

J. D. SHELTON.
AUTOMATIC CAR COUPLING.
APPLICATION FILED FEB. 14, 1911.

1,016,788.

Patented Feb. 6, 1912.

2 SHEETS—SHEET 1.

FIG. 1

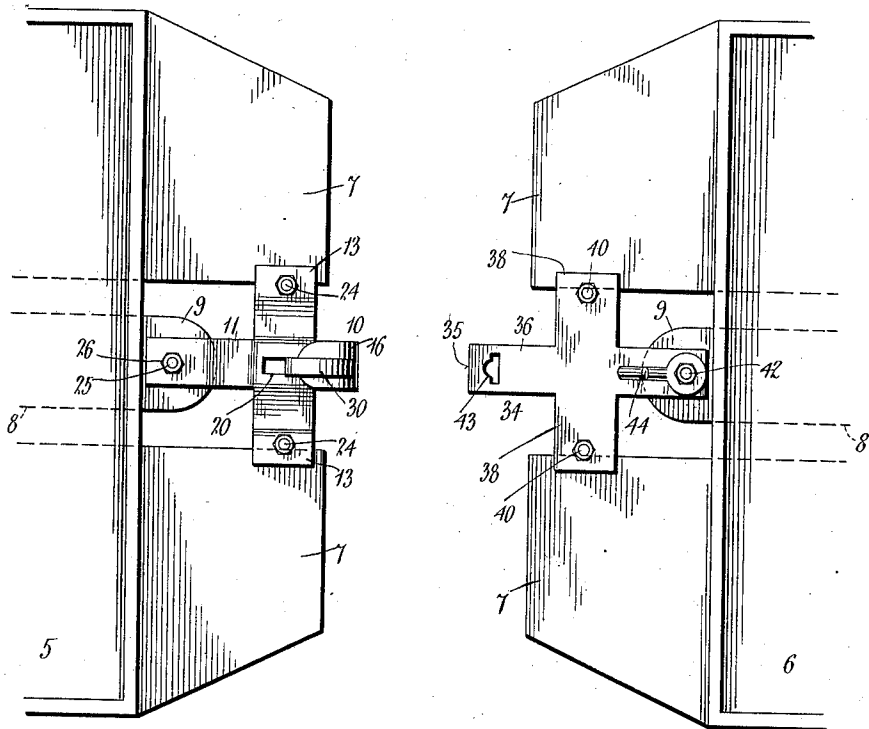
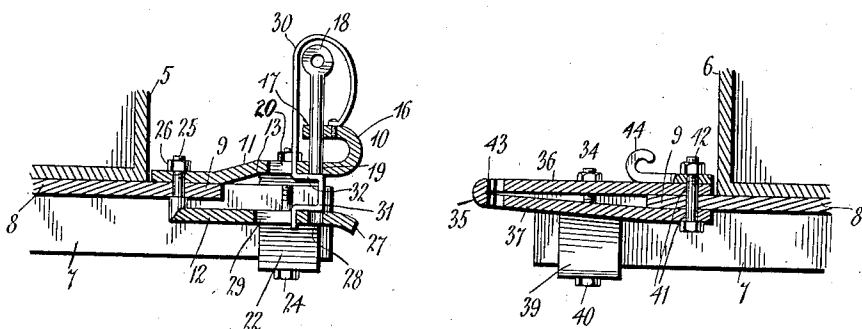


FIG. 2



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2 SHEETS—SHEET 2.

FIG. 3

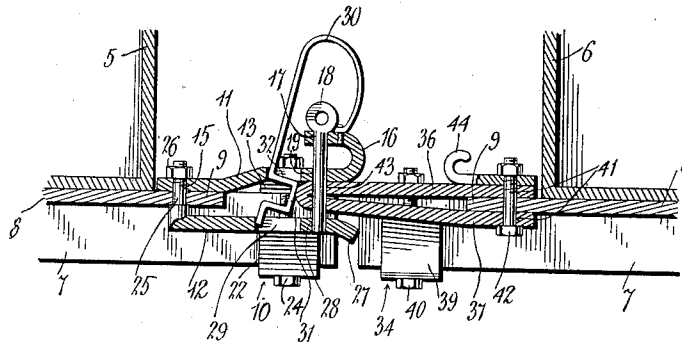


FIG. 4

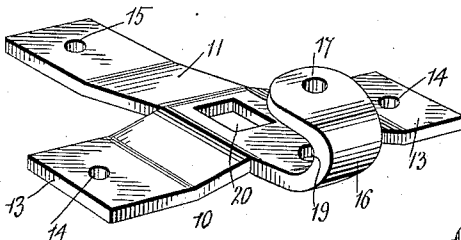


FIG. 6

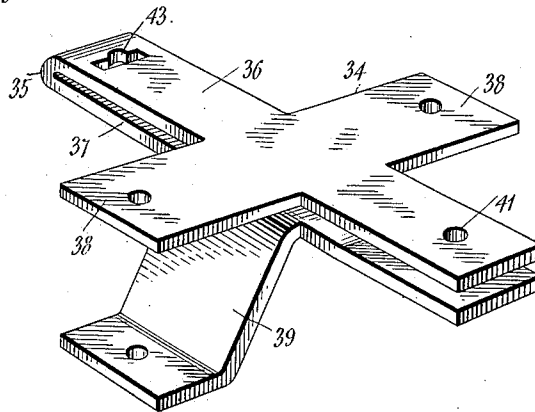
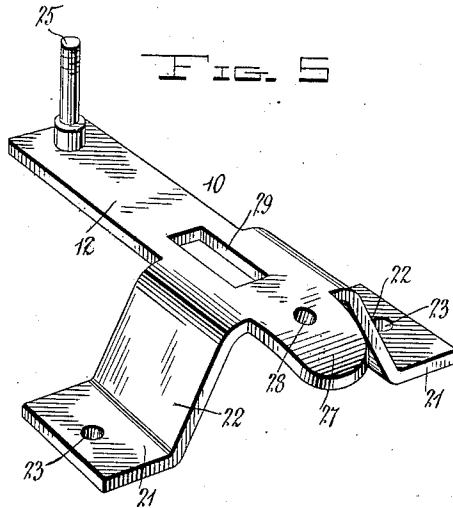


FIG. 5



Witnesses

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UNITED STATES PATENT OFFICE.

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AUTOMATIC CAR-COUPLING.

1,016,788.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed February 14, 1911. Serial No. 608,525.

To all whom it may concern:

Be it known that I, JAMES D. SHELTON, a citizen of the United States, residing at Nortonville, in the county of Hopkins, State of Kentucky, have invented certain new and useful Improvements in Automatic Car-Couplings; and I do hereby 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.

This invention relates to an improvement in automatic car couplers, and although the invention is especially adapted for use in connection with mine cars it can be employed with equal success in connection with cars of the general type.

The principal object of the invention is to provide a coupler of the character described which is in the nature of an attachment for mine cars and can be attached to or detached from a car without any alteration thereof.

Another object of the invention is to provide a coupler for the purpose described which is composed of a minimum number of parts, is therefore simple in construction and cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a top plan view showing portions of the meeting ends of two cars equipped with my improved coupling, the cars being disconnected, Fig. 2 is a detail vertical longitudinal sectional view through the same, Fig. 3 is a similar view but showing the coupling operatively connected, Fig. 4 is a perspective view of the upper member of the coupling head, Fig. 5 is a perspective view of the lower member of the coupling head, Fig. 6 is a perspective view of the coupling tongue.

Like reference numerals designate corresponding parts in all the figures of the drawings.

Referring to the drawings 5 and 6 design-

nate cars of any preferred construction having the usual bumpers 7 and spaced draw bars 8 extending therebetween and provided with perforated ears 9.

My invention comprises a coupling head designated as a whole by the numeral 10 and consisting of upper and lower plates 11 and 12 respectively. The upper plate 11 is provided with laterally projecting opposed wings 13—13 having suitable openings 14—14 formed therein. One end of the plate 11 is provided with an opening 15 which is adapted to register with the perforation formed in the ear 9 of the draw bar as will be hereinafter explained. The other end of the plate is upwardly and rearwardly bent upon itself to form a hook 16 having a suitable opening 17 formed therein for the reception of a coupling pin 18. Formed in the plate 11 directly below the said opening 17 is an opening 19 through which the coupling pin is adapted to project. Formed in the plate 11 intermediate the openings 15 and 19 thereof is an opening 20 preferably of rectangular formation.

The bottom plate 12 is provided with wings 21—21 which are connected to the plate by means of downwardly inclined walls 22—22. The wings 21 are provided with openings 23—23 which are adapted to register with the openings 14 of the wings 13 for the reception of bolts 24 or other suitable fastening means by which the two plates are secured together. The plate 12 has its rear end upwardly bent to form a threaded bolt 25 which is adapted to be passed through the opening 15 of the plate 11 and through the perforation in the ear 9 of the draw-bar. This bolt is held in place by means of a nut 26 or other suitable fastening means. The plate 12 is further provided with a forwardly and downwardly curved projection 27 and formed in the plate intermediate this projection and the bolt 25 is an opening 28 adapted to receive the coupling pin 18. Formed in the plate 12, intermediate the opening 28 and the bolt 25 is an elongated opening 29 which is preferably rectangular in outline. This opening 29 is disposed directly below the opening 20 of the plate 11.

Associated with the plates is a spring keeper 30 which is preferably formed of a strip of spring steel. One end 31 of the keeper is secured to the hook 16 by any suitable means. This spring is bent over the

upper end of the coupling pin 18 and thence extends downwardly beyond the end of the hook 16 through the openings 20 and 29 of the said plates. The spring, intermediate
 5 the plate is angularly bent to form an offset portion 31 which forms a consequent seat 32 for the pin 18. It will be observed in this connection that when force is exerted upon the offset portion 31 the same will be shifted
 10 from below the pin 18, thereby permitting the said pin to drop into the opening 28 of the lower plate. A link (not shown) can be connected to the hook 16 and by means thereof an animal may be quickly connected
 15 to the car whenever it is desired to draw the same.

The invention further consists of a coupling tongue designated as a whole by the reference numeral 34. This tongue is
 20 formed of flat metal and is centrally bent as at 35 to form upper and lower diverging plates 36 and 37 respectively. The upper plate is provided with laterally extending wings 38 and the lower plate with down-
 25 wardly and thence laterally extending wings 39 which are connected by means of bolts 40 or other suitable fastening means. The plates 36 and 37 respectively project beyond the wings and are formed with registering
 30 openings 41 adapted to receive a bolt 42 which in turn is mounted in the ears 9 of the car. Formed in the plates 36 and 37 and near the front end thereof are registering openings 43, and these openings are spaced
 35 from the bend 35 a distance equal to the width of the elongated opening 29 before mentioned. Also carried by the bolt 42 above the ear 9 is a hook 44 through means of which an animal may be connected to
 40 draw the car when the said car is uncoupled.

From the foregoing it will be observed that when the two cars are brought together the tongue 34 will be projected into the pocket formed between the upper and lower
 45 plates of the coupler head. As a result the forward portion of the tongue 35 will engage the offset portion 31 of the spring and force the same the entire length of the opening 29. As a result the seat 32 will be dis-
 50 engaged from the coupling pin 18, and the said pin will drop by gravity through the aligned openings 43 of the tongue and into the opening 28 of the lower plate, thereby automatically coupling the two cars. When
 55 it is desired to uncouple the cars the pin 18 is raised by hand, the upward movement of the pin being limited by the bowed portion of the spring 30. As will be readily under-

stood, upon the raising of the pin the offset portion 31 will automatically resume its
 60 normal position, thus causing the seat 32 to engage the pin 18 and hold the same in its inoperative position. The bolts 24 of the coupling head and the bolts 40 of the coupling tongue are disposed against the
 65 respective bumpers 7 of the cars, and the wings of the said coupling elements are respectively disposed above and below the bumpers. As a result, the wings prevent any vertical movement of the elements, and
 70 the bolts prevent any lateral movement thereof.

What is claimed is:—

1. In a coupler, a coupler head consisting of spaced upper and lower plates, a hook
 75 extending from one of the plates, a coupling pin movably mounted in the hook and the adjacent plate, and a spring having its body portion movably mounted in the plates and bent to form a seat for the pin and having
 80 one end extending over the other end of the pin and secured to the hook for limiting the outward movement of said pin.

2. In a coupler, a coupler head consisting of spaced upper and lower plates, a hook ex-
 85 tending from one of the plates, a coupling pin movably mounted in the hook and the adjacent plate, and a spring having one end connected to the hook and having its body portion movably mounted in the plates and
 90 provided with an offset portion normally disposed between the plates and beyond the end of the pin to form a seat therefor.

3. In a coupler, a coupler head consisting of spaced upper and lower plates, the upper
 95 plate being provided with laterally projecting opposed wings, the lower plate being provided with downwardly projecting walls which terminate in laterally projecting wings, means for fastening the correspond-
 100 ing wings of the plates together, a hook projecting from one end of the upper plate and extending rearwardly thereover, a coupling pin movably mounted in the hook and the upper plate, and a spring having one end
 105 connected to the hook and extending over the upper end of the pin and having its body portion movably mounted in the plates and bent to form a seat for the pin.

In testimony whereof, I affix my signa-
 110 ture, in presence of two witnesses.

JAMES D. SHELTON.

Witnesses:

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 H. D. BAKER.