

G. SARRAZIN & H. PERREAULT.

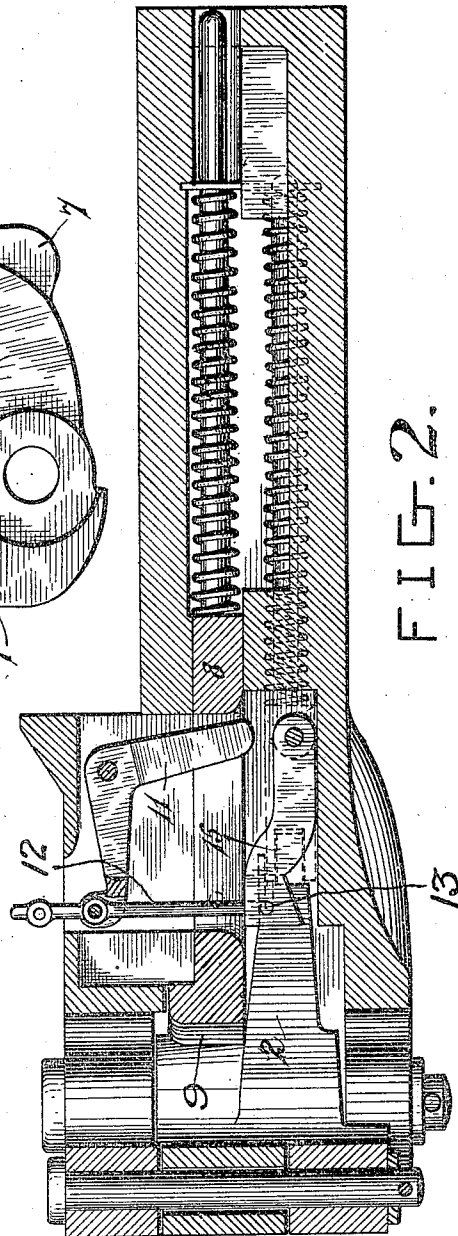
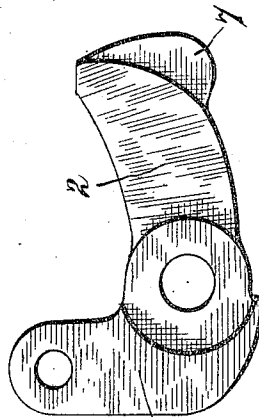
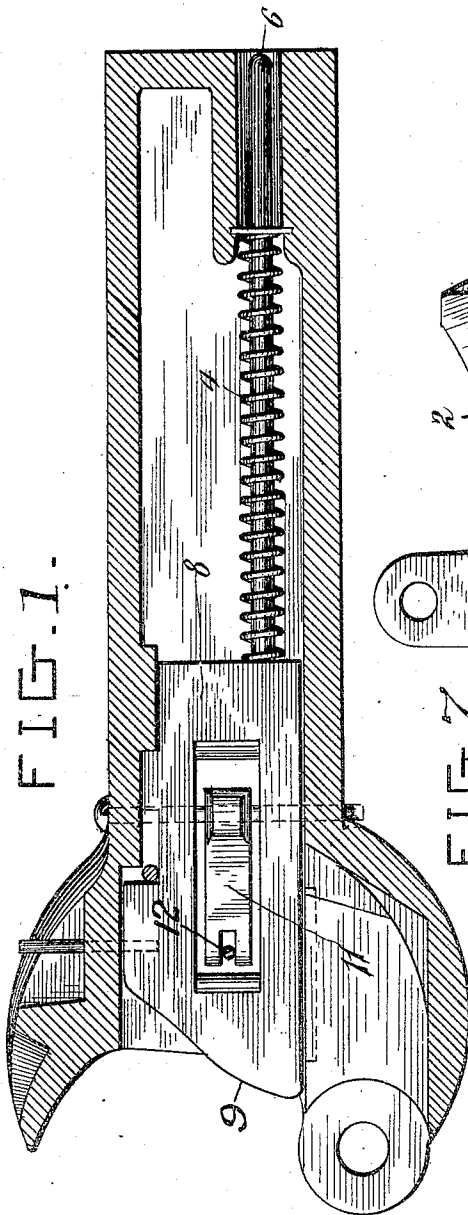
COUPLING.

APPLICATION FILED JAN. 22, 1908.

Patented Sept. 14, 1909.

3 SHEETS—SHEET 1.

933,924.



Witnesses:

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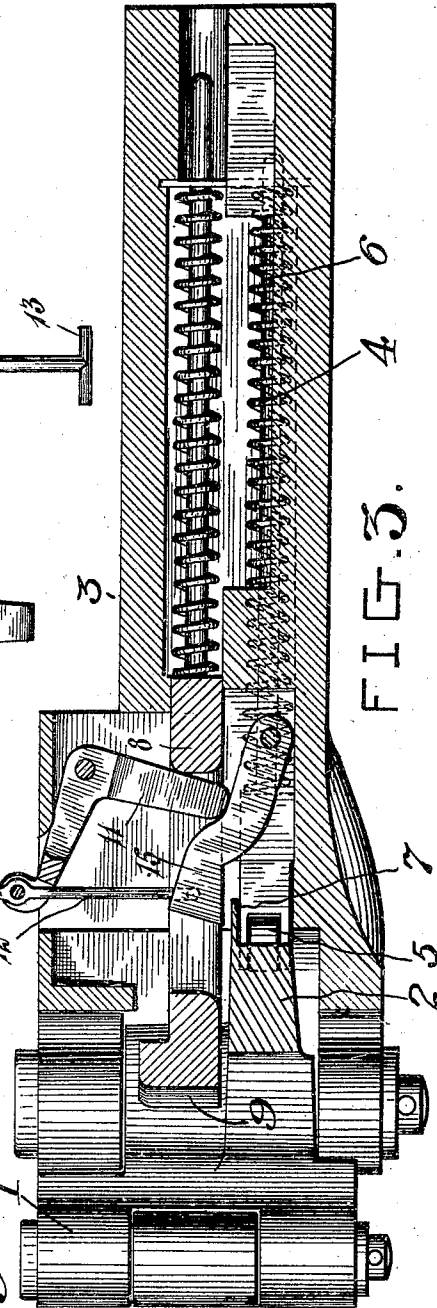
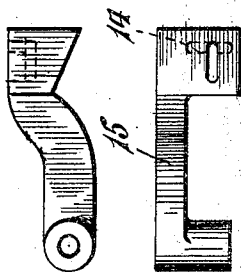
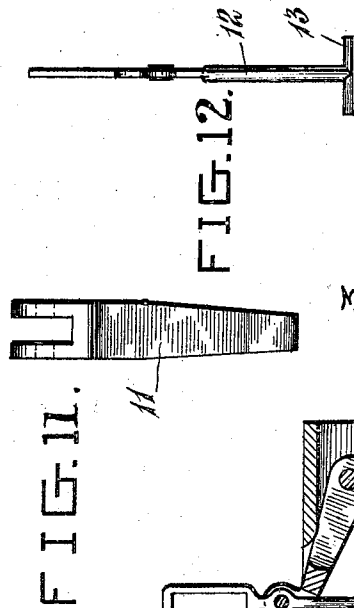
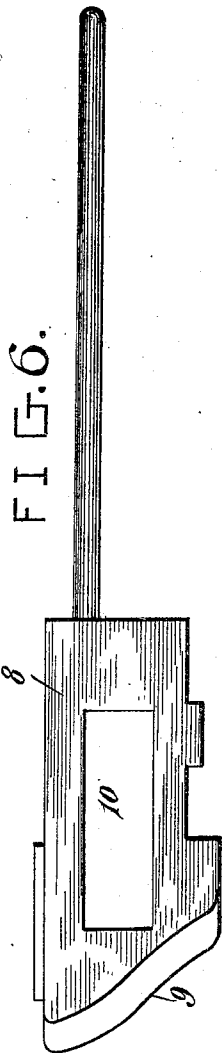
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3 SHEETS—SHEET 2.

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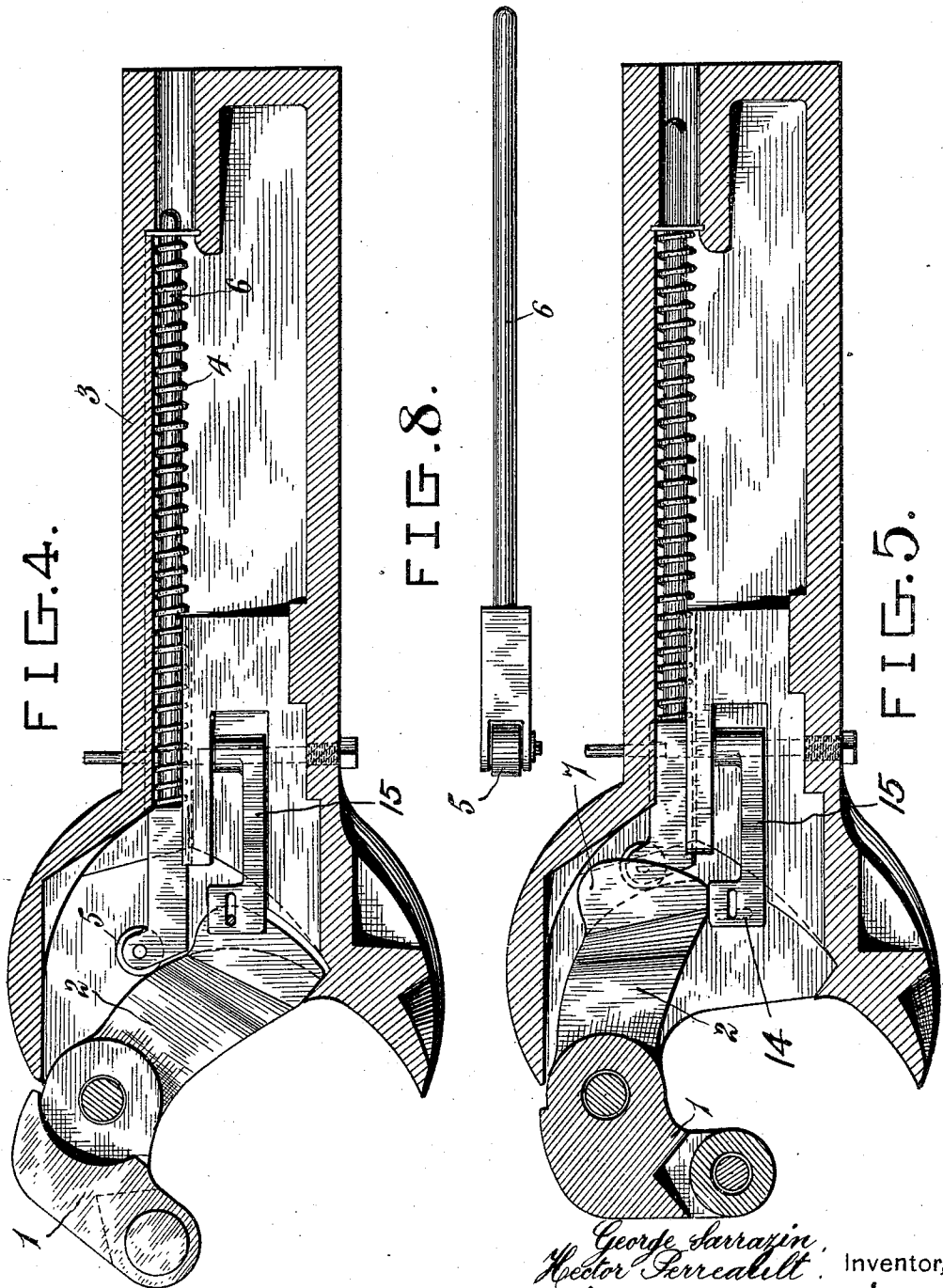
COUPLING.

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3 SHEETS—SHEET 3.

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UNITED STATES PATENT OFFICE.

GEORGE SARRAZIN AND HECTOR PERREAULT, OF SOUTH HOLYOKE, MASSACHUSETTS.

COUPLING.

933,924.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed January 22, 1908. Serial No. 412,201.

To all whom it may concern:

Be it known that we, GEORGE SARRAZIN, a citizen of the United States of America, and HECTOR PERREAULT, a subject of the King of Great Britain, residing at South Holyoke, county of Hampden, in the State of Massachusetts, one of the United States of America, have invented certain new and useful Improvements in Couplers; and we do hereby declare that the following is 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.

The invention to be hereinafter described relates to couplers for railway cars, and more particularly to that class of couplers comprising, broadly speaking, a head provided with a pivotally mounted knuckle.

Broadly speaking, the invention comprises a head adapted to contain the actuating mechanism, a knuckle pivotally mounted in the head, and means for forcing the knuckle into open position. It is designed particularly for the purpose of keeping the knuckle normally open when the individual cars are detached, so as to have the knuckles always in a position so that they may be received in the head carrying the cooperating knuckle without the necessity of manually opening each knuckle.

In order to enable one skilled in the art to which the invention relates to more readily construct and use the same, reference should be had to the accompanying drawings, forming part of this application.

In the drawings, like reference characters designate the same parts in the several figures.

In the drawings: Figure 1 is a horizontal section of Fig. 8, with the knuckle-operating devices omitted, and showing the slide 8 in plan; Fig. 2 is a longitudinal section on line 8—8 of Fig. 1; Fig. 3 is a section on line 9—9 of Fig. 4; Fig. 4 is a section on line 10—10 of Fig. 2, with the knuckle in open position; Fig. 5 is a similar section on line 11—11 of Fig. 5, with the knuckle closed; Fig. 6 is a plan view of the slide bar for operating the knuckle lock, detached; Fig. 7 is a top plan view of one of the knuckles, detached; Fig. 8 is an edge view of the sliding bar for operating the knuckle; Fig. 9 is a side view of the knuckle lock, detached; Fig. 10 is a plan view of the knuckle lock, detached; Fig. 11 is a plan view of the bell

crank lever for unlocking the knuckle; and, Fig. 12 is a plan view of the link for raising the knuckle and lock.

In order to provide a coupler which will normally assume an open position, it is necessary to provide means for automatically moving the knuckle as the coupler is unlocked, and to hold it open until it is desired to again lock the coupler. To this end, a spring-actuated bar 6, provided with a roller 5, is adapted to be forced longitudinally of the coupler casting 3 by a coil spring 4. As it moves forward, the roller 5 contacts with the back of the wing 2 of the pivotally mounted knuckle 1, and swings the knuckle open. To prevent the roller 5 from becoming jammed between the wing 2 and the casting 3, the wing 2 is provided with an ear 7, which contacts lightly with the inner wall of the casting 3 when the wing 2 is moved to its inward limit. The tension of the coil spring acts normally to hold the bar 6 pressed forward and the knuckle 1 open.

In the present construction, each knuckle of the coupler is designed to keep its cooperating knuckle securely locked in closed or operative position. To this end, a spring-actuated slide 8 is provided in each coupler casting just above the slide bar 6, and actuated forward in the same manner. This slide is provided with a concaved or curved edge 9, which projects through the inner face of the coupler head, and is adapted to be engaged by the forward edge of the knuckle 1 of the cooperating coupler. As the knuckle 1 of each coupler engages the forward edge 19 of the slide 8 and its cooperating knuckle, the slides are forced rearwardly against the tension of the springs, and the wings 2 are swung inwardly in the usual manner, forcing the bars 6 rearwardly against the tension of the springs.

Each of the slides 8 is provided with an elongated opening 10, through which projects one arm of a bell crank lever 11, which is pivotally mounted in the casting 3. To the opposite end of the bell crank lever 11 is pivotally attached a link 12, provided with a head 13 adapted to removably engage an eye 14 in a latch or lock 15 pivotally mounted in the casting 3. Thus the bell crank lever 11 and the lock 15 are connected together in such manner that by movement of the lever the lock is raised or lowered. This lock is so positioned as to lie in the path of movement of the wing 2, and may be dropped

behind the same when it has been swung to its inward limit for coupling. Normally, the rear wall of the opening 10 of the slide 8 engages the lower arm of the lever 11, and so holds the lock 15 raised or inoperative, as shown in Fig. 9. However, as the knuckles 1 engage the forward edges 9 of the slides 8 and force them rearwardly, the rear walls of the openings 10 move from engagement with the lower ends of the levers 11 and the locks are free to fall by gravity in front of the wings 2 as they are swung inwardly, as shown in Fig. 5. Thus each coupler locks its cooperating coupler and holds it locked. While the couplers are in locked or operative position, the forward edges 9 of the slides 8 are continually in engagement with the knuckles 1, and the actuating springs of the slide tend to force them forwardly to a position where the rear walls of the openings 10 will engage the lower arm of the bell crank lever 11 to raise the lock 15 and free the coupler knuckles to the action of the spring-actuated bars 6. Therefore, as one knuckle is freed and moves away from the head of its cooperating coupling, the slide 8 of the cooperating coupling will follow the knuckle 1 of the free coupler and unlock its own knuckle. Thus, when one knuckle is unlocked and moved from engagement, its cooperating knuckle is automatically unlocked.

Many changes may be made in the construction of the device as a whole, and in the several parts as well as in their combinations and many rearrangements of the several parts may be had without in any way departing from the field and scope of the

present invention as disclosed by this application, wherein only the preferred form of the same has been shown and described.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is:—

1. In a car coupler, a movable knuckle, a spring-actuated bar adapted to engage and hold the knuckle in open position, a spring-actuated slide adapted to be operated by a cooperating knuckle, a lever adapted to be actuated by the slide, and a lock connected to said lever.

2. In a car coupler, a movable knuckle, a movable bar adapted to engage and hold the knuckle in open position, a slide adapted to be operated by a cooperating knuckle, a lever adapted to be automatically operated by the slide, a lock, and connections between the lever and lock.

3. In a car coupler, a movable knuckle, a movable bar adapted to engage and hold the knuckle in operative position, a slide provided with an elongated opening there-through and adapted to be operated by a cooperating knuckle, a lever having one end projecting into the opening through the slide and adapted to be engaged and operated by the slide, a lock, and connections between the lever and lock.

In witness whereof we have hereunto set our hands in the presence of two witnesses.

GEORGE SARRAZIN.
HECTOR PERREAULT.

Witnesses:

JOSEPH JACQUES,
OSCAR LAFERRIÈRE.