

(No Model.)

G. ROHRBACH.
COMBINED CAR AND AIR BRAKE COUPLING.

No. 508,764.

Patented Nov. 14, 1893.

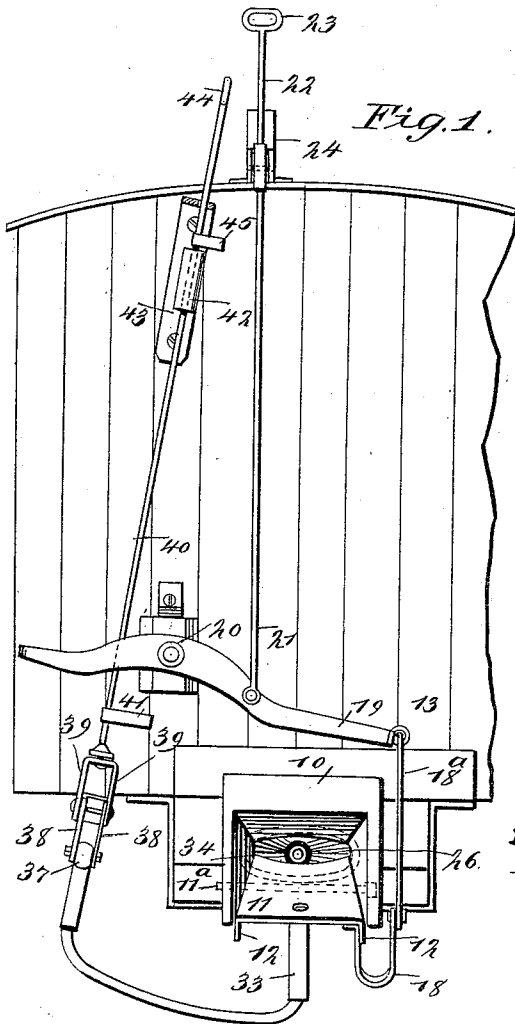


Fig. 1.

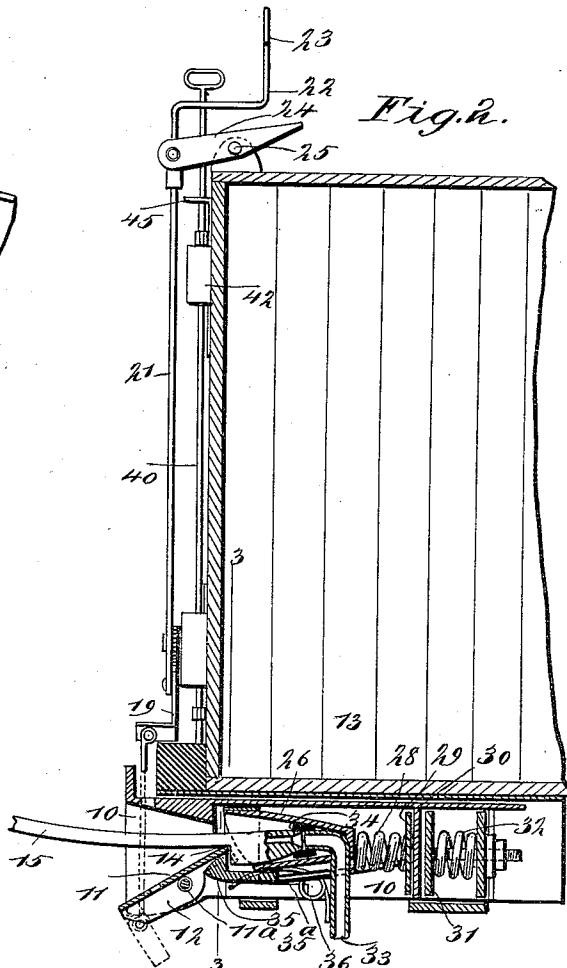


Fig. 2.

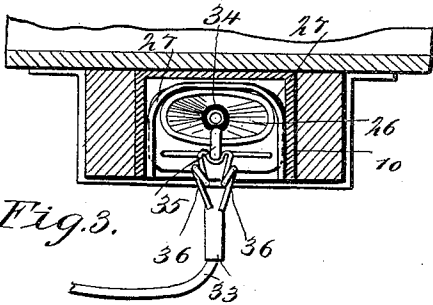


Fig. 3.

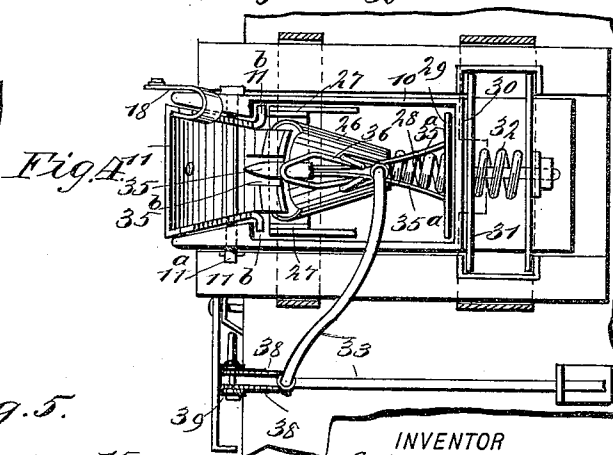
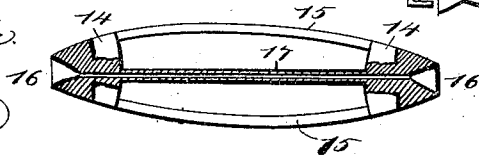


Fig. 4.

Fig. 5.

WITNESSES:

J. M. Apple
C. Sedgwick



INVENTOR

G. Rohrbach

BY

Mum. H.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GABRIEL ROHRBACH, OF DEL RIO, TEXAS.

COMBINED CAR AND AIR-BRAKE COUPLING.

SPECIFICATION forming part of Letters Patent No. 508,764, dated November 14, 1893.

Application filed July 5, 1893. Serial No. 479,622. (No model.)

To all whom it may concern:

Be it known that I, GABRIEL ROHRBACH, of Del Rio, in the county of Val Verde and State of Texas, have invented a new and Improved Car and Air-Brake Coupling, of which the following is a full, clear, and exact description.

My invention relates to improvements in car couplings and in air brake coupling; and the object of my invention is to produce an extremely simple, practical, and positive coupling, which is adapted to automatically couple together two cars, which may be easily uncoupled from the top or sides of the cars, and which is also adapted to automatically couple the air pipes of two cars together when the cars are coupled.

To these ends my invention consists in certain features of construction and combinations of parts, as will be hereinafter described and claimed.

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

Figure 1 is a front end view of the coupling embodying my invention, as applied to a car. Fig. 2 is a broken longitudinal section of the same. Fig. 3 is a cross section on the line 3—3 in Fig. 2. Fig. 4 is a broken inverted plan of the coupling; and Fig. 5 is a detail sectional view of the coupling link or drawbar.

The car coupling is substantially similar to the coupling for which I obtained Letters Patent of the United States No. 462,511, dated November 3, 1891, and the improvements consist chiefly in the adaptation of the car coupling to the air brake coupling, and in certain details of construction which will be pointed out and claimed.

The drawhead 10 is substantially like that shown in my former patent, having a flaring mouth with a rocking jaw 11 in the lower side thereof, this jaw being fulcrumed on a pin 11^a and having side lugs 11^b at its rear end, which swing behind shoulders on the drawhead, as shown in Fig. 4. The rocking jaw 11 has also depending side flanges 12 which act, in a measure, as guides, and which also strengthen the jaw. The inner end of the jaw engages a head 14 of the coupling link or drawbar 15, which is preferably constructed

of two similar side members and the heads referred to, these jutting down below the body of the link so as to readily engage the rocking jaw 11.

The link 15 is provided with bores 16 extending longitudinally through the heads 14 and connecting with a longitudinal pipe 17, so that when the link is inserted in two drawheads, it will also make the connection between the air pipes in the manner to be hereinafter described. The rocking jaw 11 is released from the link by raising its outer end and consequently depressing its inner end, and to effect this it is provided at its forward end with an arm 18 which is curved outward and upward and this connects by means of a rod 18^a with a tilting lever 19, which is fulcrumed, as shown at 20, on the end of the car 13 and which extends to one side of the car so that it may be grasped and the jaw operated to release the coupling. To the lever 19 is also pivoted a rod 21 which extends upward to the top of the car where it is bent rearward, as shown at 22, and terminates in a handle 23, and it will be seen that by raising and lowering the rod the lever 19 may be operated. A foot lever 24 is also pivoted to the rod and fulcrumed, as shown at 25, on the car top, and if desired the rod 21 may be raised to uncouple the car by stepping on the rear end of the foot lever.

Behind the rocking jaw 11 is an air brake coupling socket 26 which is of a funnel shape with its larger end toward the front end of the drawhead, and it has side arms 27 which move vertically in the drawhead and act as guides for the socket. It is closed at its rear end and backed by a spring 28, which is arranged against a plate 29 in front of a partition 30 in the drawhead, and behind this partition is a buffer plate 31 backed by the usual buffer spring 32 which acts as a buffer for the drawhead 10.

The train pipe or air pipe 33 of the car, extends into the rear end of the socket 26 and is surrounded by a packing 34 so as to also envelop a part of the head 14 when the coupling link 15 is inserted in the drawhead. The end of the link, 15, is provided with a conical socket to receive the conical end of the train-pipe, as shown in Fig. 2. It will be seen then that when the coupling link is in posi-

tion in two drawheads, the air will pass freely from the pipe 33 of one car through the link and the pipe 17 thereof to the pipe 33 of the other car, and that leakage is prevented at the junction of said link and pipe, by reason of the end of the former being surrounded by the packing 34, and the train-pipe being socketed in the link.

The link 15 is prevented from any accidental disengagement from the socket 26 by a hook 35 which projects forward from the under side of the socket and which has a spring shank 35^a secured to the plate 29, and the hook fits against the head 14 of the link, as shown in Fig. 2, and lies, when in this position, in a recess 35^b on the under side of the rocking jaw 11. The hook 35 is pressed upward by a spring 36 which is arranged beneath it and secured to any adjacent support, and it is forced down and disengaged by the tilting of the rocking plate to uncouple the cars.

The air pipe is provided with a valve 37, the details of which are not shown, but any suitable valve may be employed, the frame of which connects with the crank arms 38 and these are pivoted to a yoke 39 on a rod 40, which rod extends upward to the car top, being held in suitable keepers 41 and 42, the latter of which is secured to a supporting bracket 43. The rod has a handle 44 at the top by which it may be operated, and just above the keeper 42 is an arm 45 which is secured to the rod. The keeper 42 is slotted on one side, and by swinging the arm into alignment with the slot, the rod may be pushed down to close the valve and by turning the

arm out of alignment with the slot, the rod is prevented from dropping and the valve is held open, or the operation of the valve may be reversed, if desired.

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

1. The combination, with the tapered draw-head socket, the annular packing, 34, and the train pipe arranged therein, of the coupling link, 15, having a longitudinal bore, and the head 14, provided with a socket which enters the packing and receives the conical head of the train pipe, substantially as shown and described.

2. The combination with the drawhead and the rocking jaw therein, of a socket arranged behind the jaw, an air brake pipe connected with the socket, a link having a longitudinal bore and a head to engage the rocking jaw and enter the socket, and a lever mechanism for releasing the rocking jaw, substantially as described.

3. The combination, with the drawhead, the rocking jaw therein, the socket behind the jaw, and the air brake pipe which enters the socket,—the link having a longitudinal bore and a head to enter the socket and engage the rocking jaw, of a spring-pressed hook arranged beneath the socket and adapted to engage the head of the link, and a lever mechanism for tilting the rocking jaw and releasing the head, substantially as described.

GABRIEL ROHRBACH.

Witnesses:

JOHN K. PEIRCE,
PETER GEIB.