(No Model.)

F. VAUGHAN.

CAR COUPLING.

No. 314,403. Patented Mar. 24, 1885.

Fig. 1.

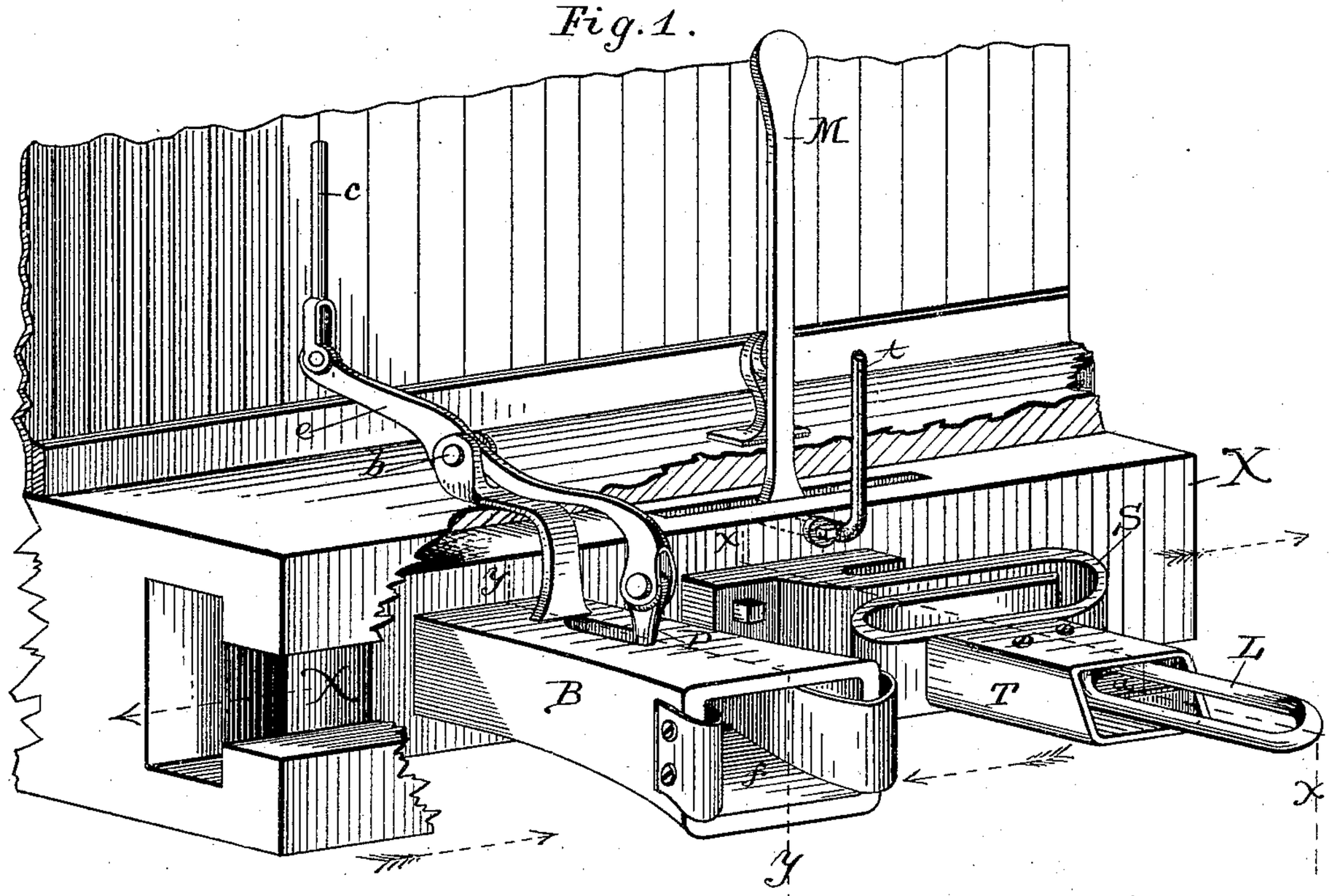


Fig. 2.

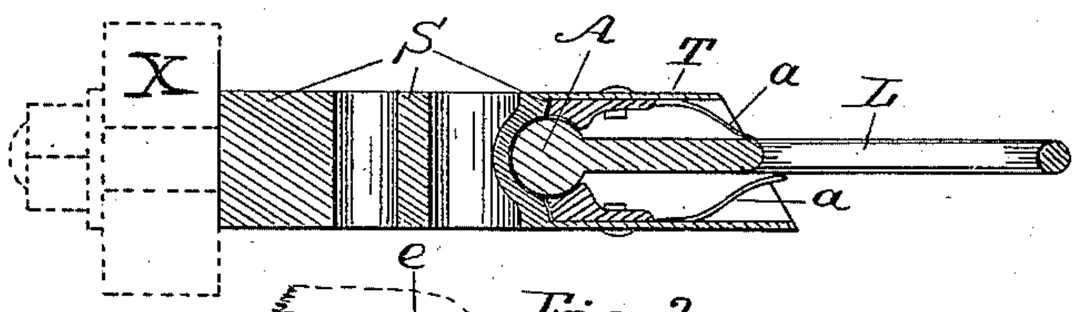
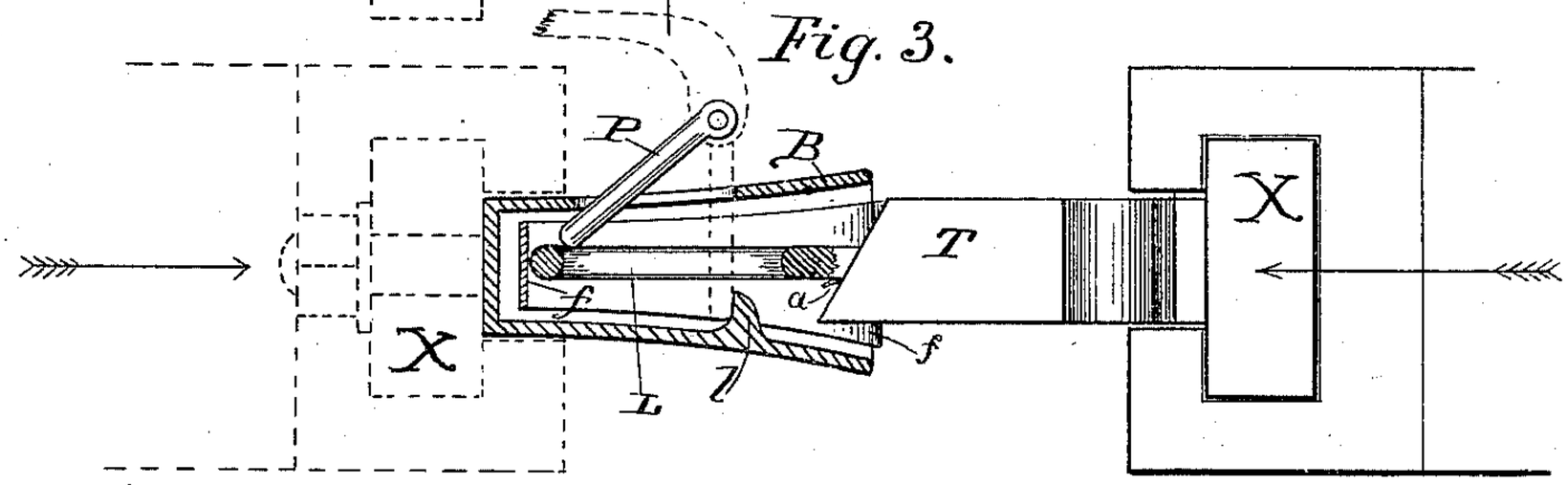


Fig. 3.



WITNESSES:

Thos. Houghton.

Edw. W. Byrn

INVENTOR:

Frank Vaughan

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRANK VAUGHAN, OF ELIZABETH CITY, NORTH CAROLINA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 314,403, dated March 24, 1885.

Application filed September 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRANK VAUGHAN, a citizen of the United States, residing at Elizabeth City, in the county of Pasquotank and State of North Carolina, have invented certain new and useful Improvements in Car-Couplings, of which the following is a description.

Figure 1 is a perspective view of a car provided with my improved coupling. Fig. 2 is a vertical section of the link and spring through line *x x* of Fig. 1. Fig. 3 is a side view of the two couplings on different cars in the act of coupling, the draw-head being in section.

My invention relates to means for coupling cars; and it consists in the peculiar construction and arrangement of the coupling-link and its supporting-spring, in the peculiar construction of the draw-head, and in the combination of the two as mounted upon the same adjustable frame, which is adapted to be moved to bring either the coupling-link or draw-head to the center line of the car, as hereinafter more fully described.

In the drawings, S is a spring, which may be of the coiled elliptical form, as shown, or spiral, or of other shape. This spring is firmly attached to one end of the sliding plate X, which is arranged in guides upon the ends of each car, and is adapted to slide transversely to the car, as indicated by the arrows in Fig. 1.

B is the draw-head, which is attached to the sliding plate at its other end, and just beside the spring. In the draw-head are arranged U-shaped springs *f*, which extend back into the throat of the draw-head, and also outside and around the side edges of the draw-head, as shown.

P is a coupling-pin, which passes through a slot in the top of the draw-head, and which pin is at its upper end jointed to the lever *e*, fulcrumed at *b*, and worked by a rod, *c*, to raise or lower the pin.

T is a casing attached to spring S, and in which is contained the butt-end of link L. This link is connected to the casing T and spring S by a ball-and-socket joint, A, that allows the link to oscillate vertically or sidewise.

Inside of the casing T are arranged springs *a a*, which hold or bring back the link to a horizontal position. The lower side of casing T is by preference made a little longer than the upper, to better sustain the link.

In making use of my coupling the frame X on one car is adjusted so that its link will be in the middle of the car, and the frame X on the other car is adjusted so that its draw-head will be in the middle of the car. Then as the cars come together the link L of one car enters the draw-head of the other, and, pushing back the jointed coupling-pin P, allows the latter to fall through the link and couple the cars. Then when the draft-strain is exerted the lower end of the pin P catches against a lug, *l*, in the bottom of the draw-head, which lug holds the pin and prevents it from pulling out again.

For moving the sliding frame X from side to side any suitable mechanism—such as a hand wheel or lever, M—may be employed.

At *t* on the frame X is attached a signal-rod, that extends up above the top of the car. At its upper end it bears a board painted red, and is designed to carry a red lantern at night, so cars may be coupled at night as well as in the day, only one red light being at the center.

In practice the sliding frame X should be stoutly made and strongly connected to the end of the car, or to the under side of the car near the end. I may also, to reduce a breaking strain on the spring S, arrange stop devices to come into action and relieve the spring when drawn out to a certain distance, as is frequently done in such cases.

Having thus described my invention, what I claim as new is—

1. A car-coupling consisting of a frame, X, arranged to slide transversely to the car, and bearing a coupling-link at one end and a draw-head at the other, substantially as and for the purpose described.

2. The combination of the spring S, casing T, link L, with ball-and-socket joint A, and springs *a a*, to hold the link horizontal, substantially as described.

3. The combination of the casing T and link L, connected thereto by ball-and-socket joint, as described.

4. The combination of the draw-head B and the U-shaped springs *f*, as and for the purpose described.

5. The combination of the slotted draw-head B, the lever *e*, jointed pin P, and lug *l*, as and for the purpose described.

Witnesses: FRANK VAUGHAN.
G. W. COBB,
S. L. SHEEP.