

(No Model.)

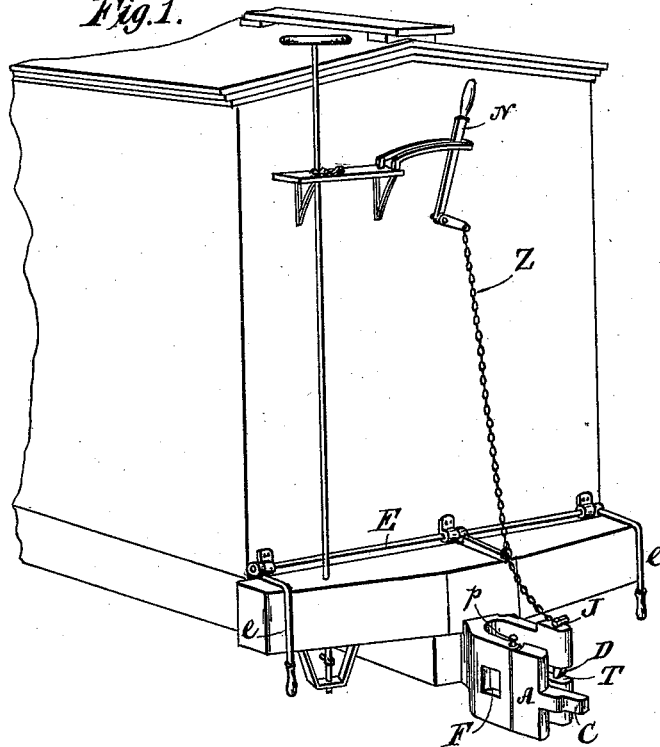
2 Sheets—Sheet 1.

B. A. SHIELDS.  
CAR COUPLING.

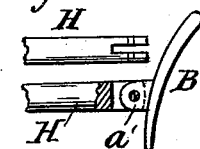
No. 423,450.

Patented Mar. 18, 1890.

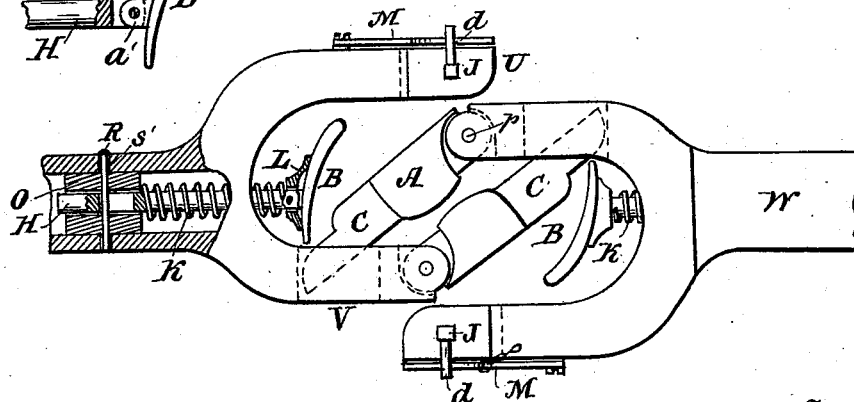
*Fig. 1.*



*Fig. 2.*



*Fig. 2.*



Witnesses  
Sam<sup>l</sup> R. Turner.  
Van Buren Hillyard

Inventor  
Burnard Austin Shields.

By his Attorneys  
R. S. Lacey

No Model.)

2 Sheets—Sheet 2.

B. A. SHIELDS.  
CAR COUPLING.

No. 423,450.

Patented Mar. 18, 1890.

Fig. 3.

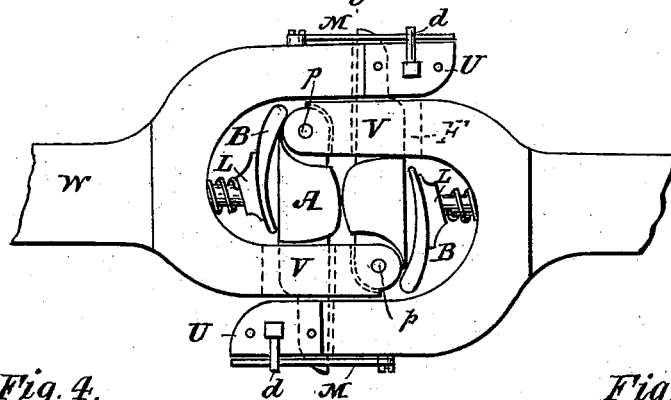


Fig. 4.

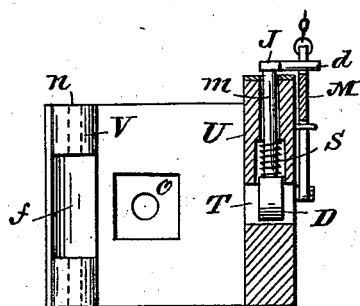


Fig. 5.

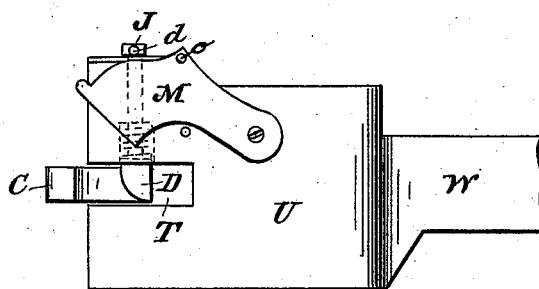
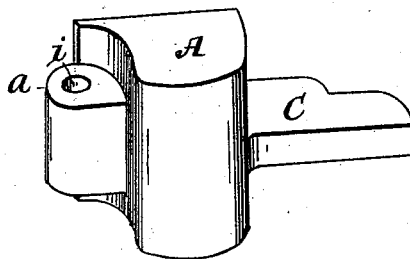


Fig. 6.



Witnesses

Sam<sup>l</sup> R. Turner.

Van Buren Hillyard

Inventor

Burnard Austin Shields

By his Attorneys

R. A. Lacey

# UNITED STATES PATENT OFFICE.

BURNARD AUSTIN SHIELDS, OF DENNISON, OHIO.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 423,450, dated March 18, 1890.

Application filed January 14, 1890. Serial No. 336,900. (No model.)

*To all whom it may concern:*

Be it known that I, BURNARD AUSTIN SHIELDS, a citizen of the United States, residing at Dennison, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to car-couplings that are automatic in their action, and in which the coupling on one car engages with the coupling on the opposing end of the other car when the cars are run together, thereby making a double coupling.

The improvement consists of the peculiar construction and combination of the parts, which will be hereinafter more fully described and claimed, and which are shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the end of a car, showing the application of my invention thereto; Fig. 2, a top plan view, parts being broken away, of a pair of couplings, showing them about to couple. Fig. 2<sup>a</sup> is a detail view of the bumper and bar. Fig. 3 is a view similar to Fig. 2, showing the couplings engaged. Fig. 4 is a detail cross-section on the line X of Fig. 3. Fig. 5 is a side view showing the operation of the releasing-cam and latch for retaining the coupling-bar by dotted lines. Fig. 6 is a perspective view of the coupling-bar.

The draw-bar W is hollow at its inner end and is provided at its outer end with two parallel arms U and V, the arm U being slightly longer than the arm V, and provided with the notch T in its end and the vertical opening *m*, in which is fitted the latch D, square in cross-section and having shank *j*, which is bent at right angles at its upper end to form the arm *d*. The spring S, placed on the shank *j*, exerts a pressure on the latch D to hold it projected across the notch T. The arm V has notch *f* in its end and opening F in rear of the said notch *f* and a pin or bolt opening

*n*. The coupling bar or tongue A is about as long as the distance from the top to the bottom of the draw-head and tapers toward each edge. The lug *a* at one edge of the coupling-bar is perforated at *i*, and is adapted to be fitted in the notch *f*, being held therein by pin *p*. The arm C at the other edge of the coupling-bar is designed to enter the notch T and be retained therein by the latch-bar D. The bumper B is concaved on its front face, being curved obliquely from the arm U to the arm V, as shown, and is provided with a shank *a'* on its rear side, which is connected with the bar H, that passes through the draw-bar W. The block O, placed in the hollow part of the draw-bar W, is square in cross-section and is bored longitudinally to receive the inner end of bar H, and has openings *s* in its sides to receive the pin R, which passes through the sides of the bar H and has its ends projected into the slots *s*. The spring K, placed on bar H, is confined between the block O and a washer L, that is placed on the shank *a'* of the bumper B. The bell-crank lever N, placed near the upper end of the car, is connected by chain *z'* with releasing-cam M, which is pivoted at one end to the side of the draw-bar, its free end adapted to engage with the bent end *d* of the latch D. The shaft E, journaled in bearings near the lower end of the car, has its ends bent to form handles *e* on each side of the car, whereby the coupling can be disengaged from the top of the car or from either side thereof.

The operation of the invention is as follows: When the couplings approach, as when two cars are run together, the bumper-plates B engage with and deflect the coupling-bars A to one side, and through the openings F in the arms V of the opposite couplings and into the notches T, the free ends of the said coupling-bars being held to by the latches D. The bumper-plates are turned slightly when the couplings are locked, and the springs K prevent any lost motion. To uncouple the cars, the shaft E or the lever N is operated, as will be readily appreciated.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A coupling having two arms U and V, a

bar pivoted at one end to one arm and adapted to be projected across the space between the two arms and engaged with the other arm, substantially as described.

5 2. A coupling having two arms, a bar pivoted at one end to one arm and adapted to be engaged at its other end with the other arm, the spring-latch for retaining the free end of the said bar in position, and the releasing-arm, substantially as described.

10 3. In a car-coupler, the combination of the draw-bar having two arms, the coupling-bar pivoted at one end to one side of the said arms, the spring-latch for engaging the other end of the coupling-bar, and the releasing-cam adapted to engage with the said latch, substantially as described.

15 4. In a car-coupling, the combination, with the draw-bar having a laterally-swinging coupling-bar, of the concaved bumper-plate arranged obliquely and adapted to deflect the coupling-bar substantially as described.

5. The combination, with the draw-bar hav-

ing two arms and having notches in the ends of the said arms, of the coupling-bar tapering toward each edge and having a pivoting-lug *a* at one edge and a retaining-arm C at the other edge, substantially as and for the purpose described.

6. In a car-coupler, the combination, with the draw-bar having two arms and the pivoted coupling-bar, of the bar H, the bumper-plate B, and the washer L and spring K, substantially as and for the purpose described.

7. In a car-coupling, the combination of the draw-bar having two arms and a coupling-bar, of which the lug at the edge of the coupling-bar and the outer end of the arm V has a shoulder.

In testimony whereof I affix my signature in presence of two witnesses.

BURNARD AUSTIN SHIELDS.

Witnesses:

T. H. LOLLER,

E. BOYD CRESAP.