

B. ZUCKERMAN.

CAR COUPLING.

APPLICATION FILED FEB. 26, 1912.

1,047,603.

Patented Dec. 17, 1912.

2 SHEETS—SHEET 1.

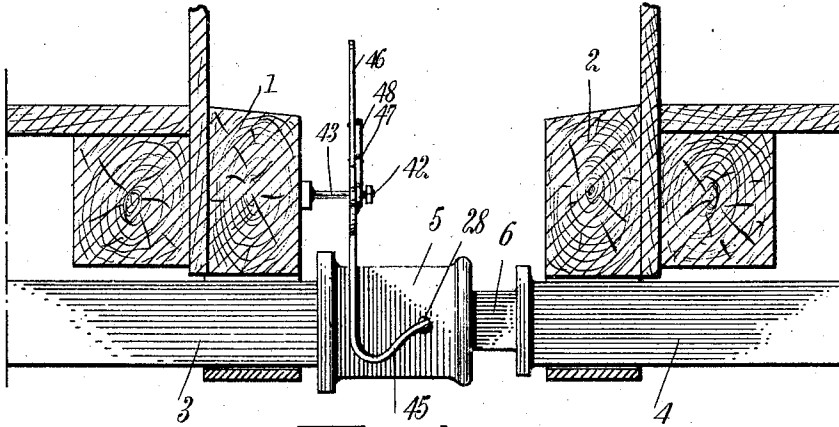


Fig. 1

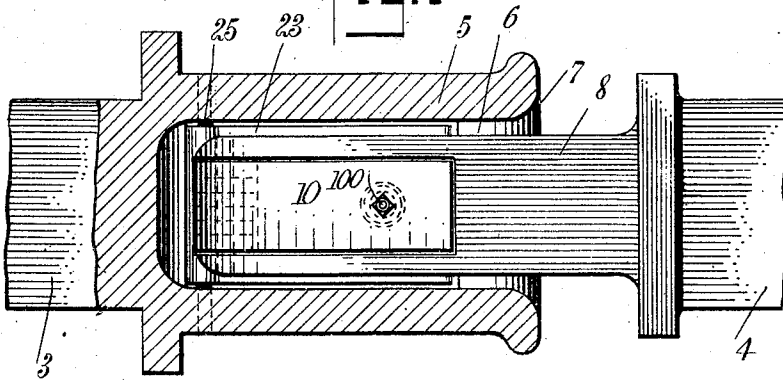


Fig. 2

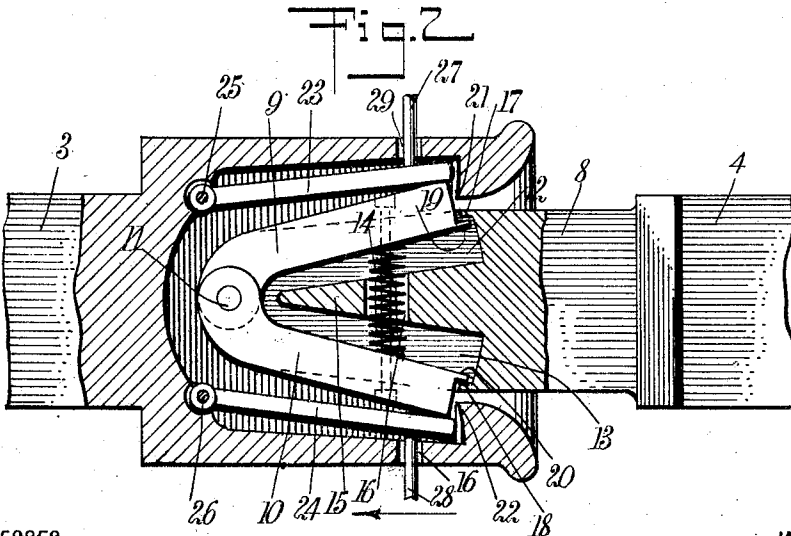


Fig. 3

WITNESSES

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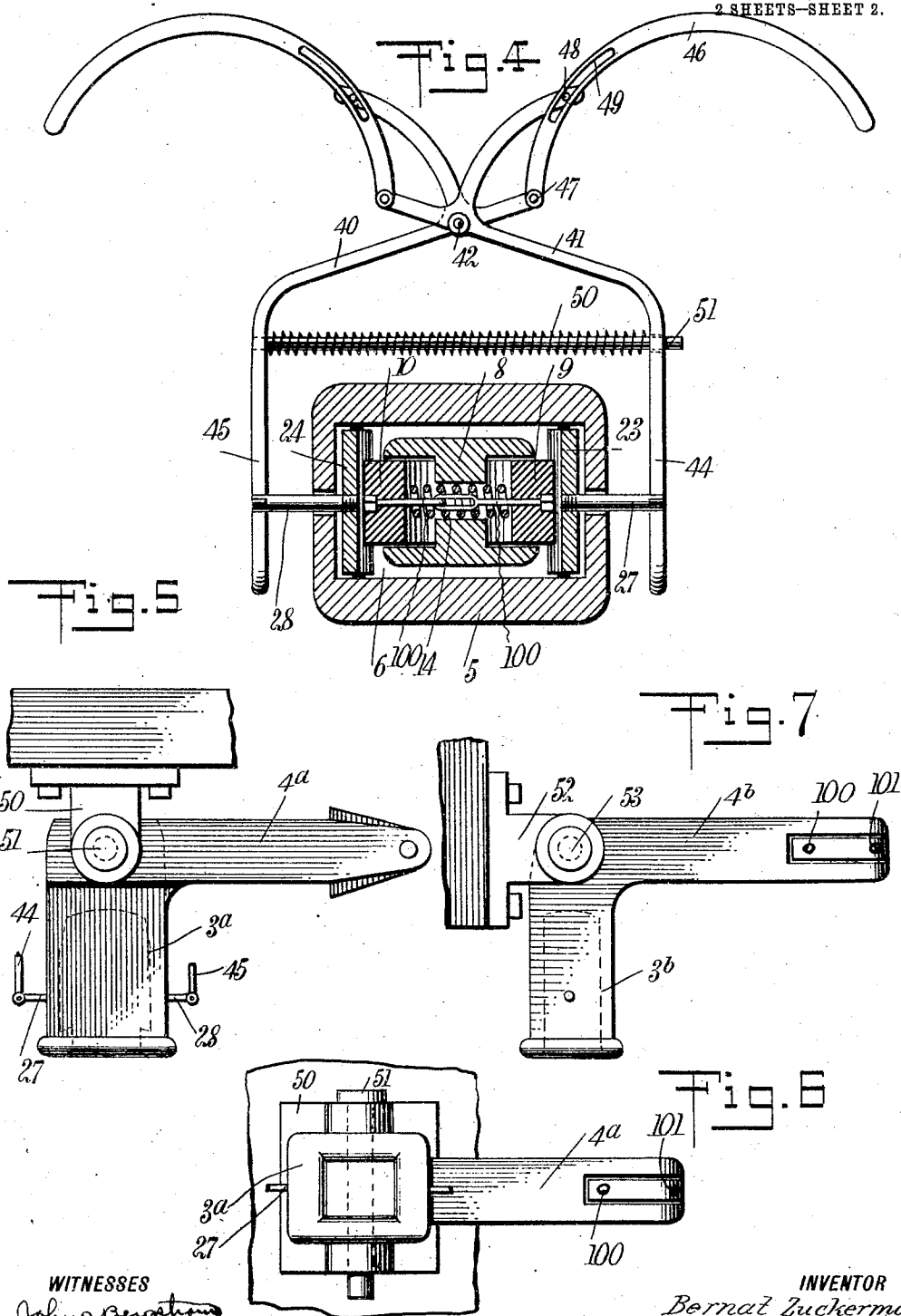
ATTORNEYS

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UNITED STATES PATENT OFFICE.

BERNAT ZUCKERMAN, OF NEW YORK, N. Y.

CAR-COUPLING.

Specification of Letters Patent.

Patented Dec. 17, 1912.

1,047,603.

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To all whom it may concern:

Be it known that I, BERNAT ZUCKERMAN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

My invention relates generally to car couplers and more particularly it is directed to a new and improved construction whereby the coupling of the cars is automatically performed, the uncoupling thereof being accomplished in a simple manner and in a short time.

The principal object of my invention is to provide a new and improved car coupler made up of few parts which, however, are adapted to cooperate with each other in a secure and efficient manner whereby a new and improved structure of this class is provided.

Other objects and advantages of the invention will appear as the description thereof proceeds, the new and useful features being set forth in the appended claim.

Reference is to be had to the accompanying drawings forming a part of this specification in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a side view of the coupler in operative position at the adjacent ends of two cars; Fig. 2 is a vertical sectional view through one of the parts of the coupler; Fig. 3 is a horizontal sectional view through the coupler; Fig. 4 is a vertical sectional view of Fig. 1; Fig. 5 is a plan view of a modified arrangement of the coupler; Fig. 6 is an end view thereof; Fig. 7 is a further modified arrangement.

Any suitable cars, designated 1 and 2, are provided at adjacent ends with the cooperating parts 3, 4, of the coupler, any suitable and desirable means being provided for securing these parts to the cars.

The part 3 comprises a body member 5 having an intermediate open portion 6, the outer walls of the open portion being flared as at 7, such construction being well-known in devices of this class.

The part 4 comprehends a forwardly extending portion 8 having pivoted tongues 9, 10, at its forward end on opposite sides, the tongues being preferably mounted on any suitable pivot, such as a pin 11. This pin may be secured in position in any desir-

able manner, as by means of a screw 101. The portion 8 is preferably provided with a plurality of recesses 12, 13, into which the tongues 9, 10, are adapted to be moved, the tongues, however, being maintained in upward position, as shown particularly in Fig. 3, by means of a helical spring 14. In order to properly strengthen the parts, the intermediate wall or partition 15 of the forwardly extending portion 8 is provided, the recesses 12, 13, being on opposite sides thereof, this wall or partition being provided with a suitable opening 16 through which the before-mentioned spring 14 passes. In order to limit the travel of the tongues, the guide rods 100 are made use of.

Referring particularly to Fig. 3 it will be noted that the recesses 12, 13, are extended for a suitable distance within the portion 8 whereby shoulders 17, 18, are provided, the free ends of the tongues 9, 10, being provided with lugs 19, 20, adapted to engage with these shoulders under the influence of the spring 14 so that the tongues have a predetermined outward movement.

Referring particularly to Fig. 3 it will be noted that the opening or removed portion 6 in the part 3 of a coupler is provided at diametrically opposite sides with shoulders 21, 22, against which the free ends of the tongues 9, 10 are adapted to engage when the parts are pulled in opposite directions, such engagement preventing withdrawal of the portion 8 of the part 4 from the recess or opening 6 in the part 3.

In order to provide for uncoupling the cars, the interior of the portion 5 of the part 3 is provided with levers 23, 24, at opposite sides, the levers being mounted on suitable pivotal supports 25, 26. As shown particularly in Fig. 3 the levers lie adjacent the tongues 9, 10, when the parts are coasting; movement of the tongues into the recesses or openings 12, 13, being obtained by movement of the levers 23, 24 toward each other; this movement being effected by means of the rods 27, 28, secured to the levers and extending through suitable openings 29, 30, in the side walls of the portion 5 of the part 3.

Any suitable and desirable means may be made use of in moving the rods 27, 28, the construction shown in Fig. 4 being that preferred; extending transversely of the portion 5 of the part 3 are the cooperating pivoted elements 40, 41, in pivotal engagement with each other at 42, the pivotal engagement being preferably a stud or post 43 ex-

tending forwardly from the body of the car, as shown particularly in Fig. 1. The cooperating elements 40, 41, embody downwardly extending spaced ends 44, 45, secured at their outer ends to the rods 27, 28, the upper ends of these elements being curved toward the coupler, as shown particularly in Fig. 4, so that movement of these ends toward each other will move the rods 27, 28, and with them the levers 23, 24, toward each other, thereby enabling the parts of the coupler to be separated. In order to provide for simple and convenient movement of the curved ends of the elements 40, 41, a suitable handle 46 is provided, the outer end of which is pivotally secured at 47 to the element 40, the end of the element 41 being provided with a pin 48 engaging in a slot 49 within the handle 46 and adjacent the outer end thereof. The downwardly extending spaced ends of the elements 40, 41, are maintained remote from each other by any suitable means, preferably a helical spring 50, mounted on a rod 51, carried by the parts and on which one of them moves.

In order to couple the two cars together it is necessary merely to bring them in such position that the forwardly projecting portion 8 on one of the cars enters into the opening or recess 6 in the part carried by the other car, the tongues 9, 10, slipping past the shoulders 21, 22, and becoming firmly engaged against these shoulders after having been entered into the opening; such coupling requires no attention or manual operation, being automatic in its nature; in order to uncouple the cars, the handle 46 is moved up, thereby bringing the upper curved ends of the elements 40, 41, together and also bringing the downwardly extending spaced ends 44, 45, toward each other, the levers 23, 24, coming into engagement with and moving the tongues 9, 10, into the recesses or openings 12, 13, in the portion 8, after which one car may be separated from the other.

The device as described contemplates the use of the two parts of the coupler on cars so that adjacent ends of the cars will always be provided with the cooperating portion; in order to provide for coupling of the cars in whatever position they may occupy, modified arrangements, as shown in Figs. 5, 6, and 7, may be made use of.

Referring particularly to Figs. 5 and 6, the two parts of the coupler 3^a, 4^a, are preferably of integral construction and are positioned at right angles to each other and movably mounted at the end of the car in a suitable bearing 50 by a pin 51 passing therethrough; such construction permits of either element or portion 3^a or 4^a cooperating with the opposite portion 3^a or 4^a on the

end of an adjacent car whereby they may be coupled together, the proper positioning of the parts being obtained by merely moving the structure about the point of pivotal support 51.

While the modification shown in Figs. 5 and 6 comprehends the portions of the coupler being pivotally mounted to swing in a horizontal plane, a second modification shown in Fig. 7 provides for movement of the portions in a vertical plane. The parts 3^b, 4^b, are preferably of integral formation and are mounted at the end of the car in a suitable bearing 52 on a transversely extending pin 53. By such construction it is obvious that while the cooperating elements of the coupler are different, the mounting is such that the coupling may be very easily and quickly effected by merely turning either coupler about the pivotal mounting in order to permit the two elements to cooperate with each other. Of course the portions 3^a and 3^b, shown in the modifications, may be provided with the rods 27, 28, together with the downwardly extending spaced sides 44, 45, as shown particularly in Fig. 4, in order to enable the cars to be uncoupled; in such event the post or stud 43, shown in Fig. 1 carried by the body of the car, will, in this instance, be mounted on the coupler itself.

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

A car coupler comprising a body member having its intermediate portion removed, the body member being provided with openings at opposite sides, levers pivotally mounted within the said removed portion, rods secured to the levers and extending through the said openings, a second cooperating body member embodying a forwardly extending portion adapted to enter the removed portion of the first body member, pivotally mounted tongues carried by the said forwardly extending portion, a spring for maintaining the ends of the tongues within the said forwardly extending portion, shoulders adjacent the inside of the said intermediate removed portion, the ends of the said tongues engaging the shoulders, movement of the levers toward each other through the medium of the said rods bringing the tongues out of engagement with the said shoulders and permitting the parts of the coupler to be separated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BERNAT ZUCKERMAN.

Witnesses:

EDUARD SPIEGEL,
PHILIP D. ROLLHAUS.