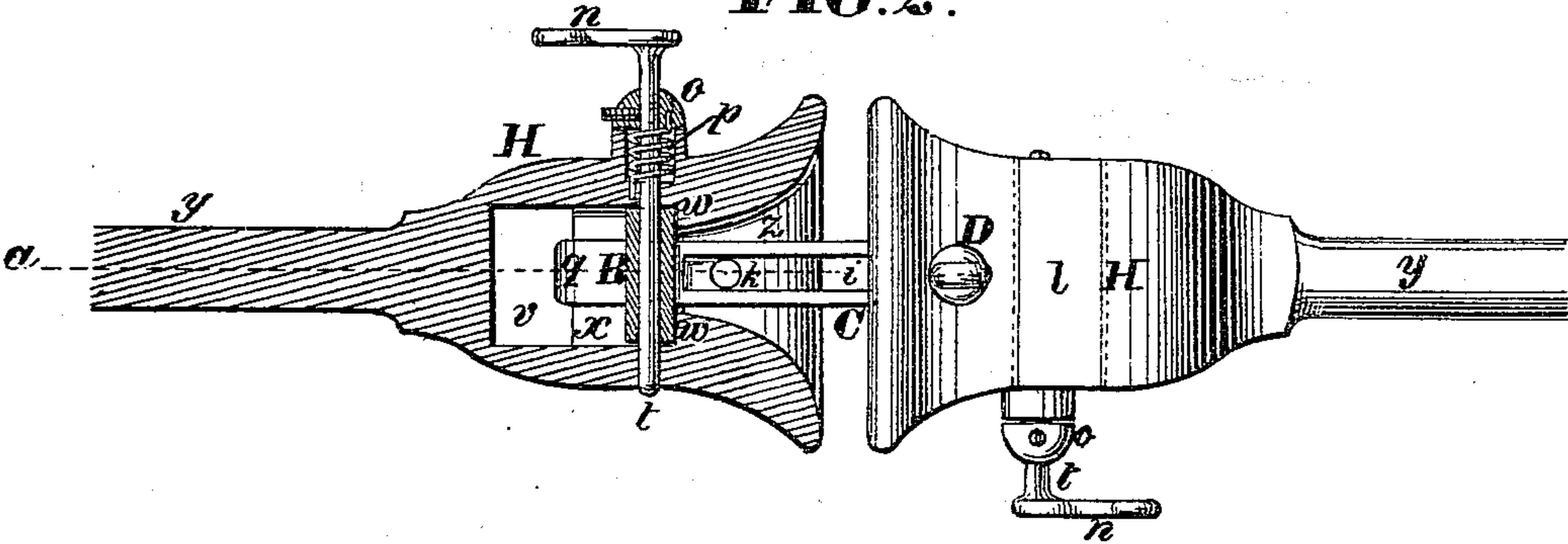
No. 148,543.

Patented March 17, 1874.

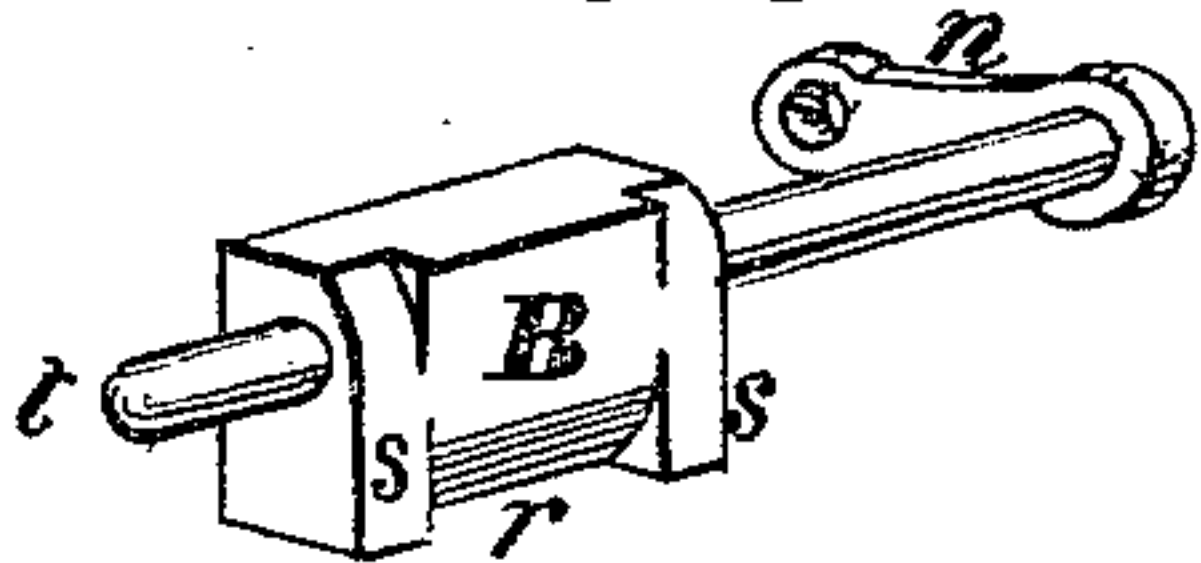
**FIG. 1.**



**FIG. 2.**



**FIG. 3.**



WITNESSES.

Gas. L. Lewis

Walter Allen

INVENTOR.

Samuel J. Adams  
By Knights Attorneys.

# UNITED STATES PATENT OFFICE.

SAMUEL J. ADAMS, OF BELLEFONTAINE, OHIO, ASSIGNOR OF ONE-HALF HIS  
RIGHT TO SAMUEL H. APPLE, OF SAME PLACE.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **148,543**, dated March 17, 1874; application filed  
November 18, 1873.

*To all whom it may concern:*

Be it known that I, SAMUEL J. ADAMS, of Bellefontaine, in the county of Logan, Ohio, have invented an Improved Car-Coupling, of which the following is a specification:

This invention relates to self-couplers for railway-cars of those forms in which pivoted latches within the draw-heads are employed, in combination with hook-shackles or links. The present invention consists in the combination of a pivoted latch or draw-head, having internal shoulders to support the same, a pivot-shaft having a lever-arm, to which a chain may be attached for retracting the latch, a concealed spring coiled within a recess in the draw-head, and a collar for attaching the spring to the pivot-shaft and for adjusting the same, as hereinafter set forth.

Figure 1 is a side view of a pair of draw-heads illustrating this invention, one head being represented in vertical section on the line *a*, Fig. 2. Fig. 2 is a plan view of the same, one head being represented in horizontal section on the line *b*, Fig. 1. Fig. 3 is a perspective view of the coupling latch with its shaft and lever detached.

A draw-head, *H*, for this improved car-coupling, is cast with the common flaring mouth *z*, and preferably of the external shape represented; but this is not essential. The objects of the general features of this shape are to accommodate the moving parts without surplus metal, and to so locate the floor of the draw-head as to bring the line of draft in line with the draw-bar or shank *y*, as illustrated in Fig. 1. A large recess, *x*, terminating at front in a pair of vertical shoulders, *w*, is formed in the draw-head by coring, and to facilitate this a core-hole, *v*, is left in the bottom of the head. This recess in the draw-head accommodates a latch, *B*, which is pivoted by means of a horizontal shaft, *t*, at or above the top of the throat, and it is attached to its shaft by a spline, or its equivalent. The latch is constructed with ends *s*, presenting square lower front corners, and between these corners the lower front edge *r* is rounded or beveled, as illustrated in Fig. 3. The shape of the latch

in other particulars is not essential, provision being made for it to oscillate to the required extent on its pivots. A hook-shackle or link, *C*, is employed having solid ends *q*, beveled and shouldered on top to engage with the latch. For throwing the latch *B* into effective position, a spring, *p*, is coiled within a small recess formed in one side of the draw-head concentric with the pivot-shaft *t*. This spring is held at its inner end by its extremity entering a socket in the head, and it is attached at its outer end to the latch-shaft by means of a collar, *o*, furnished with the set-screw, or its equivalent, for locking it. For turning the latch to release the shackle or link, a lever, *n*, is applied to one end of the pivot-shaft, and a chain, *m*, is attached thereto and extended to the platform or roof of the car. An orifice in the top of the draw-head, closed by a dovetailed slide, *l*, may furnish access to the interior for planing or filing the shoulders *w*, which support the latch, and for introducing the latter. A vertical perforation, *k*, in the draw-head, furnished with a pin, *D*, provides for coupling with the common link. A longitudinal slot, *i*, in the hook-shackle *B*, adapts it to couple with the common pin-and-link draw-head.

In a pair of draw-heads constructed according to this invention, there is no difference between the two, and consequently the use of the improved coupling involves no special arrangement of the cars.

When two cars furnished with this improved coupling are brought together, the beveled and shouldered front end *q* of the hook-shackle *C* enters the mouth *z*, and lifts the latch *B* by impinging against its beveled lower edge *r*. When the latch is released by the shoulder on the shackle passing it, it is returned to normal position by the spring *p*, and secures the shackle. In this position it abuts against the shoulder *w*, and is thus firmly supported. To uncouple a car, the chain *m* is pulled, and by means of the lever *n* and pivoted shaft *t* it turns the latch *B*, and permits the shackle *C* to escape.

In coupling with a common link, or with a



common draw-head, there is nothing peculiar in the operation.

The following is claimed as new:

The combination of the draw-head H, having the internal vertical shoulders *w*, the latch B, having the square ends *s* and beveled or rounded lower front edge *r*, the pivot-shaft *t*, having the arm or lever *n*, the spring *p*, ar-

ranged in a recess in the draw-head, and the adjustable collar *o* for attaching the spring to the pivot-shaft, all as herein shown and described, for the purpose specified.

S. J. ADAMS. [L. S.]

Witnesses:

R. H. ST. JOHN,

O. C. KNAPP.