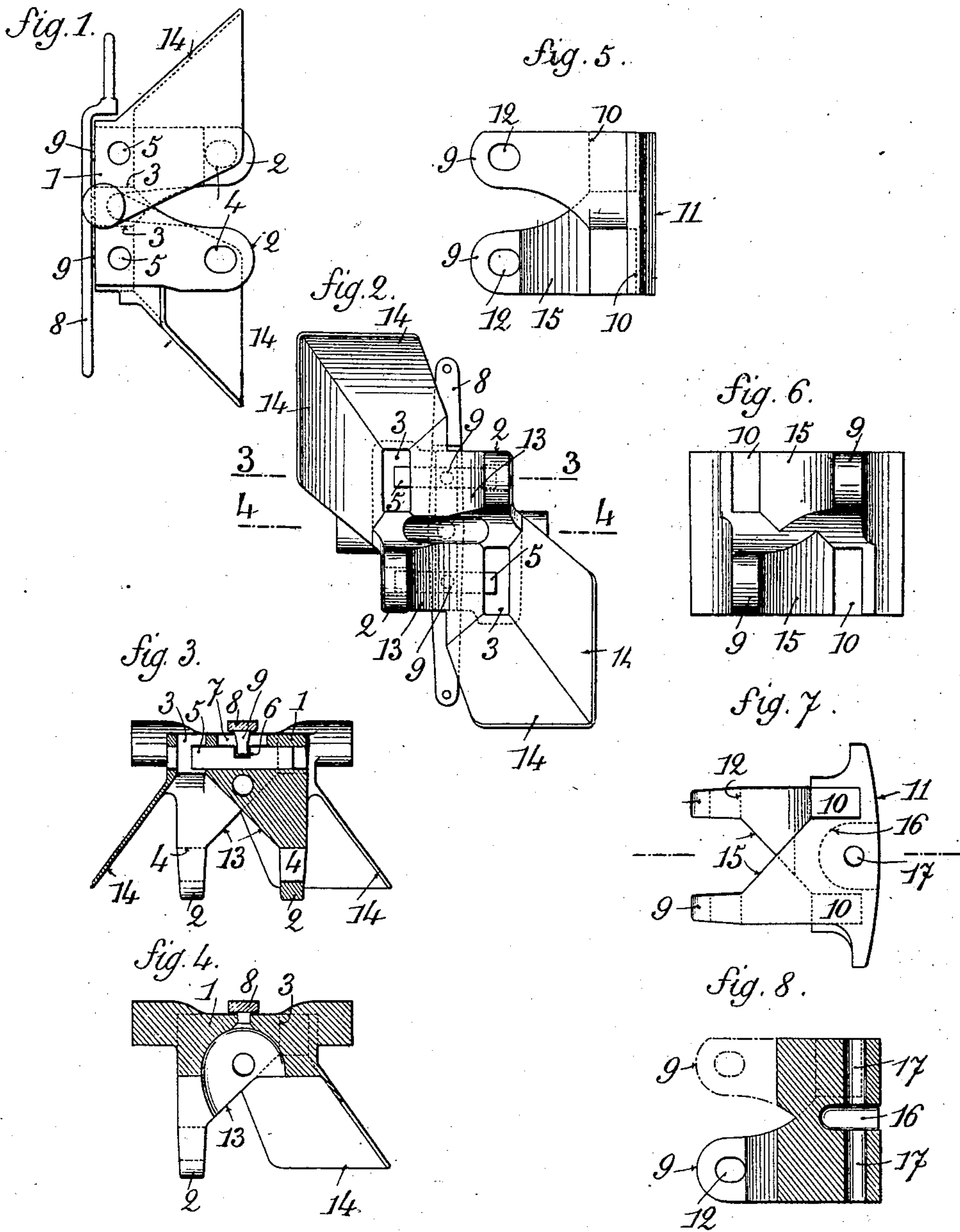


L. BOIRAULT.
 BUFFER FOR AUTOMATIC COUPLINGS FOR RAILWAY AND STREET CARS.
 APPLICATION FILED MAR. 27, 1909.

968,917.

Patented Aug. 30, 1910.



WITNESSES :

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LOUIS BOIRAULT, OF PARIS, FRANCE.

BUFFER FOR AUTOMATIC COUPLINGS FOR RAILWAY AND STREET CARS.

968,917.

Specification of Letters Patent.

Patented Aug. 30, 1910.

Application filed March 27, 1909. Serial No. 486,100.

To all whom it may concern:

Be it known that I, LOUIS BOIRAULT, a citizen of the Republic of France, residing at 20 Rue Laffitte, Paris, in the Republic of France, engineer, have invented certain new and useful Improvements in Buffers for Automatic Couplings for Railway and Street Cars, of which the following is a specification.

10 This invention relates to improvements in automatic couplings of the character shown in my previous United States Patent No. 689058, filed on May 21st 1901. In the said couplings, each draw-head is provided with 15 horns adapted to engage in the openings adapted to receive the horns of the other head, with transversal bolts adapted to lock the said horns in the openings, and with means whereby the said bolts are moved.

20 This invention relates to a device designed to be secured on a draw-head of this character and which allows of a car provided with the said draw-head being coupled with a car provided with a central buffer instead of 25 a similar draw-head.

The said device consists essentially of a piece the front part of which is adapted to serve as a central buffer and the rear part of which is provided with horns and cavities 30 adapted to engage the openings and the horns of the draw-head respectively.

The accompanying drawings show one embodiment of a draw-head and a device constructed according to this invention.

35 Figure 1 is a side elevation of the draw-head. Fig. 2 is a front elevation of the said head. Figs. 3 and 4 are horizontal sectional views of the head on the lines 3—3 and 4—4 of Fig. 2. Figs. 5 and 6 are respectively a 40 side elevation and a back elevation of a buffer piece constructed according to the invention. Figs. 7 and 8 are respectively a plan view and a vertical sectional view of the said piece.

45 The draw-head 1 comprises two horns 2 and openings 3 arranged in the form of a cross, the said horns extending forwardly and being provided with transversal openings 4. Within the head are provided housings in which are slidable bolts 5. When 50 the horns of another draw-head similar to that shown in the drawings are engaged in the openings 3, the bolts 5 can be passed through the transversal openings in the horns and thus lock the two draw-heads together. Each bolt has a slot 6 and the rear

face of the head has slots 7 opposite each bolt; to the center of the said face is pivoted a lever 8 which is provided with two pins 9, and the said pins pass through the slots 7 60 and are engaged in the slots 6, so that at each throw of the lever the bolts 5 are moved in opposite directions. The means whereby the draw-head is connected to the draw-bar and the means whereby the lever 8 65 is operated are of no importance in that which concerns this invention and are not shown in the drawings for that reason.

The piece to which this invention relates, consists, according to the embodiment shown 70 in Figs. 5 to 8 inclusively, of a piece called a horned buffer, which carries at the back two horns 9 designed to engage in the openings 3 of the above described draw-head, and is also provided with two slots 10 designed 75 to receive the horns 2 of the said head, while the front part of the said piece has a bulged or curved face 11, conforming, or approximately so, to the front face of the usual central buffers of railway and street cars. 80

The horns 9 have openings 12 through which are adapted to be passed the bolts 5 of the draw-head 1 when the horns are engaged in the openings 3; by means of the 85 said bolts, the draw-head and the horned buffer can thus be firmly assembled together.

It will be understood that the shape of the rear face of the horned buffer must be such as to fit the front face of the draw-head 90 to enable the said faces to come snugly together. Therefore, the said shape may be varied.

In the draw-plate, according to the embodiment shown in Figs. 1 to 4 inclusively, 95 the front face of the plate comprises two inclined planes 13, the directions of which cross each other and each of which starts from the base of the one horn 2 at the inner vertical side of the latter and leads to the inner vertical edge of the opening 3 located 100 at the same level. The said inclined planes 13 cooperate with other inclined planes 14 to guide the horns of the draw-heads toward the openings 3 when the two couplings are being brought together, the inclined faces 105 14 being constituted by oblique wings integral with the draw-head 1. To correspond with this form of the draw-head, the rear face of the horned buffer also comprises two inclined planes 15, the directions of 110 which cross each other and each of which starts from the base of the one horn 9 at the

inner vertical side of the latter and leads to the inner vertical edge of the opening 10 located at the same level.

In order to allow of the horned buffer being coupled with cars provided with the system of couplings having a vertical pin passing through an eyelet in the end of the draw-bar, a recess 16 is provided at the center of the front face of the buffer to receive the end of such a draw-bar, and a vertical hole 17 is provided in the said buffer to receive the pin which serves to lock the bar, neither the bar nor the pin being shown in the drawings.

15 Claims.

1. A buffer for automatic couplings having forwardly projecting horns and openings arranged crosswise with respect to said horns, and transversal bolts, consisting of a piece, the front face of which is bulged and of which the rear face is provided with horns and with slots arranged in the form of a cross, the said horns and the said slots being adapted to engage respectively the openings and the horns of an automatic coupling of the character described, and the horns of the buffer having transversal openings adapted to be engaged by the bolts of the said automatic coupling.

2. A buffer for automatic couplings having horns and openings arranged in the form of a cross, consisting of a piece the front part of which is bulged and the rear part of which is provided with horns and with slots arranged in the form of a cross, as well as two inclined planes, the directions of which each crosses the other and each of which starts from the inner vertical side of the one horn and leads to the inner vertical edge of the slot located at the same level.

3. A buffer for automatic couplings having horns and openings arranged in the form of a cross, consisting of a piece, the front part of which is bulged and is provided at the center of its front face with a recess adapted to receive a head of a draw-bar, the said front part being pierced by a vertical hole adapted to receive a locking pin, and the rear part of the buffer having horns and openings arranged in the form of a cross.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

LOUIS BOIRAULT.

Witnesses:

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MAURICE ROUX.