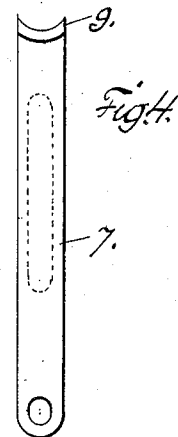
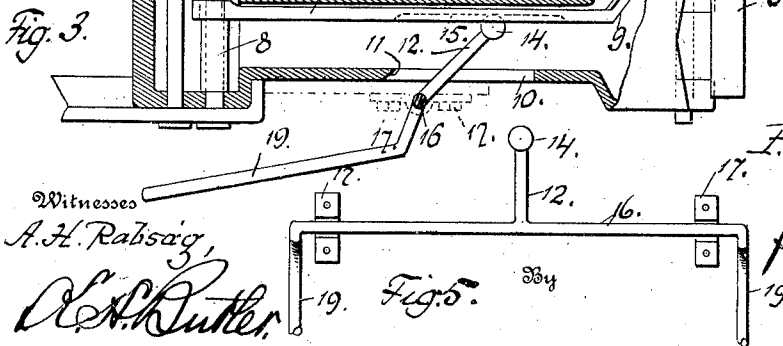
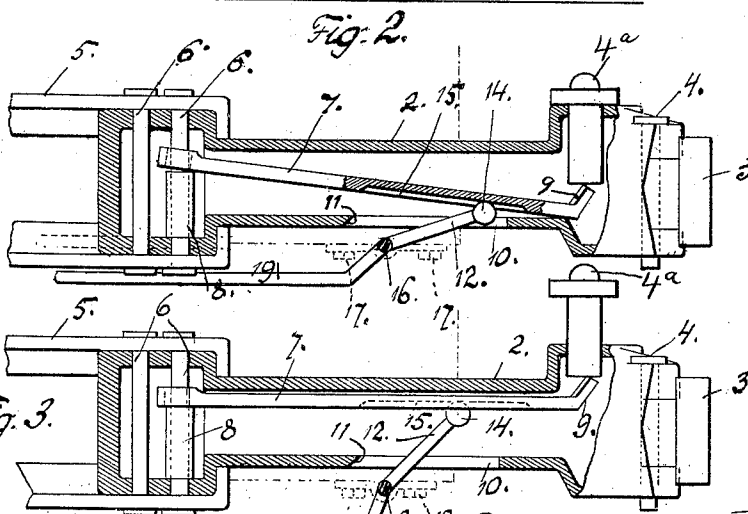
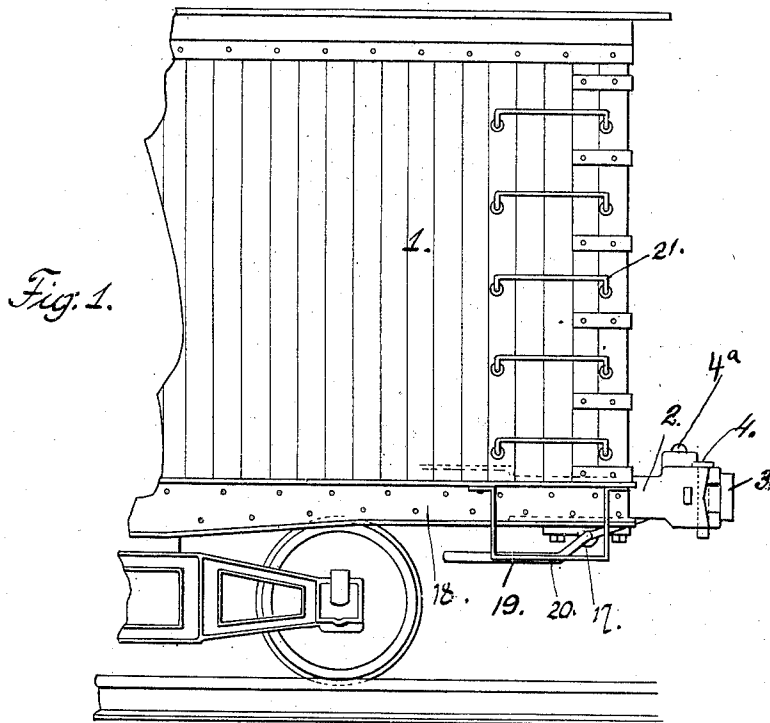


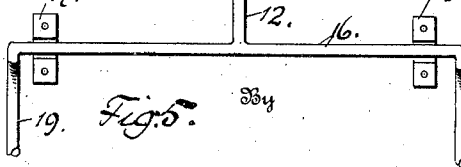
P. J. HARRIGAN.
SAFETY APPLIANCE FOR CAR COUPLINGS.
APPLICATION FILED JULY 30, 1907.

965,107.

Patented July 19, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

PATRICK J. HARRIGAN, OF McKEESPORT, PENNSYLVANIA.

SAFETY APPLIANCE FOR CAR-COUPPLINGS.

965,107.

Specification of Letters Patent.

Patented July 19, 1910.

Application filed July 30, 1907. Serial No. 386,208.

To all whom it may concern:

Be it known that I, PATRICK J. HARRIGAN, a citizen of the United States of America, residing at McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Safety Appliances for Car-Couplers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to safety appliances for car couplers, and the invention relates more particularly to a novel appliance or device for uncoupling cars.

My invention aims to provide a novel device for operating car couplers, making it unnecessary for trainmen to go between two cars or place any part of their bodies between the cars when uncoupling. It is a well known fact that trainmen are constantly being killed and injured by being crushed or knocked down by cars, when in the act of coupling or uncoupling the same. It is also a fact that with many appliances at present used, it is impossible for trainmen to safely uncouple a car, when riding on the same, it requiring considerable skill, besides endangering the life of a trainman on account of the perilous position he occupies.

I am aware of numerous appliances being used, wherein chains, clevises and numerous devices are used for opening a coupler, without a trainman placing his entire body between the cars, but as all these appliances are located and exposed upon the sill or coupler head of a car, they are consequently subjected to breakage and disarrangement when the end of a car is injured or the draft gear breaks, releasing the coupler head. I obviate the breakage of my device by locating the same beneath the car, in the rear of the car sill, and connect the same to the coupler head in such a manner that the withdrawing of the coupler head will not injure the safety appliance or device. To this end, I have devised a movable tongue adapted to be located in a coupler for elevating the locking block thereof. To operate the tongue I use a crank shaft, which is located beneath the car and in the rear of the car sill, or if the car has no sill, adjacent to the end of the car, whereby a crank arm of said shaft will extend into the coupler and elevate the tongue contained therein.

The detail construction entering into my

invention will be presently described, and then specifically pointed out in the appended claims.

Referring to the drawings: Figure 1 is an elevation of a portion of a car equipped with my improved safety device, Fig. 2 is a longitudinal sectional view of a coupler, illustrating the tongue thereof in lowered position, Fig. 3 is a similar view illustrating the tongue in an elevated position, Fig. 4 is a plan of the tongue, and Fig. 5 is a plan of the crank shaft employed for operating the tongue.

In the accompanying drawings, 1 designates the body of a car, having a conventional form of coupler head 2 with a knuckle 3, adapted to swing on a pin 4 in the usual manner. I have illustrated the coupler head 2 as being secured in a draft gear frame 5, by vertically disposed bolts 6. I use one of these bolts as a fulcrum or pivot for a lifting tongue 7, the rear end of which is supported in an elevated position by a sleeve 8 surrounding the outer bolt 6. The forward end of the tongue 7 is bent upwardly, as at 9, and forms a seat for the locking block 4^a, whereby when the forward end of said tongue is elevated the locking block 4^a will be raised clear of the knuckle tail so that the knuckle 3 may swing on its pivot pin 4 to open position.

The coupler head 2 is slotted in its lower side, as at 10, the inner end of said slot being beveled, as at 11. Extending into said slot 10 is a crank arm 12 having an enlarged or ball end 14 engaging in a groove or pathway 15 formed in the lower side of the tongue 7. The crank arm 12 is carried by a shaft 16, arranged transversely of the car body 1 and supported by bearings 17, carried beneath or by the beams 18 of the car 1. The ends of the shaft 16 are bent to provide levers or handles 19, whereby the shaft 16 can be rocked to elevate the crank arm 12 and the tongue 7 resting upon said crank arm.

The handles or levers 19 of the shaft 16 are located in close proximity to the sides of the car 1, whereby they can either be manipulated by hand, or by the foot of a trainman standing upon the step 20 of the car 1, the trainman retaining his hold upon the car by the rounds or handles 21 arranged upon the side of the car.

The knuckle 3 is of the usual form, as is the coupling or locking block 4^a, the latter

when in coupling position lying in front of the knuckle horn (not shown) so as to lock the knuckle against opening movement. My improvement resides therefore in the provision of the tongue 7 and in the means for operating this tongue whereby the operator may readily elevate the locking block 4^a to allow the opening of the knuckle, without danger of injury during such operation.

10 I do not care to limit myself to the type of coupler head or coupler in connection with which my device is used, as the tongue can be used as a block bearing or can be connected directly to the block of a coupler. 15 It is thought that the many advantages gained by the simple and inexpensive device will be apparent to those familiar with car couplers, and I would like it to be understood that such modifications and changes 20 as fall within the scope of the appended claims, can be restored to without departing from the scope of the invention.

Having now described my invention what I claim as new, is:—

25 1. In combination, a car coupler having a hollow shank provided in the lower wall thereof with a slot, a locking block mounted

in the head of said coupler, a lifting tongue within the shank pivotally-mounted at its rear end and having its forward end extending into the head of the coupler with the locking block resting thereon, and a shaft exterior of the coupler shank and having an arm extending through the slot and engaging the lifting tongue for elevating the free end of the latter and thereby the locking block. 30 35

2. The combination with a coupler head having a shank, a knuckle pivoted in said head, and a locking block carried by the head for said knuckle, of a lifting tongue pivotally-mounted at its rear end in the shank with its forward end free and extending into the head and engaged by the locking block, and means engaging the lifting tongue though free from connection therewith for elevating the free end of said tongue and the locking block. 40 45

In testimony whereof I affix my signature in the presence of two witnesses.

PATRICK J. HARRIGAN.

Witnesses:

MAX H. SROLOVITZ,
C. V. BROOKS.