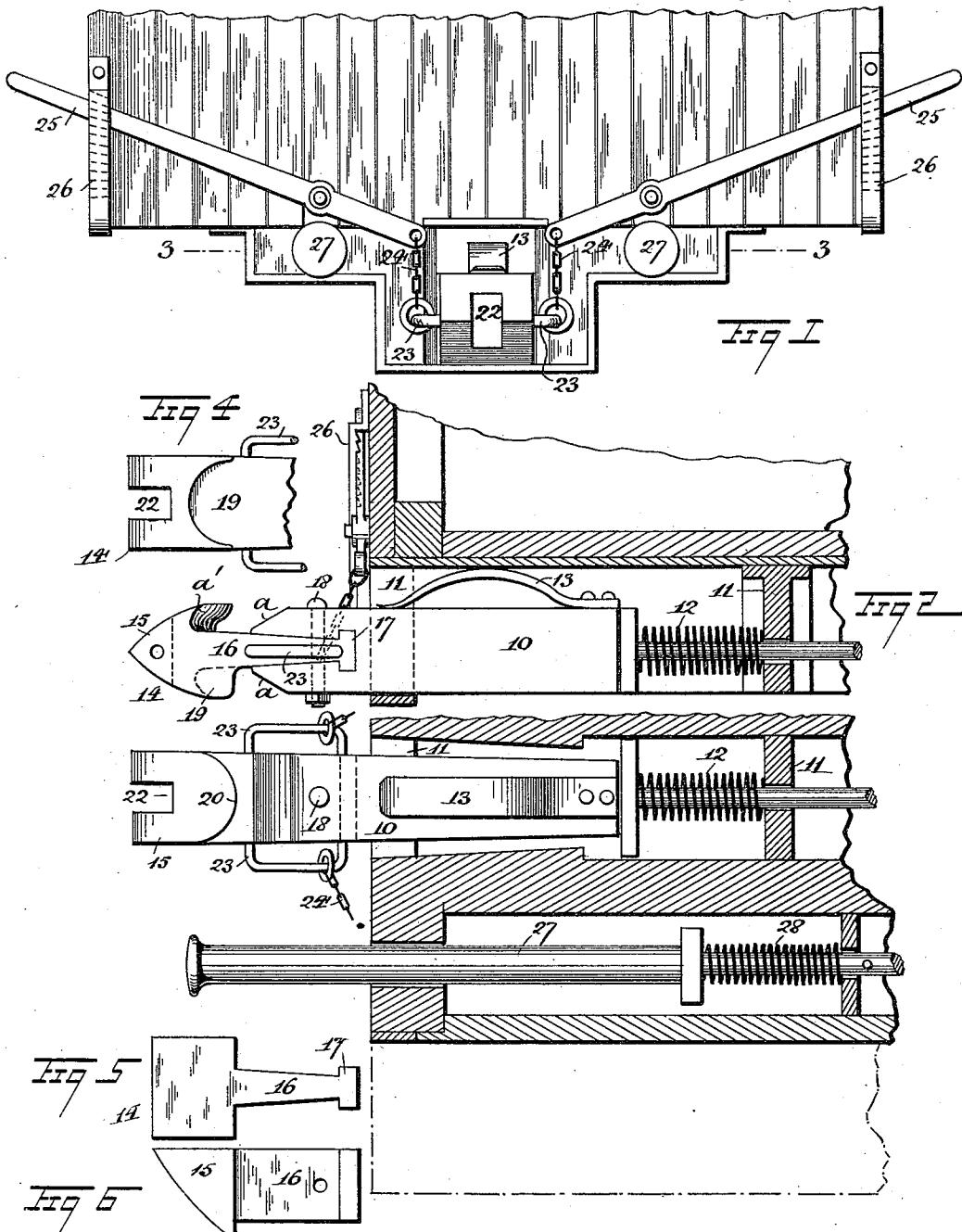


(No Model.)

J. MUTTON.  
CAR COUPLING.

No. 428,347.

Patented May 20, 1890.



WITNESSES:

H. Walker  
G. Sedgwick

Fig. 3

INVENTOR:  
J. Mutton  
Mutton & Co.

ATTORNEYS

# UNITED STATES PATENT OFFICE.

JAMES MUTTON, OF FRISCO, UTAH TERRITORY.

## CAR-COUPING.

SPECIFICATION forming part of Letters Patent No. 428,347, dated May 20, 1890.

Application filed March 13, 1890. Serial No. 343,699. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES MUTTON, of Frisco, in the county of Beaver and Territory of Utah, have invented a new and useful Improvement 5 in Car-Couplers, of which the following is a full, clear, and exact description.

My invention relates to an improvement in car-couplers, and has for its object to provide a coupling of simple and durable construction, so arranged that any form of draw-head may be attached to the draw-bar in an expeditious and convenient manner; and a further object of the invention is to provide a peculiar form of draw-head which will remain locked with an opposed head under the most trying conditions, and also which can be uncoupled from the top or side of the car.

The invention consists in the novel construction and combination of the several parts, 20 as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the 25 views.

Figure 1 is a partial end view of a car having the coupler applied thereto. Fig. 2 is a central vertical section through a portion of 30 the car, illustrating the draw-head and draw-bar in side elevation. Fig. 3 is a horizontal section taken on line 3 3 of Fig. 1. Fig. 4 is a bottom plan view of a portion of the draw-head detached from the draw-bar. Fig. 5 is 35 a side elevation of a draw-head adapted for side coupling, which may also be used in connection with the draw-bar, and Fig. 6 is a plan view of such coupler.

The draw-bar 10 is supported beneath the 40 car in suitable brackets 11, and the said draw-bar comprises a body portion, preferably rectangular in cross-section, which rests in the forward bracket, and a rod surrounded by a coil-spring 12, the said rod being adapted to 45 slide in the rear bracket, and the upper portion of the body of the draw-bar has attached thereto a bow-spring 13, which when the draw-bar is elevated is adapted to engage with the under surface of the floor of the car 50 to keep them in place when the cars are coupled. In the forward end of the draw-

bar, which end is slightly beveled at top and bottom, as shown at *a*, a T-slot is produced, the horizontal member of which T-slot is wider at the outer extremity of the draw-bar 55 than at its connection with the vertical or inner member. Thus the outer walls of the T-slot are given an inclination in opposite directions.

The draw-head 14, which is preferably used 60 in connection with the draw-bar, is of peculiar construction and consists of a body 15, which constitutes the outer extremity, the said body being essentially arrow-shaped, and a tapering shank 16, integral with the rear 65 end of the body, the inner end of which shank is formed with shoulders 17, whereby the shank is somewhat of the contour of the letter T, and the dimensions of the shank are such that it will fit snugly in the T-slot of 70 the draw-bar, being held therein by a pin 18, which passes through the draw-bar from top to bottom, and also through the shank of the draw-head, as best illustrated in Fig. 2. The lower portion of the draw-head extends further over upon the shank than the upper portion, and in this lower portion of the head a half-moon or semicircular recess or cavity 19 is formed, as shown in dotted lines in Fig. 2 and in the detail view, Fig. 4. The upper 80 portion of the draw-head is undercut upon a curved line, as illustrated at *a'* in Fig. 2, whereby the upper curved half-moon shoulder 20 is produced, as illustrated in Fig. 3. The half-moon shoulder 20 of one draw-head is 85 adapted to enter and contact with the forward walls of the similarly-shaped recess 19 in the bottom of the opposed draw-head.

It is evident that by providing the draw-bar with a T-slot, as heretofore described, and 90 the draw-head with a shank to enter such slot, the shape of the head may be varied, as shown, for instance, in Figs. 5 and 6, in which a head adapted for side coupling is illustrated to correspond with an opposed draw-head. 95 The extra draw-heads may be carried in suitable pockets beneath the car, if so desired, or in any other convenient place; and it is also evident that the peculiar form of draw-head illustrated may be expeditiously detached 100 from the draw-bar at any time and another form of head be substituted. The draw-head

is provided at its forward end, preferably, with a slot or opening 22, and also with a horizontal bore, in order that a pin and link may be used in connection with the draw-head when 5 a coupling is to be effected with an ordinary link-coupler.

At each side of the shank of the draw-head a staple 23 is secured, and to each staple a chain 24, a rod, or its equivalent is attached, 10 each rod or chain being also secured to the inner end of a lever 25, fulcrumed upon the car-body at its end, one of said levers being usually located at each side of the draw-bar. The outer ends of the levers extend beyond 15 the sides of the car and engage with any approved form of rack 26, the object of the levers being to raise the draw-head in order that an uncoupling may be effected.

To prevent the coupler from sustaining excessive shock in the process of coupling, a bumper 27 is located at each side of the draw-head, which bumpers have horizontal movement in suitable bearings or frames. The bumpers have a reduced inner end, and a 20 spring 28 is coiled around said reduced ends held between a shoulder on the bumper and the rear wall of the casing in which the bumper has movement.

It will be observed that in coupling with 30 the preferred form of draw-head described the shoulder 20 upon one head will automatically pass in contact with the lower surface of the opposite head to a seat in the under recess 19 of the latter, and that as the shape 35 of the shoulder corresponds with the contour of the recess 19 the draw-heads will be held in perfect connection, even when the shortest curve is turned, or when the couplings are slackened, as in backing, for instance.

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

1. The combination, with a draw-bar having a T-slot formed in its outer end, of a 45 draw-head provided with an essentially T shank adapted to enter the T-slot of the draw-

bar, substantially as shown and described, and for the purpose specified.

2. As an improved article of manufacture, a draw-head provided with a T-shank at its 50 rear end, substantially as shown and described.

3. As an improved article of manufacture, a draw-bar provided with a T-slot in its forward end, substantially as shown and de- 55 scribed.

4. The combination, with a draw-bar having a T-slot produced in its outer end, the walls of the horizontal member of the T-slot being inclined in opposite directions, of a 60 draw-head provided with a tapering T-shank adapted to enter the slot of the draw-bar, and means, substantially as shown and described, for retaining the draw-head in place, as and for the purpose specified.

5. As an improved article of manufacture, a draw-head the body portion of which is essentially arrow-shaped, having a semicircular cavity produced in its under surface and an equivalent projection formed upon 70 its upper surface, and also provided with an essentially T-shaped shank at its rear end between the recess and the projection, substantially as shown and described.

6. The combination, with a draw-bar having a T-slot therein, of a draw-head the body portion of which is provided upon its under face with a semicircular cavity and the upper portion with a corresponding projection, and also with an essentially T-shaped shank 80 at the rear end between the recess and the projection, the said shank being adapted to enter the slot in the draw-bar, and means, substantially as shown and described, for locking the draw-head to place and for elevat- 85 ing the draw bar and head, as and for the purpose specified.

JAMES MUTTON.

Witnesses:

AUGUST THIESSEN,  
WALTER JAMES.